



City of Holly Springs

Date: Monday, May 1, 2023

Location: 3235 Holly Springs Pkwy

City Council Work Session Agenda 7:00 p.m., Council Chambers

I. CALL TO ORDER

II. PLEDGE OF ALLEGIANCE

“Veterans of U.S. military services may proudly salute the flag while not in uniform based on a change in the governing law on 25 July 2007.”

III. INVOCATION

IV. SPECIAL PRESENTATIONS

- Building Safety Month Proclamation

V. PUBLIC COMMENTS

VI. UNFINISHED BUSINESS

1. Discuss **A-03-2023**, applicant requests annexation of 16.51 +/- acres located off of Hickory Flat Highway, Cherokee County, GA, tax parcels 197, 198, 199, 200, 200A, 201, 202, and 203 of tax plat 15N19 and **MA-04-2023**, applicant requests rezoning of 22.87 +/- acres located off of Hickory Flat Highway, Holly Springs, GA, tax parcels 197, 198, 199, 200, 200A, 201, 202, 203, 223, and 226 of tax plat 15N19, from R-40, Single Family Residential Estate (County), and NC, Neighborhood Commercial (City), to TND, Traditional Neighborhood Development (City)

Presented by Nancy Moon, Community Development Director

VII. NEW BUSINESS

1. Discuss **A-04-2023**, applicant requests annexation of 0.60 +/- acres located off of East Rope Mill Lane, Cherokee County, GA, tax parcel 074 of tax plat 15N15 and **MA-06-2023**, applicant requests rezoning of 0.60 +/- acres located off of East Rope Mill Lane, Holly Springs, GA, tax parcel 074 of tax plat 15N15, from LI, Light Industrial (County), to LI, Light Industrial (City)
Presented by Nancy Moon, Community Development Director
2. Discuss **MA-07-2023**, applicant requests rezoning of 20.10 +/- acres located off of East Cherokee Drive, Holly Springs, GA, tax parcels 118, 120, 121, and 124 of tax plat 15N26, from GC, General Commercial, to GC, General Commercial / MXD, Mixed Use and **CUP-03-2023**, applicant requests a conditional use permit for a Self-Storage Establishment for property located off of East Cherokee Drive, Holly Springs, GA, tax parcels 120 and 124 of tax plat 15N26
Presented by Nancy Moon, Community Development Director
3. Discuss **D-01-2023**, applicant requests deannexation of 1.71 +/- acres located off of Peardon Court, Holly Springs, GA, tax parcel 120A of tax plat 15N20
Presented by Nancy Moon, Community Development Director
4. Discuss the Pollution Liability line of coverage with Georgia Interlocal Risk Management Agency (GIRMA)
Presented by Karen Norred, City Clerk/HR Director
5. Discuss the Municipal Workforce AD&D line of coverage with CV Starr
Presented by Karen Norred, City Clerk/HR Director
6. Discuss the Off-Duty Liability line of coverage with Lexington Insurance Company
Presented by Karen Norred, City Clerk/HR Director
7. Discuss the Excess Crime line of coverage with Hanover Insurance Company/Allmerica
Presented by Karen Norred, City Clerk/HR Director
8. Discuss the Excess Cyber Liability line of coverage with Berkley Insurance
Presented by Karen Norred, City Clerk/HR Director
9. Discuss the Terrorism & Sabotage line of coverage with Hiscox
Presented by Karen Norred, City Clerk/HR Director
10. Discuss a resolution declaring certain property as surplus and authorizing its sale or disposal
Presented by Robert H. Logan, City Manager

11. Discuss an ordinance to amend the Code of the City of Holly Springs, Georgia, as amended; to Amend Chapter 66 – Streets, Sidewalks and Other Public Places, Article IV – Parks and Recreation Facilities; Section 66-121 – Use of Facilities and Section 66-124 – Motor Vehicles

Presented by Robert H. Logan, City Manager

12. Discuss the Professional Services Agreement Addendum No. 9 with Southeastern Engineering, Inc. for any on-demand engineering consultation services requested by the City of Holly Springs as needed for the Holly Springs Town Center Project

Presented by Robert H. Logan, City Manager

VIII. ADJOURNMENT

City Council Special Called Meeting

Agenda

Immediately Following City Council Work Session, Council Chambers

I. CALL TO ORDER

II. NEW BUSINESS

- A. Approve/deny the Pollution Liability line of coverage with Georgia Interlocal Risk Management Agency (GIRMA)
- B. Approve/deny the Municipal Workforce AD&D line of coverage with CV Starr
- C. Approve/deny the Off-Duty Liability line of coverage with Lexington Insurance Company
- D. Approve/deny the Excess Crime line of coverage with Hanover Insurance Company/Allmerica
- E. Approve/deny the Excess Cyber Liability line of coverage with Berkley Insurance
- F. Approve/deny the Terrorism & Sabotage line of coverage with Hiscox
- G. Approve/deny a resolution declaring certain property as surplus and authorizing its sale or disposal

III. ADJOURNMENT

EXECUTIVE SESSION – Real Estate



A PROCLAMATION BUILDING SAFETY MONTH

WHEREAS, The City of Holly Springs is committed to recognizing that our growth and strength depends on the safety and essential role our homes, buildings and infrastructure play, both in everyday life and when disasters strike, and;

WHEREAS, our confidence in the resilience of these buildings that make up our community is achieved through the devotion of vigilant guardians—building safety and fire prevention officials, architects, engineers, builders, tradespeople, design professionals, laborers, plumbers and others in the construction industry—who work year-round to ensure the safe construction of buildings, and;

WHEREAS, these guardians are dedicated members of the International Code Council, a nonprofit that brings together local, state, territorial, tribal and federal officials who are experts in the built environment to create and implement the highest-quality codes to protect us in the buildings where we live, learn, work and play, and;

WHEREAS, these modern building codes include safeguards to protect the public from hazards such as hurricanes, snowstorms, tornadoes, wildland fires, floods and earthquakes, and;

WHEREAS, Building Safety Month is sponsored by the International Code Council to remind the public about the critical role of our communities' largely unknown protectors of public safety—our local code officials—who assure us of safe, sustainable and affordable buildings that are essential to our prosperity, and;

WHEREAS, “It Starts with You,” The theme for Building Safety Month 2023, encourages us all to raise awareness about building safety on a personal, local and global scale, and;

WHEREAS, each year, in observance of Building Safety Month, people all over the world are asked to consider the commitment to improve building safety, resilience and economic investment at home and in the community, and to acknowledge the essential service provided to all of us by local and state building departments, fire prevention bureaus and federal agencies in protecting lives and property.

NOW, THEREFORE, I, Steven W. Miller, Mayor of the City of Holly Springs, do hereby proclaim the month of May 2023 as Building Safety Month. Accordingly, I encourage our citizens to join us as we participate in Building Safety Month activities.

Steven W. Miller, Mayor

Attest:

Karen Norred, City Clerk
(Seal)

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COUNCIL AGENDA REPORT

FROM: Nancy Moon

SUBJECT: **A-03-2023**, applicant requests annexation of 16.51 +/- acres located off of Hickory Flat Highway, Cherokee County, GA, tax parcels 197, 198, 199, 200, 200A, 201, 202, and 203 of tax plat 15N19

MA-04-2023, applicant requests rezoning of 22.87 +/- acres located off of Hickory Flat Highway, Holly Springs, GA, tax parcels 197, 198, 199, 200, 200A, 201, 202, 203, 223, and 226 of tax plat 15N19, from R-40, Single Family Residential Estate (County), and NC, Neighborhood Commercial (City), to TND, Traditional Neighborhood Development (City)

DATE: April 26, 2023

COUNCIL MEETING DATE: May 1, 2023

STAFF ANALYSIS

Applicants, PR Land Investments, LLC, have requested annexation of 16.51 +/- acres located on Hickory Flat Highway, specifically tax parcels 197, 198, 199, 200, 200A, 201, 202, and 203 of tax plat 15N19. In addition, the applicant has requested rezoning of 22.87 +/- acres for parcels 197, 198, 199, 200, 200A, 201, 202, 203, 223, and 226 of tax plat 15N19 from R-40, Single Family Residential Estate (County), and NC, Neighborhood Commercial (City), to TND, Traditional Neighborhood Development (City).

The applicant plans to construct a single-family residential detached home community consisting of 138 units with a density of 6.0 units per acre. The access is off of Hickory Flat Highway via Old Pioneer Trail with dual entrances on both the north and the south sides of Old Pioneer Trail. Any upgrades to Hickory Flat Highway will be subject to the requirements of the Georgia DOT. Typical elevations are included within the packet.

During the April City Council meetings, there was discussion concerning reducing the density to 4.88 units. The applicant has agreed to this density and at the request of City Council, has submitted a revised site plan showing 111 homes with a density of 4.85 units per acre.

A. Staff Recommendation

Staff recommends **APPROVAL** to **ANNEX** the property consisting of 16.51 +/- acres.

Staff recommends **APPROVAL** to **REZONE** the property consisting of 22.87 +/- acres to **TND, Traditional Neighborhood Development** with the following stipulations.

1. A master association shall be formed which shall include all component parts of the project. The master association shall be responsible for the oversight, upkeep, and maintenance of the entrance areas, signage, private infrastructure, detention areas, mail kiosk, amenity

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areas, common areas, open space areas, other common recreational areas, and all landscaping and plantings contained within the community.

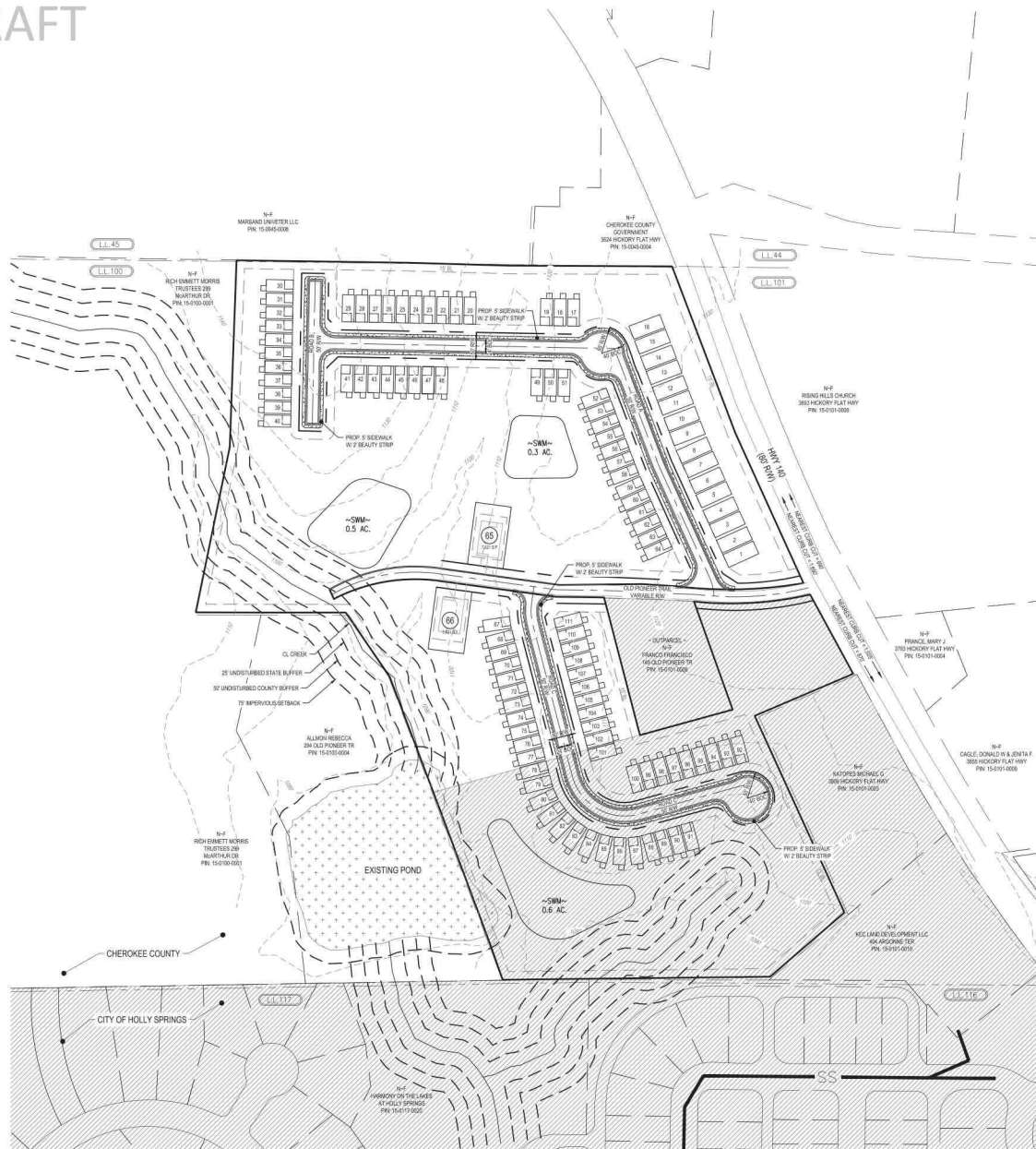
2. The master association to be formed hereunder shall have architectural design regulations which shall control and coordinate all principal and accessory buildings within the project, as well as items such as project entrance signage, signage for individual units, signage within amenity areas, common areas, open space areas, other common recreational areas and the like to protect and maintain the quality and integrity of the development. The yard areas around each unit shall be fully sodded/landscaped and maintained by the mandatory homeowners' association.
3. All restrictive covenants and association documents shall be submitted for review by the Community Development Director prior to final plat approval.
4. All units within the proposed community shall be "for sale" units. The Declaration of Restrictive Covenants shall restrict the number of units which can be leased at any one time to no more than twenty percent.
5. Density shall be limited to a maximum gross density of 4.85 units per acre, or a maximum of 111 fee simple single-family residential detached dwelling units.
6. Signage at the entrance point shall be ground based, monument style. The entrance areas shall be professionally designed, landscaped and maintained. All project signage will be consistent with the architectural design regulations established for the principal and accessory buildings within the project and shall comply with Article 19, Design Guidelines for Model Zoning Districts of the Holly Springs Zoning Ordinance.
7. The architectural style shall be of craftsman type and the exterior facade shall consist of brick, stone, stacked stone, cedar shake type and/or Hardi-plank and combinations thereof, one of which must be brick or stone, and follow the design guidelines as outlined in the Holly Springs Zoning Ordinance, Article 19, Design Guidelines for Model Zoning Districts.
8. Gutters shall blend with the architectural style of the buildings, consistent with the building design as established by the owner/developer and approved by the City of Holly Springs.
9. Asphalt roof shingles shall be architectural grade with a dimensional textured surface and shall be algae resistant.
10. Garage doors shall be setback a minimum of 20 feet from the back of sidewalks.
11. Lighting shall be environmentally sensitive, with developer making every effort to ensure that lighting is as unobtrusive as possible, utilizing fully-shielded LED lamps in compliance with the International Dark Sky Association, or equivalent organization.
12. Owner/developer shall coordinate with the Community Development Director and the City Arborist regarding landscaping.

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13. As requested by the Cherokee County School District, the developer shall provide a School Mitigation Fee of \$989 per residential unit constructed and such fee shall be paid prior to the issuance of each building permit.
14. Entrance design and improvements to Hwy 140 and Old Pioneer Trail shall be provided as per determination and recommendation of the Georgia Department of Transportation and the City Engineer.
15. Owner/developer shall be responsible for the installation of sidewalks (5' sidewalk with a 5' beauty strip), decorative street lamps, accel/decel lanes and curb and gutter along the entire road frontage of Hickory Flat Highway, as approved by Georgia Department of Transportation, and Old Pioneer Trail, as applicable and approved by the City Engineer, and shall conform to the design of the Holly Springs LCI Project 0008961, Pedestrian Improvements, as well as, the requirements of the Holly Springs Parkway District, as stated in Article 19, Design Guidelines for Model Zoning District.
16. All construction and employee vehicles and equipment will be parked, and otherwise located, on the property during development of infrastructure and construction of residences and shall not be parked on or along Hwy 140. There will be no stacking of vehicles along any roadway waiting for entry onto the property.

*** The recommendations made herein are the opinions of the City of Holly Springs Staff and do not constitute a final decision. The Holly Springs City Council makes the final decision on all rezoning applications at their regularly scheduled meeting. Any site plan submitted as a part of this application is not considered approved and must go through the normal civil site plan review by the City of Holly Springs Community Development Department to ensure compliance with City regulations.*

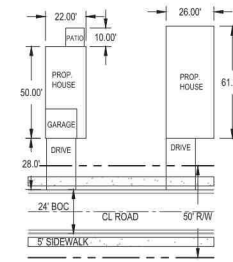
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SITE LOCATION MAP
SCALE: 1"=1,000'

GENERAL SITE NOTES:

- TOTAL AREA = 22.87 ACRES
- TOTAL NUMBER OF PROPOSED BUILDINGS = 111
- PROPOSED DENSITY = 4.86 DU/AC
- PROPOSED ZONING = TND
- HOUSES FRONTING HWY 140:
 - TYPICAL BUILDING DIMENSIONS = 26'W x 61'D
 - BUILDING SETBACKS: FRONT = 15' MINIMUM 3' BETWEEN BUILDINGS
- ALL INTERNAL DEVELOPMENT HOUSES:
 - TYPICAL BUILDING DIMENSIONS = 22'W X 50'D WITH 10' PATIO
 - BUILDING SETBACKS: FRONT = 15' MINIMUM 3' BETWEEN BUILDINGS
- SFR DETACHED LOTS:
 - TYPICAL BUILDING DIMENSIONS = 40'W x 64'D
 - BUILDING SETBACKS: FRONT = 15' SIDE = 5' REAR = 20'
- BOUNDARY INFORMATION DEPICTED FROM CHEROKEE COUNTY GIS
- ALL ON-SITE WETLANDS AND BUFFERED STATE WATERS LOCATED ON OR WITHIN 200 LINEAR FEET OF THE PROJECT SITE HAVE BEEN DELINEATED AND SHALL BE NOTED AS APPROXIMATE
- TOPOGRAPHIC INFORMATION SHOWN PROVIDED BY CHEROKEE COUNTY GIS
- THIS PROJECT CONSISTS OF THE DEVELOPMENT OF 138 SINGLE FAMILY DETACHED HOMES
- HATCHED AREA REPRESENTS EXISTING CITY OF HOLLY SPRINGS JURISDICTION



TYPICAL BUILDINGS
N.T.S.

DESIGNED BY:	MJB
DRAWN BY:	MJB
REVIEWED BY:	DFS
DATE	
REV	



COA: PER107149
EXP: 06/30/2024

PIEDMONT RESIDENTIAL
281 PARKWAY 25E
WOODSTOCK, GA 30188

OLD PIONEER TRAIL
CHEROKEE COUNTY, GA
CITY OF HOLLY SPRINGS
LAND LOTS 18, 19

ZONING PLAN

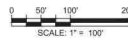


CONC. CERT. #84403
EXP. 06/27/25
NOT ISSUED FOR CONSTRUCTION
FILE NUMBER:
10661-00
DATE: 04-21-2023

01



FLOOD CERTIFICATION
SUBJECT PROPERTY IS NOT LOCATED WITHIN A SPECIAL FLOOD HAZARD ZONE. IT IS LOCATED IN ZONE X, AS DEFINED BY HUD F.I.R.M. COMMUNITY PANEL NUMBER 130424, MAP NUMBER 1305700254E, WITH AN EFFECTIVE DATE OF JUNE 7, 2019.



Hwy 140 & Old Pioneer

Community Site Map
Cherokee County, GA





COUNCIL AGENDA REPORT

FROM: Nancy Moon

SUBJECT: **A-04-2023**, applicant requests annexation of 0.60 +/- acres located off of East Rope Mill Lane, Cherokee County, GA, tax parcel 074 of tax plat 15N15

MA-06-2023, applicant requests rezoning of 0.60 +/- acres located off of East Rope Mill Lane, Holly Springs, GA, tax parcel 074 of tax plat 15N15, from LI, Light Industrial (County), to LI, Light Industrial (City)

DATE: April 26, 2023

PLANNING COMMISSION MEETING DATE: May 1, 2023

STAFF ANALYSIS

Applicant, Andrew Carmichael, has requested annexation and rezoning of approximately 0.60 +/- acres, from LI, Light Industrial (County), to LI, Light Industrial (City), tax parcel 15N15 074 (pt).

The applicant owns the adjacent property, tax parcel 15N15 073, annexed and rezoned to LI in 2016. He intends to combine 0.60+/-acre parcel with his existing property for the construction of two office and warehouse buildings. The zoning is currently LI in the County, and the property is just being rezoned to the City LI zoning. A proposed site plan has been included.

A. Existing Land Use and Zoning Classification of Nearby Property

ADJACENT ZONING		ADJACENT DEVELOPMENT	
NORTH:	LI/ (County)	NORTH:	Industrial
SOUTH:	R-40/GC (County)	SOUTH:	SFR/Commercial
EAST:	TND	EAST:	Future SFR
WEST:	GC/MXD	WEST:	Future Mixed-Use Development

B. Zoning Proposal Review Standards; Study Required for Amendment

- Whether the zoning proposal will permit a use that is suitable in view of the use and development of adjacent and nearby property?

Surrounding development in the area includes industrial, commercial, and single family residential uses. The proposed use for office/warehouse would be compatible with the surrounding area. The property is already used for industrial purposes.

- Whether the zoning proposal will adversely affect the existing use or usability of adjacent or nearby property?

The development of this property should not cause a substantial adverse effect on adjacent or nearby properties with regards to existing uses or usability. Surrounding development is mixed with a diversity of uses.

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

The property, as currently zoned, would permit those uses associated with the LI, district.

4. 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, public safety, or schools?

This request will not generate a significant impact to traffic or utilities in the area.

5. Whether the zoning proposal is in conformity with the policy and intent of the adopted Future Development Map (FDM)?

This property is planned for development within the Parkway Corridor character area. This character area follows Holly Springs Parkway and also encompasses land around interchanges of I-575. The Parkway Corridor is intended to provide primarily a commercial service function, i.e., retail sales, services, and offices, while maintaining quality development standards and sensitive transition to the Holly Springs Town Center. It also includes a high-density multi-family residential component.

Application: Existing and new commercial and high-density multi-family residential

Primary Future Land Uses: office, retail, service, high density multi-family residential

Zoning Districts: HDMFR, PD-C, NC, GC, OI, GV

This property, as well as the adjacent property, is already being utilized for industrial purposes.

6. Whether the zoning proposal is in conformity with the policies, objectives, and vision set forth by the Community Agenda (Comprehensive Plan) and other adopted policy documents?

Although the proposed development is not consistent with strict commercial development, the proposed use is not that of a heavy industrial use either. Given the surrounding zoning and/or uses, this development would improve the area with a more structured business. Furthermore, the proposal is in compliance with the vision and objectives of the Community Agenda, primarily as follows:

- a) **Commercial Uses.** Use the character areas and the Future Development Map (FDM) to guide commercial growth and expansion for office/institutional, general commercial, and industrial opportunities (8.1, #1).
 - b) **Annexation.** Consider municipal boundary expansion opportunities as unincorporated property owners petition for annexation (8.1, #9).
 - c) **Expansion Areas.** Extend character areas and future land uses logically beyond adopted maps, as the city grows through annexation (8.1, #10).
 - d) **Architectural Requirements.** Utilize the adopted architectural requirements for the various character areas of the city, seeking to refine and enhance these requirements, as needed. Consistently enforce architectural regulations to promote a uniform and harmonious quality of development within respective character areas (8.1, #11).
 - e) **Improvement of Industrial Sites.** Improve development sites to attract quality light industrial businesses. Implement design guidelines for the improvement of existing industrial sites. (8.3, #7)
7. Whether an impact is expected on the environment, including, but not limited to, drainage, soil erosion, and sedimentation, flooding, air quality, and water quality and quantity?

The development of the property will be held to the environmental development standards for all local, state, and federal requirements.

8. 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?

This property is currently part of another industrial development located within unincorporated Cherokee County. The proposed use would be compatible with the surrounding area.

C. Cherokee County Comments

The Cherokee County Board of Commissioners discussed this case on April 4, 2023. The Board voted unanimously that they have no land use objections. The Fire Marshal had the following comments:

1. A water flow test shall be conducted to ensure adequate water supply for the development is available for firefighting. According to County GIS mapping there is an 8" waterline along East Rope Mill.

2. Any future development of the property should be designed and built to meet minimum state fire codes.

D. Summary

The proposed annexation and zoning for industrial use is compatible with the general development of the area.

E. Planning Commission Recommendation

The Planning Commission conducted a public hearing on April 13, 2023. No public comments were made at the hearing. Planning Commission recommended **APPROVAL (5-0)** of the **ANNEXATION** request and also recommended **APPROVAL (5-0) WITH STAFF STIPULATIONS** of the **REZONING** request

F. Staff Recommendation

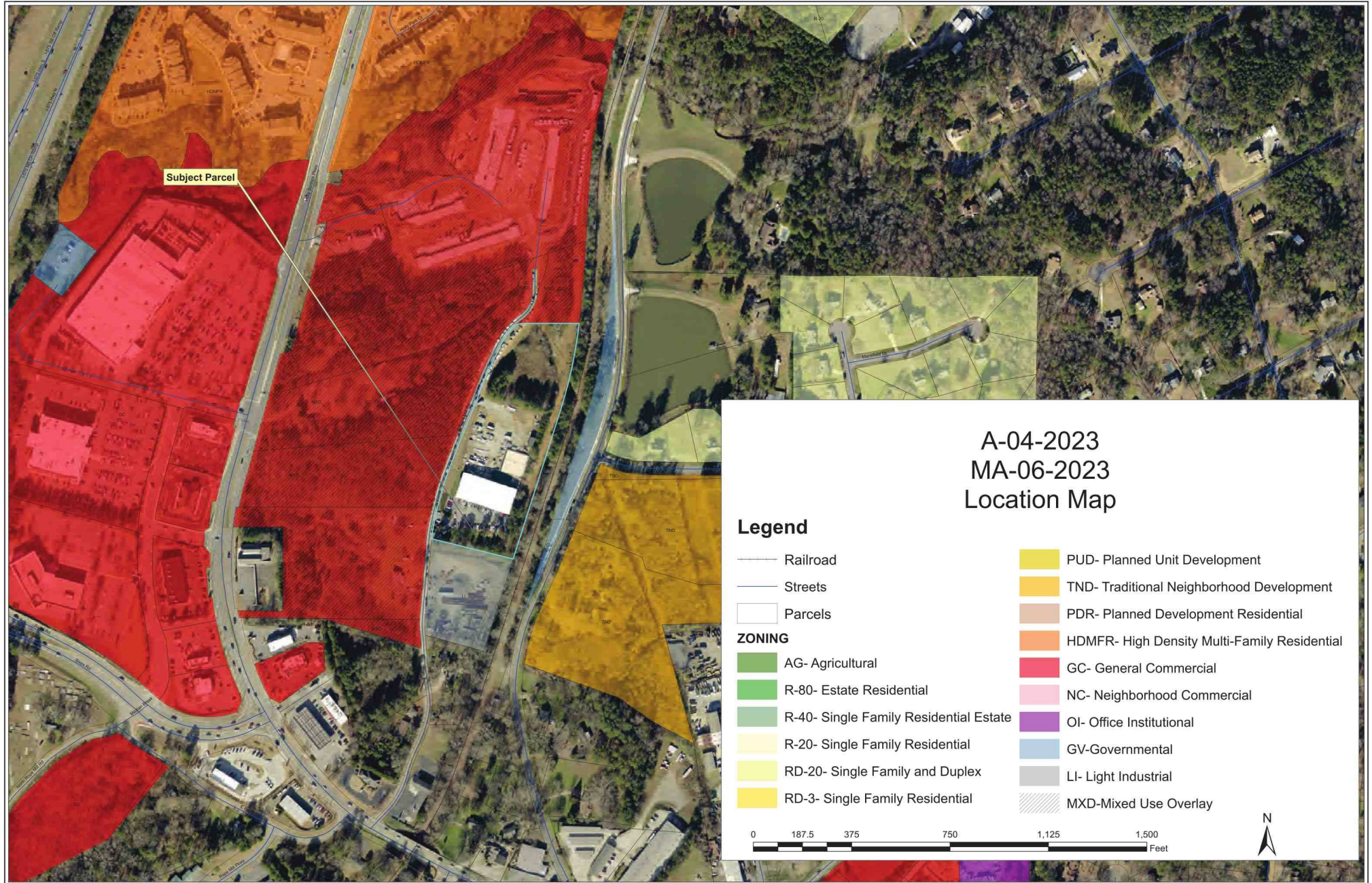
Staff recommends **APPROVAL** to **ANNEX** 0.60+/- acres.

Staff recommends **APPROVAL** to **REZONE** 0.60+/- acres to **LI, LIGHT INDUSTRIAL** with the following stipulations:

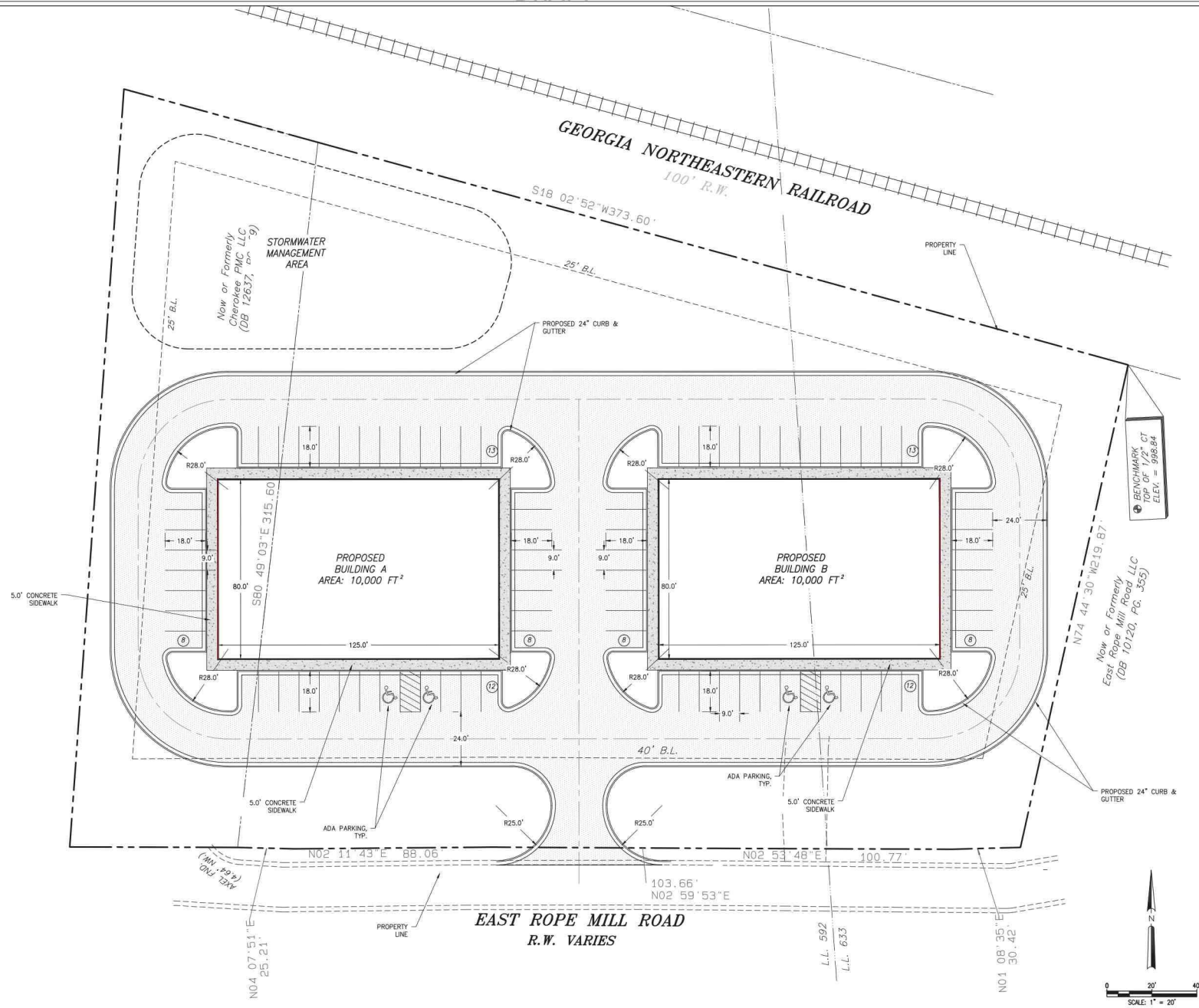
1. Owner/developer shall coordinate with the Community Development Director and the City Arborist regarding landscaping.
2. Lighting shall be environmentally sensitive, with developer making every effort to ensure that lighting is as unobtrusive as possible, utilizing fully-shielded LED lamps in compliance with the International Dark Sky Association, or equivalent organization.
3. Road improvements to East Rope Mill Road shall be in accordance with the Holly Springs Development Regulations, and as approved by the City Engineer and County Engineer. Location of entrances and determination of accel/decel lanes shall be subject to recommendation and approval of City Engineer and County Engineer.
4. The following uses shall be prohibited on this site:
 - a. Auto Repair Establishments
 - b. Auto Service Establishments
5. Development shall comply with the design guidelines of the Holly Springs Parkway District as outlined in Article 19 of the Zoning Ordinance. Architectural design of the elevations shall be substantially consistent with the elevations submitted with this application and entitled, "Office Building" by RLE Designs, LLC, dated 02/24/23.

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Prepared By:
CRESCENT VIEW
ENGINEERING, LLC:
211 Frazier Street SE
Atlanta, GA 30316
Tel: 404-525-4410
www.crescentvieweng.com

Prepared For
Carmichael Development
Woodstock, GA 30188

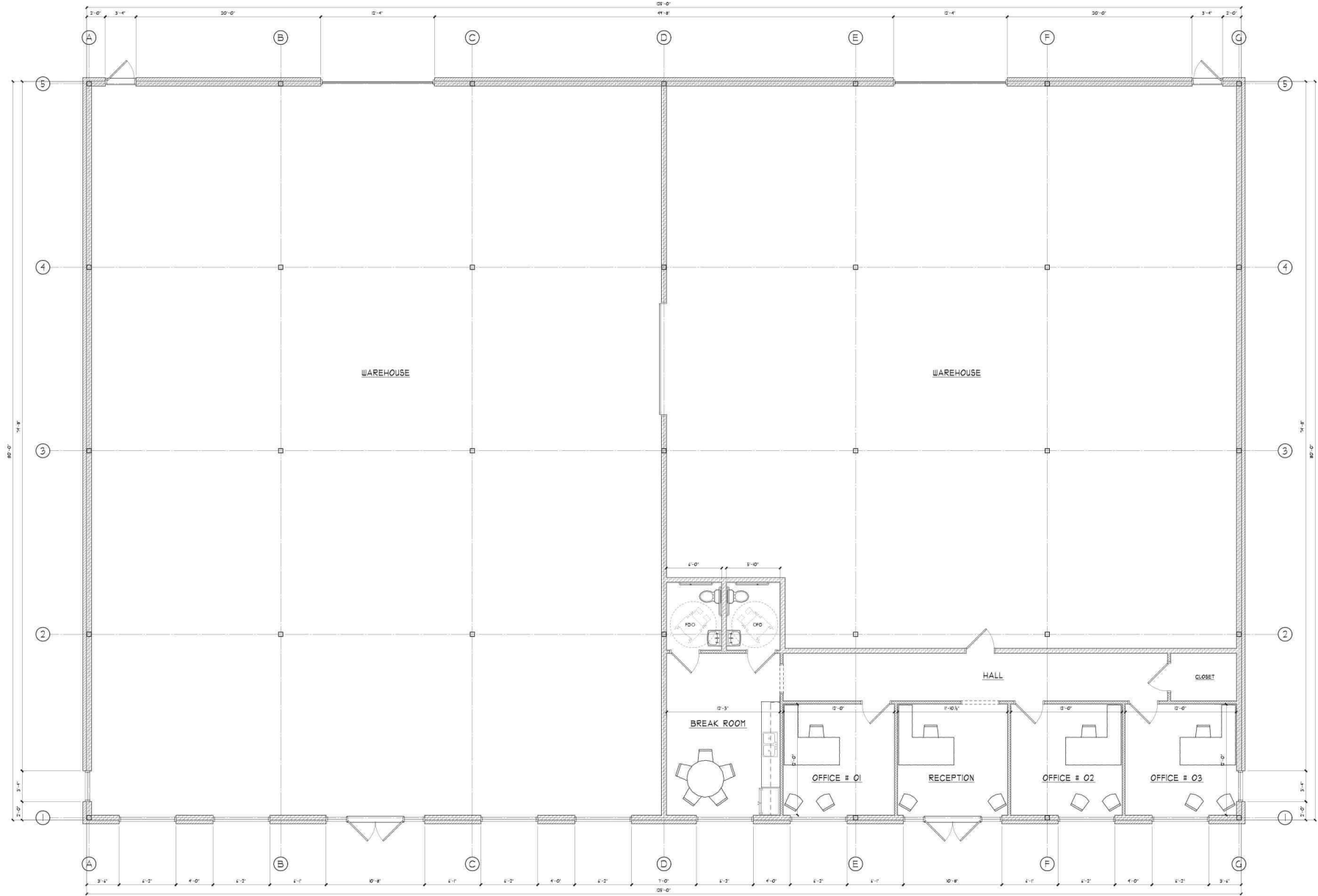
SITE PLAN

DATE	1-11-22	REVISIONS
SCALE	AS SHOWN	
DRAWN	AR	
CHECKED	DPB	

Conceptual Site Plans For:
**428 EAST ROPE MILL ROAD
OFFICE COMPLEX**
Land Lots 592 & 533, 15th District
Cherokee County, Georgia

CVE # 1 23-012

Sheet No.
C-1



FLOOR PLAN
1/4" = 1'-0"



RLE Designs, LLC
Architect
3330 Cobb Parkway, NW
Suite 324-328
Acworth, GA 30101
(770) 315-4914
www.rledesigns.com

**PRELIMINARY DRAWINGS
NOT FOR CONSTRUCTION**

Office Building
- 10,000 Sq. Ft. New Structure -
428 East Rope Mill Road, Canton, GA 30115

(C) Copyright
This drawing is the property of
RLE Designs, LLC and cannot be
reproduced without its permission.

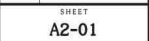
IMPORTANT NOTES:
A1) RLE Designs, LLC assumes no liability
for any changes constructed from these
drawings. The architectural drawings
conform to the design.
A2) Plans indicate locations only. Engineering
specifications should be incorporated into the
drawings before construction.
A3) All framing member spacing and connections
are to be determined by the contractor or
designed by an engineer.

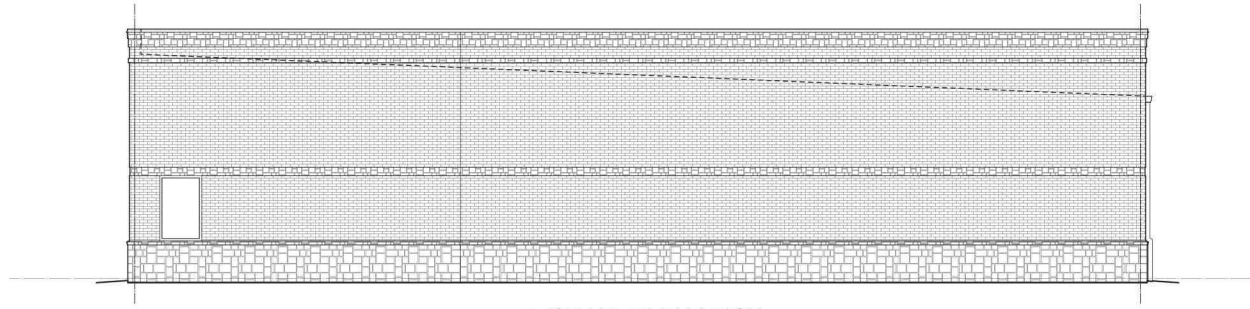
Description of the Contract by the Contractor
is a representation that the Contractor
will perform the following:
(C1) Contractor must verify ALL DIMENSIONS.
Drawings are not to be scaled.
(C2) Contractor is to report to RLE Designs, LLC
any errors, omissions or discrepancies
discovered or made known to them prior
to the drawings before proceeding.
(C3) Contractor shall report to RLE Designs, LLC
any construction, structural or other issues
to the Architect before the drawings and
all APPLICABLE BUILDING CODES.
(C4) Contractor is responsible for quality of
materials and workmanship.
(C5) Contractor is responsible for means and
methods of construction.

DATE: 02/24/23 PROJECT NUMBER: 2023-305

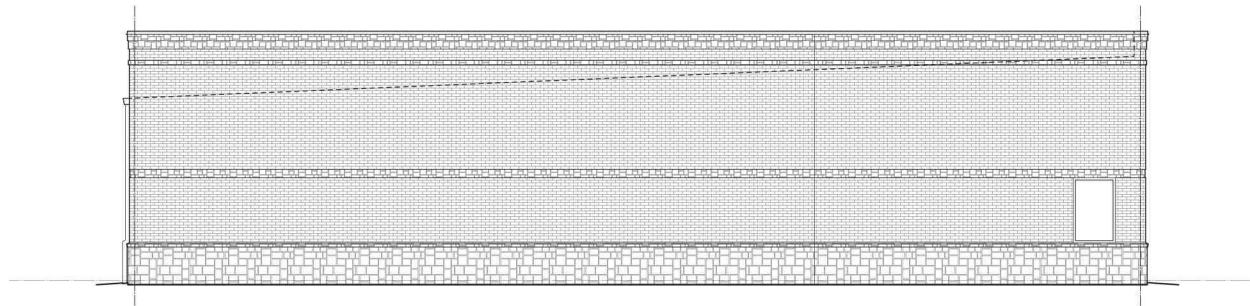
REVISIONS	
DATE	DESCRIPTION

SHEET
A1-02





1 RIGHT ELEVATION
1/4" = 1'-0"



2 LEFT ELEVATION
1/4" = 1'-0"



RLE Designs, LLC
Architect
3330 Cobb Parkway, NW
Suite 324-328
Acworth, GA 30101
(770) 315-4914
www.rledesigns.com

**PRELIMINARY DRAWINGS
NOT FOR CONSTRUCTION**

Office Building
- 10,000 Sq. Ft. New Structure -
428 East Rope Mill Road, Canton, GA 30115

© Copyright
This drawing is the property of
RLE Designs, LLC and cannot be
reproduced without its permission.

- IMPORTANT NOTES:**
- A1) RLE Designs, LLC assumes no liability for any typographical or graphical errors that may appear in this drawing. The architectural drawings are preliminary and not for construction.
 - A2) Plans indicate locations only. Engineering and/or other professional consultants should be consulted for all details.
 - A3) All existing member spacing and connections are to be determined by the contractor or designed by an engineer.

- Execution of the Contract by the Contractor is a representation that the Contractor will perform the following:
- C1) Contractor must verify ALL DIMENSIONS. Drawings are not to be scaled.
 - C2) Contractor is to report to RLE Designs, LLC any errors, omissions or discrepancies discovered or made known to him/her in the drawings before proceeding.
 - C3) Contractor shall report to RLE Designs, LLC any uncertainties, omissions or errors known to him/her before the drawings are used.
 - C4) Contractor is responsible for quality of material and workmanship.
 - C5) Contractor is responsible for means and methods of construction.

DATE: 02/24/23 PROJECT NUMBER: 2023-305

REVISIONS	
DATE	DESCRIPTION

SHEET
A2-02

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**City of Holly Springs, Georgia**

A-04-2023

Petition for Annexation**100% Method***Please completed one petition per parcel; duplicate this form as needed. Please print or type.***APPLICANT INFORMATION**

Date: 02/08/2023

Applicant's Name: Andrew Carmichael

Corporation Name: AKC Properties LLC

Mailing Address: 246 River Park North Drive Woodstock, GA 30189

Phone: 770.617.0344

Email: drew@carmichaeldev.com

PROPERTY OWNER INFORMATION

Property Owner(s): Cherokee PMC LLC

Mailing Address: 500 East Rope Mill Lane Canton, GA 30115

Phone: 404.886.9502 Glen Nedza

Email: gnedza2000@yahoo.com

PROPERTY INFORMATION

Tax Map #: 15 N 15 Parcel #: 074

Land Lot(s)/District: 592 15th District, 2nd section

Physical Address: 500 East Rope Mill Lane Canton, GA 30115

Property Location Description: Please see attached legal description.

Current Zoning: LI

(Attach additional sheets, if necessary)

Has an application for rezoning, special use, or variance been applied for in the County within the past five (5) years? NO If "yes," please provide complete explanation and details in the space below:

(attach additional sheets, if necessary)

Describe the proposed development for the property in question should the annexation be approved, including the appropriate City zoning classification desired. (NOTE: Any annexation request requiring a rezoning in the City will need to be made on the appropriate rezoning request forms for the City of Holly Springs. This annexation petition does not complete the requirements for making a rezoning request).

Approximately 0.6 acres of LI will be annexed into
the city, which will allow 2 office/warehouse
buildings to be built on the combined LI property.

(attach additional sheets, if necessary)

SUBMITTAL CHECKLIST

The following exhibits must be attached to this Annexation Petition:

- ☒ A copy of the most recent warranty deed or equivalent conveyance of ownership for the property to be annexed;
- ☒ A copy of the Cherokee County Tax Plat, illustrating the property to be annexed;
plus survey from Lowery
- ☒ Complete the Applicant & Property Owner(s) Signature Sections, following page;
- ☐ Any additional information requested by City Officials.

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APPLICANT & PROPERTY OWNERS SIGNATURE SECTION

Andrew Carmichael
Applicant Name (Please Print)

AKC Properties LLC
Corporation Name (Please Print)

[Signature]
Applicant Signature

Member
Title (Please Print)

02/08/2023
Date

ALL PROPERTY OWNERS (GRANTEES) MUST SIGN BELOW AS INCLUDED ON THE ATTACHED DEED OR CONVEYANCE.

Glen Alan Nedra
Property Owner Name (Please Print)

[Signature]
Property Owner Signature

2-9-2023
Date

Property Owner Name (Please Print)

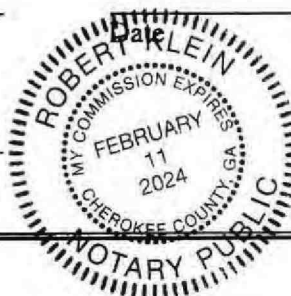
Property Owner Signature

Date

Property Owner Name (Please Print)

Property Owner Signature

[Signature]
Notary (form must be notarized)



Received by: Nancy Moon
City of Holly Springs, Georgia

Date: 02/20/2023



PROFESSIONAL
LAND SURVEYORS

Geocortex Essentials Parcel Report Cherokee County, GA

TIN: 15N15 074

Report generated 2/7/2023 5:59:25 PM



Vicinity Map

1: 21,969.18



Tax parcel highlighted in cyan

1: 5,036.85

Tax Parcel Information

Owner: CHEROKEE PMC LLC

Property Address: 500 E Rope Mill Rd, Canton 30115

Subdivision:

TIN: 15N15 074

PIN: 15-0592-0001

Mailing Address: 500 EAST ROPE MILL RD, CANTON, GA 30115

Acreage: 7.22

Lot #: -

PB/PG:

DB/PG:

This map is a user generated static output from an Internet mapping site and is for reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable.



PLANNING AND ZONING

April 5, 2023

Nancy Moon
Community Development Director
City of Holly Springs
3237 Holly Springs Parkway
Holly Springs, GA 30115

RE: A-04-2023 East Rope Mill Rd

Dear Mrs. Moon:

The annexation case A-04-2023 East Rope Mill Rd was on the agenda of the regular meeting of the Cherokee County Board of Commissioners on Tuesday, April 4, 2023. The applicant is requesting to annex and rezone one parcel on East Rope Mill Rd from County LI to City LI, for the development of two warehouse and office buildings on 0.6 acres.

Based on the staff review and discussion at the commission meeting, the Board of Commissioners voted unanimously to express that they have no land use objections concerning this annexation. However, there are some fire comments included in the staff analysis for review. I have attached the complete staff analysis for your use.

Feel free to reach out to me if you have any questions.

Sincerely,

A large, stylized handwritten signature in black ink, which appears to read "Kevin Turner". The signature is written over a horizontal line that spans the width of the page.

Kevin Turner, AICP
Deputy Director

STAFF REVIEW AND ANALYSIS OF ANNEXATION REQUEST FINAL 3/28/2023

Per O.C.G.A. § 36-36-113 (set forth in full at the end of this document for your ease of reference), a land use objection can be made by majority vote of the Board of Commissioners in the event of a material increase in burden upon the County which is quantifiable and otherwise meets the requirements of the statute. In order for a land use objection to be considered timely, it must be completed in time for the BOC to vote upon it in open session and served upon the annexing municipality within 45 days of receipt of notice of annexation via statutory overnight delivery or certified mail, return receipt requested

City	Holly Springs		
Case Number	A-04-2023	Applicant	Andrew Carmichael
Receipt of Annexation Notice Date			2/28/2023
Holly Springs Planning Commission Public Hearing			4/13/23
Meeting date the Board of Commissioners must decide whether to object.			4/4/2023
45 day period to object expires on			4/14/23
City Council Review & Decision			5/15/2023

Staff is requested to review the application for annexation and provide a response to the following questions.

	Yes	No
Is the property to be annexed contiguous to city jurisdictional boundary?	X	
Development Map designation	Regional Center	
Surrounding / Contiguous City Future Development Map	Parkway Corridor	
Surrounding County Future Development Map	Regional Center	
Does this annexation create an "island" of unincorporated land?		X

1) If the application is granted will there be a material increase in burden upon the County directly related to :		
	Yes	No
a) the proposed change in zoning or land use?		X
b) the proposed increase in density?		X

STAFF REVIEW AND ANALYSIS OF ANNEXATION REQUEST

FINAL 3/28/2023

c) infrastructure demands related to the proposed change in zoning or land use?	X
---	---

2) Will delivery of services be affected by the annexation?	Yes	No
		X
If the answer to (2) is yes, is the affect on delivery of services directly related to		
a) the proposed change in zoning or land use?		
b) the proposed increase in density?		
c) infrastructure demands related to the proposed change in zoning or land use?		
Note: Delivery of services may not be a basis for a valid objection but may be used in support of a valid objection if directly related to one or more of the subjects enumerated in items (a), (b), and/or (c) of Section 1 above.		

3) If there is a material increase in burden caused by items (a), (b), and/or (c) of Section 1 above, can your department provide evidence of any financial impact?	Yes	No
If the answer to (3) is yes, please provide the evidence		

4) Does the proposed change in zoning or land use result in a substantial change in the intensity of the allowable use of the property or a change to a significantly different allowable use?	Yes	No
		X
If the answer to (4) is no, does the proposed change in zoning or land use result in:		
	Yes	No

STAFF REVIEW AND ANALYSIS OF ANNEXATION REQUEST

FINAL 3/28/2023

a) a use which significantly increases the net cost of infrastructure?	X	
b) a use which significantly diminishes the value or useful life of a capital outlay project, as such term is defined in O.C.G.A. 48-8-110, which is furnished by the county to the area to be annexed?	X	
If the answer to 4(a) or 4(b) is yes, then:	Yes	No
c) Does the proposed change in zoning or land use differ substantially from the existing uses suggested for the property by the county's comprehensive land use plan?		
d) Does the proposed change in zoning or land use differ substantially from the existing uses permitted for the property pursuant to the county's zoning ordinance or its land use ordinances?		

Comments:

Planning and Zoning

The applicant wishes to annex 0.6+/- acres from a 7.22+/- acre parcel located at 500 East Rope Mill Rd and combine it with an existing parcel, 428 East Rope Mill Rd. This is for the development of two office/warehouse buildings. The parcel would be rezoned from County LI to City LI. According to the County's Future Development Map, the subject parcel is located within the Regional Center character area and LI is a primary use. Also, it is within the Holly Springs Growth Boundary.

Engineering

Coordinate with staff for future road improvements

Fire Marshal

- A water flow test shall be conducted to ensure adequate water supply for the development is available for firefighting. According to County GIS mapping there is an 8" waterline along East Rope Mill.
- Any future development of the property should be designed and built to meet minimum state fire codes.

Legal Review Results

No comment.

O.C.G.A. § 36-36-113. Reasons for objection to annexation

(a) The county governing authority may by majority vote object to the annexation because of a material increase in burden upon the county directly related to any one or more of the following:

(1) The proposed change in zoning or land use;

(2) Proposed increase in density; and

(3) Infrastructure demands related to the proposed change in zoning or land use.

(b) Delivery of services may not be a basis for a valid objection but may be used in support of a valid objection if directly related to one or more of the subjects enumerated in paragraphs (1), (2), and (3) of subsection (a) of this Code section.

(c) The objection provided for in subsection (a) of this Code section shall document the nature of the objection specifically providing evidence of any financial impact forming the basis of the objection and shall be delivered to the municipal governing authority by certified mail or statutory overnight delivery to be received not later than the end of the thirtieth calendar day following receipt of the notice provided for in [Code Section 36-36-111](#).

(d) In order for an objection pursuant to this Code section to be valid, the proposed change in zoning or land use must:

(1) Result in:

(A) A substantial change in the intensity of the allowable use of the property or a change to a significantly different allowable use; or

(B) A use which significantly increases the net cost of infrastructure or significantly diminishes the value or useful life of a capital outlay project, as such term is defined in [Code Section 48-8-110](#), which is furnished by the county to the area to be annexed; and

(2) Differ substantially from the existing uses suggested for the property by the county's comprehensive land use plan or permitted for the property pursuant to the county's zoning ordinance or its land use ordinances.

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COUNCIL AGENDA REPORT

FROM: Nancy Moon

SUBJECT: **MA-07-2023**, applicant requests rezoning of 20.10 +/- acres located off of East Cherokee Drive, Holly Springs, GA, tax parcels 118, 120, 121, and 124 of tax plat 15N26, from GC, General Commercial, to GC, General Commercial / MXD, Mixed Use

CUP-03-2023, applicant requests a conditional use permit for a Self-Storage Establishment for property located off of East Cherokee Drive, Holly Springs, GA, tax parcels 120 and 124 of tax plat 15N26

DATE: April 26, 2023

COUNCIL MEETING DATE: May 1, 2023

STAFF ANALYSIS

Applicant, Place Property Management, has requested rezoning of 20.10+/- acres from GC, General Commercial, to GC, General Commercial / MXD, Mixed Use for the development of a mixed-use development consisting of a three-story office/retail building (Place Property Management corporate building), an additional office/retail building, and an age-restricted rental cottage community. The developer for the residential component will be OneStreet. In addition, Turnstone Group, LLC is requesting a conditional use permit to construct a combination climate-controlled self-storage building with retail uses on the first floor along Hickory Road on a portion of the property that will remain GC zoning only.

The property is currently zoned GC and as such has already been determined by the Commission and by the City Council to support commercial uses. The addition of the Mixed-Use Zoning District would allow the residential component to be added to the development.

This project, previously, heard under cases MA-05-2022 and CUP-02-2022, included similar uses with a different site plan and building design for the self-storage facility. The new site plan shifts the storage building to be accessed off of Hickory Road rather than East Cherokee and away from the adjacent residential uses in unincorporated County. The residential uses expand into the previous location of the storage building on the southernmost part of the property. The site plan also includes a new road running through the property from Hickory Road to East Cherokee. 115 residential units are planned yielding a gross density of 5.72.

An updated site plan, traffic study and storage building design is included within the packet.

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A. Existing Land Use and Zoning Classification of Nearby Property

ADJACENT ZONING		ADJACENT DEVELOPMENT	
NORTH:	R-40 (County)	NORTH:	Cherokee County School District
SOUTH:	R-40 (County)	SOUTH:	SFR
EAST:	AG/R-40 (County) PDR	EAST:	SFR Woodhaven Court
WEST:	R-40 (County) PDR	WEST:	SFR Oakhaven

B. Zoning Proposal Review Standards; Study Required for Amendment

1. Whether the zoning proposal will permit a use that is suitable in view of the use and development of adjacent and nearby property?

The property is within an area with mixed uses including residential, public education, and a library. Proposed uses are allowed by right and by the issuance of a Conditional Use Permit in the GC zoning district. The proposed mixed-use zoning will permit the proposed residential to be added.

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

The development of the property should not adversely affect the existing use or usability of adjacent or nearby property. A 40' undisturbed/replanted buffer will be required adjacent to the residential uses.

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

The property is zoned GC and the property could be developed as currently zoned with all permitted uses.

4. 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, public safety, or schools?

The proposed requests will not result in an excessive or burdensome use of utilities, streets, or other public services. They will have no impact on the local school system. A revised traffic study was completed based on the addition of the new road. Traffic impact should be minimal as the proposed residential does not generate as much

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traffic, especially during peak hours. The office and retail should not impact the area greatly during peak times as the retail usually begins and ends operation after peak hours. The traffic generated by the storage building use would be negligible.

5. Whether the zoning proposal is in conformity with the policy and intent of the adopted Future Development Map (FDM)?

This property is planned for development within the Parkway Corridor character area. This character area follows Holly Springs Parkway and also encompasses land around interchanges of I-575. The Parkway Corridor is intended to provide primarily a commercial service function, i.e., retail sales, services, and offices, while maintaining quality development standards and sensitive transition to the Holly Springs Town Center. It also includes a high-density multi-family residential component.

Application: Existing and new commercial and high-density multi-family residential

Primary Future Land Uses: office, retail, service, high density multi-family residential

Zoning Districts: HDMFR, PD-C, NC, GC, OI, GV

6. Whether the zoning proposal is in conformity with the policies, objectives, and vision set forth by the Community Agenda (Comprehensive Plan) and other adopted policy documents?

This zoning proposal and conditional use permit request is in conformity with the policies and intent of the Comprehensive Plan. The request is consistent with the City's "Future Land Use Map" which projects commercial uses for the immediate area. Furthermore, the proposal is in compliance with the vision and objectives of the Community Agenda, primarily as follows:

- a) **Commercial Uses. Use the character areas and the Future Land Use Map (FLUM) to guide commercial growth and expansion for office/institutional, general commercial, and industrial opportunities (8.1, #1).**
- b) **Architectural Requirements. Utilize the adopted architectural requirements for the various character areas of the city, seeking to refine and enhance these requirements, as needed. Consistently enforce architectural regulations to promote a uniform and harmonious quality of development within respective character areas (8.1, #11).**
- c) **Conditional Uses. Continue to regulate the designated conditional uses, to protect the health, safety, welfare, natural environment, and character of the City of Holly Springs. Revise and expand conditional uses in the future as determined by Mayor and Council (8.1, #13).**

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- d) **Land Use Decisions.** Use the Future Development Map (FDM) as a guide when making land use decisions (map amendment requests) and reviewing other development proposals (8.1, #22).
 - e) **Housing Options.** Promote an adequate range of safe, affordable, inclusive, and resource efficient housing in the community. This may be achieved by encouraging development of a variety of housing types, sizes, costs, and densities in each neighborhood; promoting programs to provide housing for residents of all socio-economic backgrounds, including affordable mortgage finance options; instituting programs to address homelessness issues in the community; or coordinating with local economic development programs to ensure availability of adequate workforce housing in the community. (8.2, #1) (Quality Community Objective, #7, Regional Strategic Plan Goal-Housing).
 - f) **Seniors and Group Quarters Housing.** Attached housing for seniors and group quarters housing are encouraged to be located within mixed-use developments and along the Holly Springs Parkway corridor. (8.2, #3)
7. Whether an impact is expected on the environment, including, but not limited to, drainage, soil erosion, and sedimentation, flooding, air quality, and water quality and quantity?

The development of the property will be held to the environmental development standards for all local, state, and federal requirements.

8. 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?

The proposed development in conjunction with existing regulations of the Holly Springs Zoning Ordinance would create an aesthetically pleasing development blending with other developments in the surrounding area.

C. Conditional Use Proposal Review Standards

Under Attachment B in the application, the City asks each CUP applicant to complete 16 questions related to the proposed use. The applicant has completed these questions and they are attached in the Conditional Use Permit application.

The Conditional Use Permit for a Self-Storage Establishment requires the following regulations to be met:

5.4-40 Self-Storage Establishments: Self-Storage Establishments, also known as “Self Service Storage” and “Storage Facilities” are any real property designed and used for renting or leasing individual storage spaces, other than storage spaces which are leased or rented as an incident to the lease or rental of residential property or dwelling units, to which the occupants thereof have access for storing or removing their personal property. No occupant shall use a self-service storage

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facility for residential purposes. The purpose of this section is to mitigate the negative effects of impervious surfaces, stormwater runoff, bright lights and noise, to promote the aesthetic quality and operational safety of adjacent land uses, to promote diverse economic uses, and to ensure compatibility with adjacent uses and surrounding neighborhoods and businesses. In addition to an application for a conditional use permit, the applicant shall submit evidence sufficient to demonstrate compliance, and at all times thereafter remain compliant with the following standards:

- a.) Individual storage units shall be located within Self-Storage Establishment structures, primarily accessed from interior corridors. However, any individual storage space that is not accessed from an interior corridor, and whose individual unit door is accessed from the outside of the structure so that the unit door is visible from public rights-of-way or adjacent properties of dissimilar zoning or use, are to be adequately and sufficiently screened from view through the use of landscaping, plantings, walls, fencing or by use of other approved methods to emphasize architectural aesthetics and to blend in with adjacent uses.
- b.) All facades constructed in connection with Self-Storage Establishments and structures therewith, that are visible from public rights-of-way or adjacent properties, or dissimilar uses, shall be constructed of either brick, stone, or other City pre-approved masonry materials, or a combination thereof. Additionally, said structures shall also be constructed of materials and colors that are compatible with and that embody the forms and features of buildings in the area.
- c.) Self-Storage Establishments proposed and designed to be entirely self-contained, with no individual customer unit door(s) typically accessed from the outside of the structure, and with one or more levels (storage facility), shall be climate controlled, with no individual customer storage unit doors placed on the exterior of the structure. The architecture of these buildings shall be constructed consistent with the requirements of this section and other zoning codes, as well as the architecture of the immediate vicinity.
- d.) The owner/operator of Self-Storage Establishments shall provide an on-site Manager, who shall maintain and operate an office on the premises. Said office is required to be operated with personnel, open and occupied a minimum of forty (40) hours each seven- day week. Said operational hours are to be posted conspicuously on the premises, for public view.
- e.) A decorative fence or wall may be required on all street frontages, which shall be compatible with the architecture of the building(s).
- f.) The outdoor storage of vehicles and/or equipment as an ancillary use of the self-storage establishment business may be considered at the time of review by Mayor and City Council. Each vehicle and/or piece of equipment stored on the premises must be kept in an approved parking space, with drive aisles. All outdoor vehicle/equipment storage shall be completely shielded from views of public rights-of-way and buffered from adjacent properties and dissimilar uses. All other forms of outdoor storage are expressly prohibited.

Outdoor storage is not being requested.

- g.) The proposed height of self-storage establishment structures shall be reviewed through the zoning process. The Mayor and City Council shall have the discretion to restrict the height of said structures.
- h.) For “Warehousing,” “Storage Yard,” and other storage uses not intended for individual access by the public, please review the Light Industrial Zoning District. For businesses proposed to

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engage primarily in the outdoor storage of vehicles and/or equipment, please review the Light Industrial Zoning District.

D. Summary

The proposed uses, including the conditional use permit request for a Self-Storage Establishment are allowed uses within the GC, General Commercial zoning district with the addition of the Mixed-Use Overlay, subject to compliance with the applicable regulations. Surrounding zoning and land uses are compatible with the proposed land use. The development is in compliance with the Future Development Map and with the objectives of the Comprehensive Plan.

E. Planning Commission Recommendation

The Planning Commission conducted a public hearing on April 13, 2023. Two area residents spoke in opposition citing density, traffic, buffers, and the first rental product in the Hickory Flat Area as the main concerns. One area resident spoke in favor of the application; however, a request was made to remove the most southern entrance and construct a cul-de-sac in its place. Planning Commission recommended **APPROVAL (5-0) WITH STAFF STIPULATIONS**, of the **REZONING** request. They added a stipulation that the southernmost entrance on East Cherokee Drive be evaluated by the City Engineer for the determination of removal of the entrance and replacement with a cul-de-sac. In addition, the Planning Commission recommended **APPROVAL (5-0)** of the **CONDITIONAL USE PERMIT** request for a **SELF-STORAGE ESTABLISHMENT**.

F. Staff Recommendation

Staff recommends **APPROVAL** to rezone 20+/- acres, to **GC, General Commercial and MXD-1, Mixed Use**, with the following stipulations:

1. Lighting shall be environmentally sensitive, with developer making every effort to ensure that lighting is as unobtrusive as possible, utilizing fully-shielded LED lamps in compliance with the International Dark Sky Association, or equivalent organization.
2. Owner/developer shall coordinate with the Community Development Director and the City Arborist regarding open space and landscaping.
3. Owner/Developer shall be responsible for the installation of sidewalks, decorative streetlights, and curb and gutter along the road frontage of East Cherokee Drive and Hickory Road, as applicable, and shall conform to the design of the Holly Springs LCI Project 0008961, Pedestrian Improvements, as well as, the requirements of the Holly Springs Parkway District, as stated in Article 19, Design Guidelines for Model Zoning District, subject to the approval of the City Engineer and the County Engineer. The southernmost entrance on East Cherokee Drive shall be evaluated by the City Engineer for consideration of elimination of the entrance and replacement with a cul-de-sac.
4. Setbacks shall be as shown on the site plan entitled, "20-ACRE MIXED-USE DEVELOPMENT" and dated 04/04/2023.

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5. The residential component of the development shall be age-restricted and shall be limited to a maximum of 115 units.
6. The residential architectural style shall be of craftsman type and the exterior facade shall consist of brick, stone, stacked stone, cedar shake type and/or Hardi-plank and combinations thereof, one of which must be brick or stone, and follow the design guidelines as outlined in the Holly Springs Zoning Ordinance, Article 19, Design Guidelines for Model Zoning Districts.
7. Maintenance and occupancy specifications shall comply with the requirements of Article 5.2-5.E of the Holly Springs Zoning Ordinance.
8. In addition to the zoning requirements of the GC zoning district and MXD zoning district, all non-residential development shall follow the design guidelines as outlined in the Holly Springs Zoning Ordinance, Article 19, Design Guidelines for Model Zoning Districts.
9. The following uses shall be prohibited on this site:
 - a. Used Vehicle Sales, Lease, or Rental
 - b. Adult Entertainment
 - c. Cash, Check Cashing, and Pawn Establishments
 - d. Tattoo Parlors and Body Piercing Establishments
 - e. CBD and Hemp Oil Retail Establishments
 - f. Tire sales with outdoor storage
 - g. Cellular phone towers
 - h. Amusement parks
 - i. Animal hospitals/clinics with outdoor kennels
 - j. Go-kart, motor bike track

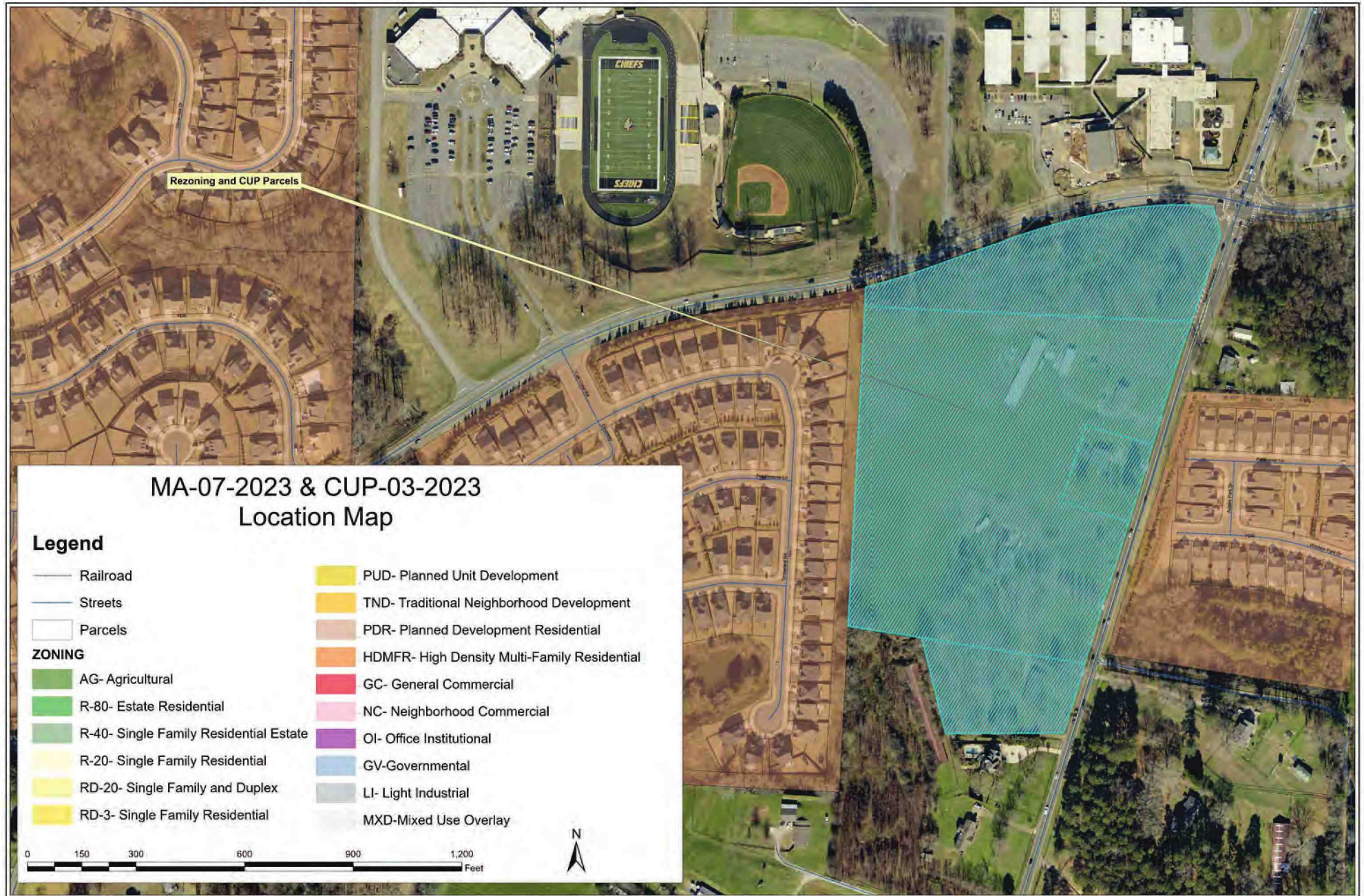
Staff recommends **APPROVAL** of a Conditional Use Permit for a **SELF-STORAGE ESTABLISHMENT**, with the following stipulations:

1. Lighting shall be environmentally sensitive, with developer making every effort to ensure that lighting is as unobtrusive as possible, utilizing fully-shielded LED lamps in compliance with the International Dark Sky Association, or equivalent organization.
2. Owner/Developer shall coordinate with the Community Development Director and the City Arborist regarding landscaping.
3. All improvements to Hickory Road shall be provided as per determination and recommendation of the City Engineer and County Engineer.
4. Owner/Developer shall be responsible for the installation of sidewalks, decorative streetlights, and curb and gutter along the road frontage of Hickory Road, as applicable, and shall conform to the design of the Holly Springs LCI Project 0008961, Pedestrian Improvements, as well as, the requirements of the Holly Springs Parkway District, as stated in Article 19, Design Guidelines for Model Zoning District, subject to the approval of the City Engineer and the County Engineer.

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5. In addition to the zoning requirements of the GC zoning district, all development shall follow the design guidelines as outlined in the Holly Springs Zoning Ordinance, Article 19, Design Guidelines for Model Zoning Districts.
6. Architectural design of the elevations shall be substantially consistent with the red brick rendering submitted with this application and included as Attachment A. Fifty percent (50%) of the first-floor uses of the structure shall be limited to the self-storage office, as well as, additional retail and office uses. These uses shall, at a minimum, utilize the entire frontage of the building adjacent to Hickory Road. Windows shall be tinted so that individual storage unit doors are not visible.
7. The following uses shall be prohibited on this site:
 - a. Used Vehicle Sales, Lease, or Rental
 - b. Adult Entertainment
 - c. Cash, Check Cashing, and Pawn Establishments
 - d. Tattoo Parlors and Body Piercing Establishments
 - e. CBD and Hemp Oil Retail Establishments
 - f. Tire sales with outdoor storage
 - g. Cellular phone towers
 - h. Amusement parks
 - i. Animal hospitals/clinics with outdoor kennels
 - j. Go-kart, motor bike track

*** The recommendations made herein are the opinions of the City of Holly Springs Staff and do not constitute a final decision. The Holly Springs City Council makes the final decision on all rezoning applications at their regularly scheduled meeting. Any site plan submitted as a part of this application is not considered approved and must go through the normal civil site plan review by the City of Holly Springs Community Development Department to ensure compliance with City regulations.*



Agenda Item VII-2



ARCHITECTURE
PLANNING
LANDSCAPE
ARCHITECTURE
DTJ DESIGN, Inc.
1101 1st Avenue, Suite 150
Boulder, Colorado 80501
T 303.443.7333
www.dtdesign.com



20-ACRE MIXED USE DEVELOPMENT

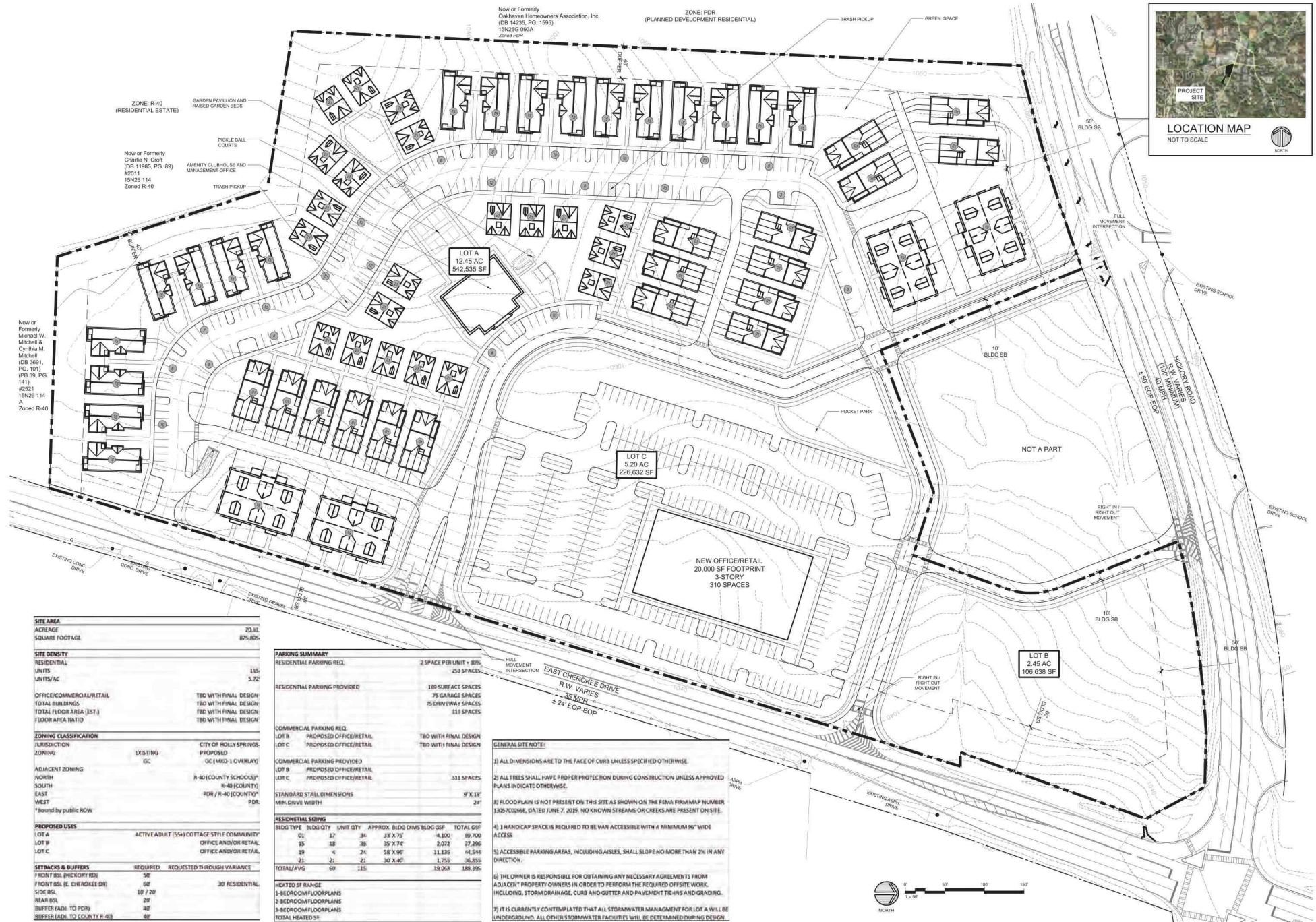
SW CORNER OF HICKORY ROAD & EAST CHEROKEE DRIVE
PIN 15-0395-0001 & 15-0326-0002
HOLLY SPRINGS, CHEROKEE COUNTY, GEORGIA

ONE STREET RESIDENTIAL
104 INTERSTATE N. PARKWAY EAST SE, ATLANTA, GA. 30339

DATE: 04/04/2023
PROJECT NO.: 2023055.10
REVISION: 04/04/2023

OVERALL PLAN

1 of 1



SITE AREA		20.32
ACREAGE		875,805
SITE DENSITY		115
RESIDENTIAL UNITS/AC		5.72
OFFICE/COMMERCIAL/RETAIL		TBD WITH FINAL DESIGN
TOTAL BUILDING AREA (EST.)		TBD WITH FINAL DESIGN
TOTAL FLOOR AREA (EST.)		TBD WITH FINAL DESIGN
FLOOR AREA RATIO		TBD WITH FINAL DESIGN
ZONING CLASSIFICATION		
SUBDIVISION		CITY OF HOLLY SPRINGS
ZONING		PROPOSED GC (MIXED-USE OVERLAY)
ADJACENT ZONING		R-40 (COUNTY SCHOOLS)
NORTH		R-40 (COUNTY)
SOUTH		PDR / R-40 (COUNTY)
EAST		PDR
WEST		PDR
*Based by public ROW		
PROPOSED USES		
LOT A		ACTIVE ADULT (55+) COTTAGE STYLE COMMUNITY
LOT B		OFFICE AND/OR RETAIL
LOT C		OFFICE AND/OR RETAIL
SETBACKS & BUFFERS		
FRONT BSL (HICKORY RD)		30' RESIDENTIAL
FRONT BSL (E. CHEROKEE DR)		50'
SIDE BSL		10' / 20'
REAR BSL		20'
BUFFER (ADJ. TO PDR)		40'
BUFFER (ADJ. TO COUNTY R-40)		40'

PARKING SUMMARY		
RESIDENTIAL PARKING REQ.		2 SPACE PER UNIT + 10% 253 SPACES
RESIDENTIAL PARKING PROVIDED		389 SURFACE SPACES 75 GARAGE SPACES 75 DRIVEWAY SPACES 339 SPACES
COMMERCIAL PARKING REQ.		TBD WITH FINAL DESIGN
LOT B	PROPOSED OFFICE/RETAIL	TBD WITH FINAL DESIGN
LOT C	PROPOSED OFFICE/RETAIL	TBD WITH FINAL DESIGN
COMMERCIAL PARKING PROVIDED		333 SPACES
LOT B	PROPOSED OFFICE/RETAIL	333 SPACES
LOT C	PROPOSED OFFICE/RETAIL	333 SPACES
STANDARD STALL DIMENSIONS		9' X 18'
MIN. DRIVE WIDTH		24'
RESIDENTIAL SIZING		
BEDS TYPE	BLDG DIMS	TOTAL GSF
01 17 34	33' X 75'	4,100 69,700
15 18 38	35' X 74'	2,672 37,296
19 4 24	38' X 96'	31,136 44,544
21 21 21	30' X 40'	1,755 18,895
TOTAL AVG	60 115	38,954 388,955
HEATED SF RANGE		
1-BEDROOM FLOORPLANS		
2-BEDROOM FLOORPLANS		
3-BEDROOM FLOORPLANS		
TOTAL HEATED SF		

GENERAL SITE NOTE:

- 1) ALL DIMENSIONS ARE TO THE FACE OF CURB UNLESS SPECIFIED OTHERWISE.
- 2) ALL TREES SHALL HAVE PROPER PROTECTION DURING CONSTRUCTION UNLESS APPROVED PLANS INDICATE OTHERWISE.
- 3) FLOODPLAIN IS NOT PRESENT ON THIS SITE AS SHOWN ON THE FEMA FIRM MAP NUMBER 1309-PC0206, DATED JUNE 7, 2019. NO KNOWN STREAMS OR CREEKS ARE PRESENT ON SITE.
- 4) HANDICAP SPACE IS REQUIRED TO BE VAN ACCESSIBLE WITH A MINIMUM 96" WIDE ACCESS.
- 5) ACCESSIBLE PARKING AREAS, INCLUDING AISLES, SHALL SLOPE NO MORE THAN 2% IN ANY DIRECTION.
- 6) THE OWNER IS RESPONSIBLE FOR OBTAINING ANY NECESSARY AGREEMENTS FROM ADJACENT PROPERTY OWNERS IN ORDER TO PERFORM THE REQUIRED OFF-SITE WORK, INCLUDING STORM DRAINAGE, CURB AND GUTTER AND PAVEMENT TIE-INS AND GRADING.
- 7) IT IS CURRENTLY CONTINGENT THAT ALL STORMWATER MANAGEMENT FOR LOT A WILL BE UNDERGROUND. ALL OTHER STORMWATER FACILITIES WILL BE DETERMINED DURING DESIGN.

Agenda Item VII-2



ARCHITECTURE
PLANNING
LANDSCAPE
ARCHITECTURE
DTJ DESIGN, Inc.
1101 Elm Avenue, Suite 150
Boulder, Colorado 80501
T 303.443.7333
www.dtdesign.com



LOCATION OF FULL ACCESS IS OK
POSSIBLE ROUNDABOUT

THE LEFT TURN BAY WILL NEED TO BE EVALUATED FOR THE ENTRANCE WHILE TAKING INTO CONSIDERATION THE QUEUE AT THE INTERSECTION OF HICKORY RD AND EAST CHEROKEE DRIVE

20-ACRE MIXED USE DEVELOPMENT

SW CORNER OF HICKORY ROAD & EAST CHEROKEE DRIVE
PIN 15-0395-0001 & 15-0326-0002
HOLLY SPRINGS, CHEROKEE COUNTY, GEORGIA

ONE STREET RESIDENTIAL

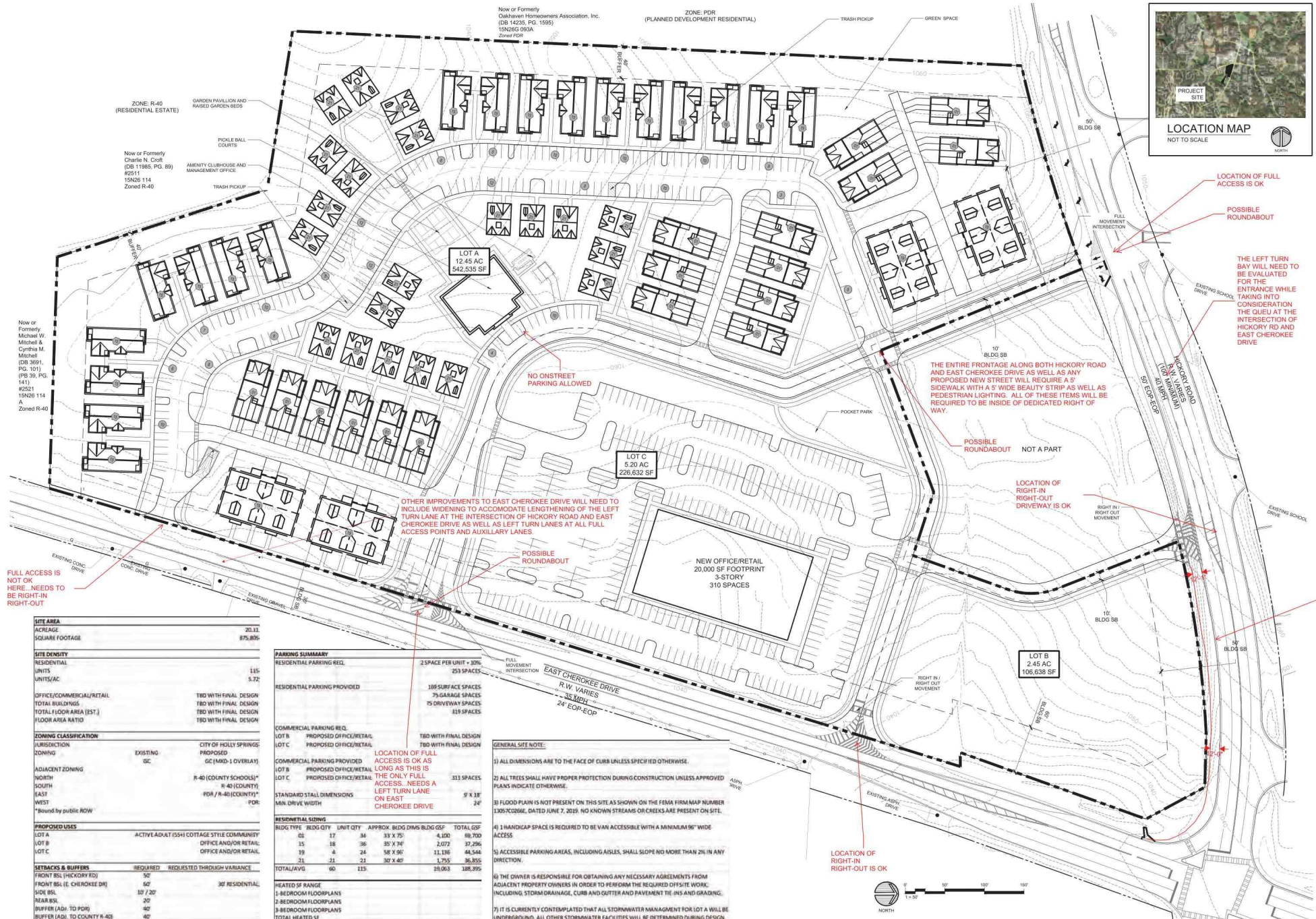
104 INTERSTATE N. PARKWAY EAST SE, ATLANTA, GA 30339

ADD DEDICATED RIGHT TURN LANE

DATE: 01/11/2023
DRAWN BY: MR. MS
CHECKED BY: DW
PROJECT NO.: 2023055.10
DESIGN DATE: 04/04/2023
REVISIONS:

OVERALL PLAN

1 of 1



PARKING SUMMARY									
RESIDENTIAL PARKING REQ.					2 SPACE PER UNIT = 10% 253 SPACES				
RESIDENTIAL PARKING PROVIDED					100 SURFACE SPACES 75 GARAGE SPACES TO DRIVEWAY SPACES 319 SPACES				
COMMERCIAL PARKING REQ.					TBD WITH FINAL DESIGN				
LOT B	PROPOSED OFFICE/RETAIL				TBD WITH FINAL DESIGN				
LOT C	PROPOSED OFFICE/RETAIL				TBD WITH FINAL DESIGN				
COMMERCIAL PARKING PROVIDED					LOCATION OF FULL ACCESS IS OK AS LONG AS THIS IS THE ONLY FULL ACCESS. NEEDS A LEFT TURN LANE ON EAST CHEROKEE DRIVE				
LOT B	PROPOSED OFFICE/RETAIL								
LOT C	PROPOSED OFFICE/RETAIL								
STANDARD STALL DIMENSIONS					9' X 18'				
MIN DRIVE WIDTH					24'				
RESIDENTIAL SIZES									
BLDG TYPE	BLDG QTY	UNIT QTY	APPROX.	BLDG DIMS	BLDG GSF	TOTAL GSF			
01	17	84	33' X 75'		4,100	88,700			
15	18	36	35' X 74'		2,072	37,296			
19	4	24	58' X 96'		11,136	44,544			
21	21	21	30' X 40'		1,755	36,855			
TOTAL/AVG	60	115			28,063	188,395			
HEATED SP RANGE									
1-BEDROOM FLOORPLANS									
2-BEDROOM FLOORPLANS									
3-BEDROOM FLOORPLANS									
TOTAL HEATED SF									

GENERAL SITE NOTE:

- 1) ALL DIMENSIONS ARE TO THE FACE OF CURB UNLESS SPECIFIED OTHERWISE.
- 2) ALL TREES SHALL HAVE PROPER PROTECTION DURING CONSTRUCTION UNLESS APPROVED PLANS INDICATE OTHERWISE.
- 3) FLOOD PLAIN IS NOT PRESENT ON THIS SITE AS SHOWN ON THE FEMA FIRM MAP NUMBER 13057C0266, DATED JUNE 7, 2019. NO KNOWN STREAMS OR CREEKS ARE PRESENT ON SITE.
- 4) 1 HANDICAP SPACE IS REQUIRED TO BE VAN ACCESSIBLE WITH A MINIMUM 96" WIDE ACCESS.
- 5) ACCESSIBLE PARKING AREAS, INCLUDING AISLES, SHALL SLOPE NO MORE THAN 2% IN ANY DIRECTION.
- 6) THE OWNER IS RESPONSIBLE FOR OBTAINING ANY NECESSARY AGREEMENTS FROM ADJACENT PROPERTY OWNERS IN ORDER TO PERFORM THE REQUIRED OFF-SITE WORK, INCLUDING STORM DRAINAGE, CURB AND GUTTER AND PAVEMENT TIE-INS AND GRADING.
- 7) IT IS CURRENTLY CONTEMPLATED THAT ALL STORMWATER MANAGEMENT FOR LOT A WILL BE UNDERGROUND. ALL OTHER STORMWATER FACILITIES WILL BE DETERMINED DURING DESIGN.

FULL ACCESS IS NOT OK HERE... NEEDS TO BE RIGHT-IN RIGHT-OUT

OTHER IMPROVEMENTS TO EAST CHEROKEE DRIVE WILL NEED TO INCLUDE WIDENING TO ACCOMMODATE LENGTHENING OF THE LEFT TURN LANE AT THE INTERSECTION OF HICKORY ROAD AND EAST CHEROKEE DRIVE AS WELL AS LEFT TURN LANES AT ALL FULL ACCESS POINTS AND AUXILIARY LANES.

THE ENTIRE FRONTAGE ALONG BOTH HICKORY ROAD AND EAST CHEROKEE DRIVE AS WELL AS ANY PROPOSED NEW STREET WILL REQUIRE A 5' SIDEWALK WITH A 5' WIDE BEAUTY STRIP AS WELL AS PEDESTRIAN LIGHTING. ALL OF THESE ITEMS WILL BE REQUIRED TO BE INSIDE OF DEDICATED RIGHT OF WAY.

LOCATION OF RIGHT-IN RIGHT-OUT DRIVEWAY IS OK

RIGHT IN / RIGHT OUT MOVEMENT

RIGHT IN / RIGHT OUT MOVEMENT

RIGHT IN / RIGHT OUT MOVEMENT

RIGHT IN / RIGHT OUT MOVEMENT

RIGHT IN / RIGHT OUT MOVEMENT

RIGHT IN / RIGHT OUT MOVEMENT

RIGHT IN / RIGHT OUT MOVEMENT

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RIGHT IN / RIGHT OUT MOVEMENT

RIGHT IN / RIGHT OUT MOVEMENT

RIGHT IN / RIGHT OUT MOVEMENT

RIGHT IN / RIGHT OUT MOVEMENT

RIGHT IN / RIGHT OUT MOVEMENT

LOT ADJUSTMENT SURVEY FOR
**ONESTREET RESIDENTIAL
PLACE PROPERTY MANAGEMENT**
LOCATED IN LAND LOTS 326 & 395
15th DISTRICT, 2nd SECTION, CITY OF HOLLY SPRINGS
CHEROKEE COUNTY, GEORGIA
FIELD DATE: SEPTEMBER 25, 2020
PLAT DATE: FEBRUARY 15, 2023

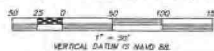
THE PURPOSE OF THIS PLAT IS TO RECONFIGURE PARCELS 15028, 1116, 120, 121 & 124 FOR RE-ZONING PURPOSES. EXISTING INTERIOR IMPROVEMENTS NOT SHOWN.

ZONING CERTIFICATE

THIS PLAT HAS BEEN ADMINISTEREDLY REVIEWED FOR COMPLIANCE WITH THE CITY OF HOLLY SPRINGS ZONING ORDINANCE AND IS APPROVED FOR RECORDING.

ZONING ADMINISTRATOR

DATE



GENERAL NOTES:

THE FIELD DATA UPON WHICH THIS PLAT IS BASED HAS AN ANGULAR ERROR OF 2.0 SECONDS PER ANGLE POINT AND A PRECISION RATIO OF 1 IN 36,853. IT WAS BEEN ADJUSTED USING THE COMPOUND RULE. EQUIPMENT USED TO OBTAIN THESE MEASUREMENTS WAS A TOPCON GTS-235.

THE DATA SHOWN ON THIS PLAT HAS A CLOSURE PRECISION RATIO OF 1 IN 245,860.

UNLESS OTHERWISE INDICATED, ALL IR'S ARE 6" REBAR.

BEARINGS ARE CALCULATED FROM ANGLES TURNED FROM A SINGLE ORIO BASELINE.

ACCORDING TO THE CURRENT T-1-A OFFICIAL FLOOD HAZARD MAP, COMMUNITY PANEL NO. 13052, DATED JUNE 2, 2018, THIS PROPERTY IS NOT IN AN AREA HAVING SPECIAL FLOOD HAZARDS.

ALL MATTERS OF TITLE ARE EXCEPTED.

THIS SURVEY WAS PREPARED WITHOUT THE BENEFIT OF A TITLE SEARCH. THERE MAY BE EASEMENTS OR OTHER ENCUMBRANCES NOT SHOWN.

THE SURVEY AND PLAT SHOWN HEREON IS NOT INTENDED FOR USE OR RELIANCE BY ANY PARTIES OR ENTITIES NOT SPECIFICALLY LISTED IN THE TITLE. UNAUTHORIZED THIRD PARTIES SHALL INDEMNIFY AND HOLD BARTON SURVEYING, INC. HARMLESS AGAINST ANY AND ALL LIABILITY FOR ANY LOSS ARISING OUT OF OR RELATED TO RELIANCE BY ANY THIRD PARTY ON WORK PERFORMED THEREUNDER, OR THE CONTENTS OF THE SURVEY.

OWNER OF RECORD: PLACE PROPERTY MANAGEMENT, LLC.

REFERENCES:

- 1) DE 1414, PG. 1808
- 2) DE 1414, PG. 1814
- 3) DE 1414, PG. 1789
- 4) PG 2, PG. 76
- 5) DE 867, PG. 237
- 6) DE 4353, PG. 231
- 7) DE 4353, PG. 235
- 8) DE 1414, PG. 2179
- 9) TOPOGRAPHIC SURVEY FOR PLACE PROPERTY MANAGEMENT, PREPARED BY BARTON SURVEYING, INC., DATED JUNE 16, 2020, REVISED SEPTEMBER 10, 2020
- 10) TOPOGRAPHIC SURVEY FOR PLACE PROPERTY MANAGEMENT, PREPARED BY BARTON SURVEYING, INC., DATED SEPTEMBER 25, 2020, REVISED NOVEMBER 18, 2020

EXISTING ZONING PER 2017 MAP, GC.

THE UNDERGROUND UTILITIES SHOWN HEREON ARE BASED ON LOCATION OF MARKINGS PROVIDED IN 2020 BY: UTILITY SURVEY, LLC
154 GRANT ROAD
FAIRVIEW, GA 30075
PHONE: 404-312-6812

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

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

UNDERGROUND UTILITY LEGEND

- G = GAS LINE
- COM = UNDERGROUND COMMUNICATION
- EE = UNDERGROUND ELECTRIC
- P = UNDERGROUND POWER FOR LIGHT POLES
- CS = SANITARY SEWER
- W = WATER LINE

CONTRACTOR SHALL HAVE UNDERGROUND UTILITIES RE-MARKED PRIOR TO ANY EXCAVATION ACTIVITIES.



SURVEYOR'S CERTIFICATE
AS REQUIRED BY SUBSECTION (b) OF O.C.G.A. SECTION 14-2-61, THIS PLAT HAS BEEN PREPARED BY A LICENSED SURVEYOR AND APPROVED BY ALL APPLICABLE LOCAL AGENCIES FOR RECORDING AS EXEMPTED BY APPLICABLE STATUTES. THE SURVEYOR'S CERTIFICATE OF RECORDING AND OF RECORDING OF THE PLAT SHALL BE CONTAINED WITHIN THE PLAT. THE SURVEYOR'S CERTIFICATE OF RECORDING AND OF RECORDING OF THE PLAT SHALL BE CONTAINED WITHIN THE PLAT. THE SURVEYOR'S CERTIFICATE OF RECORDING AND OF RECORDING OF THE PLAT SHALL BE CONTAINED WITHIN THE PLAT.

DRAFT - ISSUED FOR REVIEW PRIOR TO APPROVAL
RECORDED IN LAND SURVEY NO. 267
DATE

BARTON SURVEYING, INC.
3003 HOLLY SPRINGS PARKWAY, SUITE 101
CANTON, GEORGIA 30115
(770) 343-2010
(LICENSE NO. 127-000181)

Attachment A



**MAP AMENDMENT (REZONING) AND CONDITIONAL USE PERMIT APPLICATION**

Adopted by Mayor and Council on February 23, 2006

For Application Procedures, See p. 8

APPLICATION MA-_____

APPLICATION CUP-_____

HEARING DATE_____

DATE OF APPLICATION Revised 2-16-2023

APPLICANT Place Property Management

OWNER Same as Applicant
(If other than applicant)

ADDRESS 201 Gateway Drive

ADDRESS_____

Canton GA

ZIP CODE 30115

PHONE_____

ZIP CODE_____

PHONE_____

EMAIL phuff@samslarkinhuff.com

SIGNATURE_____

SIGNATURE_____

Attorney for Applicant

APPLICANT OR REPRESENTATIVE MUST ATTEND MEETING OR APPLICATION WILL NOT BE CONSIDERED

PRESENT ZONING DISTRICT(S) GC

REQUESTED ZONING DISTRICT GC with MXD

REQUESTED CONDITIONAL USE(S)_____

PROPERTY LOCATION/ADDRESS west side of East Cherokee Dr., south of Hickory

MAP NUMBER 15N26

PARCEL NUMBER(S) 124, 120, 121 & 118

LAND LOT(S) 326 & 395

DISTRICT(S) 15th

SECTION(S)_____

ACREAGE 20.102

SEWAGE DISPOSAL TYPE Public

UTILITIES AVAILABLE W & S

DESCRIPTION OF PROPOSED DEVELOPMENT AND/OR CONDITIONAL USE REQUEST:

Applicant owns 22 acres of GC property and proposes a MXD classification on 20.102 acres to facilitate a mixed use development. The MXD proposal includes a OneStreet senior residential community that will wrap around a three story office building and adjacent commercial parcels. The remaining 2.320 acres shall remain GC and is seeking a separate CUP for a self-storage facility with first floor commercial.

(COMPLETE ON ATTACHED PAPER IF NECESSARY)

The following information must be provided with completed application:

- ___ WARRANTY DEED
- ___ TAX DOCUMENTATION
- ___ SURVEY PLAT BY REGISTERED SURVEYOR
- ___ 10 COPIES OF SITE DEVELOPMENT PLAN BY REGISTERED SURVEYOR
- ___ INDIVIDUAL FOLDED TO 8.5"x11" (SEE p.7 FOR REQUIREMENTS)
- ___ CAMPAIGN CONTRIBUTION DISCLOSURE STATEMENT (ATTACHMENT A)
- ___ FOR CONDITIONAL USE REQUESTS, COMPLIANCE WITH SECTION 5.4
- ___ FOR CONDITIONAL USE REQUESTS, COMPLETE ATTACHMENT B
- ___ FILING FEES\$_____ RECEIPT#_____ CHECK#_____

(APPLICANT DO NOT WRITE BELOW THIS LINE)**PLANNING COMMISSION RECOMMENDATION:**

APPROVED _____

STIPULATIONS_____

DISAPPROVED _____

TABLED _____

CITY COUNCIL DECISION:

APPROVED _____

STIPULATIONS_____

DISAPPROVED _____

TABLED _____

Application Information

- DRAFT
- (1) Whether the zoning proposal will permit a use that is suitable in view of the use and development of adjacent and nearby property? *The property is zoned GC and it is anticipated for a senior living component. The OneSteet proposal is for a cottage style senior housing adjacent to the Oakhaven neighborhood. The proposed age-restricted community will create a good transition between the existing neighborhood and GC uses along East Cherokee Dr.*
 - (2) Whether the zoning proposal will adversely affect the existing use or usability of adjacent or nearby property? *The age -restricted community will have a 40-foot buffer adjacent to the Oakhaven neighborhood which will create a good transition from the GC uses. The community will be a relative quiet neighborhood with landscaping maintained by a professional company during the week. The use will produce l noise than either commercial or traditional suburban residential uses.*
 - (3) Whether the property to be affected by the zoning proposal has a reasonable economic use as currently zoned? *The 22-acre site all zoned GC without a MXD to allow for some residential component would make the property difficult to develop.is much more compatible for the area.*
 - (4) 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, public safety, or schools? *The age-restricted use will not add any students but have a significant tax base. The traffic created by the age-restricted component is less than most commercial uses and less than a suburban, non-age restricted community.*
 - (5) Whether the zoning proposal is in conformity with the policy and intent of the adopted Future Development Map (FDM) and Future Land Use Map (FLUM)? *The Future Development Map designates the property as Parkway Corridor. This designation includes high-intensity commercial and high-density residential. The mixed use proposal with 11 acres of age-restricted housing is consistent with this designation.*
 - (6) Whether the zoning proposal is in conformity with the policies, objectives, and vision set forth by the Community Agenda (Comprehensive Plan) and other adopted policy documents? *The city has a goal of creating a community with a mixture of housing options. The age-restricted rental housing option is desperately needed in the area. There are assisted-living options in institutional buildings and there are for sale cottages that sell immediately because of excess demand. Having a rental option for seniors is needed and will allow some seniors to leave single family homes that they can no longer maintain and allow it to be purchased by younger buyers. The market shows there are a lot of seniors, often widows or widowers, that live in the area and need single-level living but have no options in their community.*

DRAFT

Application Information

- (7) Whether an impact is expected on the environment, including, but not limited to, drainage, soil erosion, and sediment. The development will comply with all environmental requirements. transportation, flooding, air quality, and water quality and quantity? *The development will comply with all environmental and engineering requirements.*
- (8) 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 is a great need for senior housing in Hickory Flat. It only takes a mobility issue such as Parkinson to require a move to a single-level living. By providing housing that is suited for seniors allows them to live independently longer.*

DRAFT

ATTACHMENT TO APPLICATION FOR PUBLIC HEARING

Titleholder PLACE PROPERTY MANAGEMENT, LLC:

TIN#: 15N26 124, 15N26 120, 15N26 121 & 15N26 118

The undersigned(s) below, or as attached, is the owner of the property considered in this application.

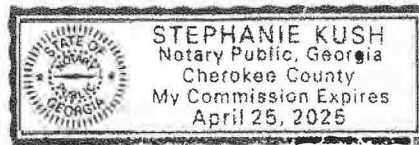
Steph Blue 5/6/22
Place Property Management, LLC Date

Address: 201 Gateway Dr Canton GA 30145

Telephone No.: (770) 841 0913

Stephanie KUSH
Signature of Notary Public

Date: 5/6/22



DRAFT

CERTIFICATE REGARDING CORPORATE AUTHORITY TO PURSUE PUBLIC HEARING

1.

My name is Troy Place. I am the officer who is delegated the responsibility for authenticating records of **PLACE PROPERTY MANAGEMENT, LLC**, Domestic Limited Liability Company ("Property Owner Company"). I am of legal age and suffer from no disabilities which would affect my competence to give this Certificate which is being given on my own personal knowledge for use with respect to the Public Hearing Application regarding certain real property owned by the Titleholder located in the City of Holly Springs, Cherokee County, Georgia.

2.

In accordance with the Requirements for completing a City of Holly Springs Public Hearing Application, I hereby attest on behalf of the Property Owner Company that an authorized representative of Property Owner Company has reviewed the Public Hearing Application and related documents which are being filed simultaneously therewith on behalf of the Public Hearing Company (collectively, the "Public Hearing Application") to which this Certificate is attached and hereby certify:

- (a) That corporate seal or facsimile affixed to the Public Hearing Application is in fact the seal of the Property Owner Company or a true facsimile thereof; and
- (b) That the officer or other representative of the Property Owner Company who executed the Public Hearing Application does in fact occupy the official position indicated, that the position that the signer occupies has the authority to execute the Public Hearing Application on behalf of the Property Owner Company, and that the signature of said officer or other representative is genuine; and
- (c) That the execution of the Public Hearing Application and the filing of the Public Hearing Application on behalf of the Property Owner Company by the officer or other representative of the Property Owner Company has been duly authorized by the Property Owner Company.

PLACE PROPERTY MANAGEMENT, LLC

By: Troy Place

Print Name: Troy Place

Its: managing member

DRAFT

**MAP AMENDMENT (REZONING) AND CONDITIONAL USE PERMIT APPLICATION**

Adopted by Mayor and Council on February 23, 2006

For Application Procedures, See p. 8



APPLICATION MA-_____

APPLICATION CUP-_____

HEARING DATE _____

DATE OF APPLICATION _____ Revised 02/16/2023

APPLICANT Turnstone Group LLCOWNER Place Property Management, LLC
(If other than applicant) _____ADDRESS 1170 Peachtree Street, NE
Atlanta, GeorgiaADDRESS 201 Gateway Drive
Canton, GeorgiaZIP CODE 30309 PHONE (404) 477-6180ZIP CODE 30119 PHONE (770) 841-0913EMAIL agoldstein@turnstonegroup.comSIGNATURE _____
Parks F. Huff, Attorney for ApplicantSIGNATURE See Attached Form**APPLICANT OR REPRESENTATIVE MUST ATTEND MEETING OR APPLICATION WILL NOT BE CONSIDERED**PRESENT ZONING DISTRICT(S) GCREQUESTED ZONING DISTRICT CUP for Self StorageREQUESTED CONDITIONAL USE(S) Self StoragePROPERTY LOCATION/ADDRESS South side of Hickory Road; west of East Cherokee Drive.MAP NUMBER 15N26PARCEL NUMBER(S) 120 & 124LAND LOT(S) 0395DISTRICT(S) 15 SECTION(S) _____ACREAGE 2.13 SEWAGE DISPOSAL TYPE Public UTILITIES AVAILABLE W&SDESCRIPTION OF PROPOSED DEVELOPMENT AND/OR CONDITIONAL USE REQUEST: _____
CUP is for a self storage facility with first floor commercial.**(COMPLETE ON ATTACHED PAPER IF NECESSARY)**

The following information must be provided with completed application:

- ___ WARRANTY DEED
- ___ TAX DOCUMENTATION
- ___ SURVEY PLAT BY REGISTERED SURVEYOR
- ___ 10 COPIES OF SITE DEVELOPMENT PLAN BY REGISTERED SURVEYOR
- ___ INDIVIDUAL FOLDED TO 8.5"x11" (SEE p.7 FOR REQUIREMENTS)
- ___ CAMPAIGN CONTRIBUTION DISCLOSURE STATEMENT (ATTACHMENT A)
- ___ FOR CONDITIONAL USE REQUESTS, COMPLIANCE WITH SECTION 5.4
- ___ FOR CONDITIONAL USE REQUESTS, COMPLETE ATTACHMENT B
- ___ FILING FEES \$ _____ RECEIPT# _____ CHECK# _____

(APPLICANT DO NOT WRITE BELOW THIS LINE)**PLANNING COMMISSION RECOMMENDATION:**

APPROVED _____ STIPULATIONS _____

DISAPPROVED _____ TABLED _____

CITY COUNCIL DECISION:

APPROVED _____ STIPULATIONS _____

DISAPPROVED _____ TABLED _____

DRAFT

CERTIFICATE REGARDING CORPORATE AUTHORITY TO PURSUE PUBLIC HEARING

1.

My name is Charles Johnson am the secretary, assistant secretary or other officer to whom the operating agreement has delegated the responsibility for authenticating records of the company TURNSTONE GROUP, a Foreign Limited Liability Company (the "Applicant"). I am of legal age and suffer from no disabilities which would affect my competence to give this Certificate which is being given on my own personal knowledge for use with respect to the Applicant's ability to file a Public Hearing Application for certain real property located in the City of Holly Springs.

2.

In accordance with the requirements for completing a public hearing application, I hereby attest on behalf of the Applicant that I have reviewed the Application and related documents which are being filed simultaneously therewith by the Applicant Company (collectively, the "Public Hearing Application") to which this Certificate is attached and hereby certify:

- (a) That signature or facsimile affixed to the Application is in fact the seal of the Applicant and is a true representation thereof; and
- (b) That the officer or other representative of the Applicant who executed the Application does in fact occupy the official position indicated, that the position that the signer occupies has the authority to execute the Application on behalf of the Applicant, and that the signature of said officer or other representative is genuine; and
- (c) That the execution of the Application and the filing of the Application by the Applicant is with the express permission of the Applicant Company.

TURNSTONE GROUP LLC

Chl Johnson (SEAL)

By: Charles E Johnson

Its: CEJ

DRAFT

ATTACHMENT TO APPLICATION FOR PUBLIC HEARING

Applicant: TURNSTONE GROUP, LLC

Titleholder: PLACE PROPERTY MANAGEMENT, LLC

TIN#: 15N26118

The undersigned(s) below, or as attached, is the owner of the property considered in this application.

Tracy Place, Managing Member LLC. 3/3/22
Place Property Management, LLC Date

Address: 201 Gateway Dr Canton GA 30115

Telephone No.: (770) 841 0913

Johnathan Parks
Signature of Notary Public

Date: 3/3/2022



DRAFT

CERTIFICATE REGARDING CORPORATE AUTHORITY TO PURSUE PUBLIC HEARING

1.

My name is Troy Place. I am the officer who is delegated the responsibility for authenticating records of **PLACE PROPERTY MANAGEMENT, LLC**, Domestic Limited Liability Company ("Property Owner Company"). I am of legal age and suffer from no disabilities which would affect my competence to give this Certificate which is being given on my own personal knowledge for use with respect to the Public Hearing Application regarding certain real property owned by the Titleholder located in the City of Holly Springs, Cherokee County, Georgia.

2.

In accordance with the Requirements for completing a City of Holly Springs Public Hearing Application, I hereby attest on behalf of the Property Owner Company that an authorized representative of Property Owner Company has reviewed the Public Hearing Application and related documents which are being filed simultaneously therewith on behalf of the Public Hearing Company (collectively, the "Public Hearing Application") to which this Certificate is attached and hereby certify:

- (a) That corporate seal or facsimile affixed to the Public Hearing Application is in fact the seal of the Property Owner Company or a true facsimile thereof; and
- (b) That the officer or other representative of the Property Owner Company who executed the Public Hearing Application does in fact occupy the official position indicated, that the position that the signer occupies has the authority to execute the Public Hearing Application on behalf of the Property Owner Company, and that the signature of said officer or other representative is genuine; and
- (c) That the execution of the Public Hearing Application and the filing of the Public Hearing Application on behalf of the Property Owner Company by the officer or other representative of the Property Owner Company has been duly authorized by the Property Owner Company.

PLACE PROPERTY MANAGEMENT, LLC

By: Troy Place

Print Name: Troy Place, Managing Member

Its: Managing Member

Johnathan Parks
Notary Public

Date: 3/3/2022

(NOTARY SEAL)



DRAFT

CONDITIONAL USE PERMIT APPLICATION QUESTIONS

1. Please verify that the proposed use complies with all of the additional stipulations by use, if any, as set forth by Section 5.4, Article 5.

We comply with all the relevant stipulations.

2. State the proposed business name, brand, flag, and/or franchise.

CubeSmart.

3. Explain in detail what services the proposed conditional use business will provide. *Renting of units at an indoor climate-controlled self-storage facility. Additional merchandise for sale related to moving and storing items including boxes, tape, locks, etc.*

4. Has a business plan or model been completed for this proposed conditional use business?
Yes.

5. Why was this specific location chosen for this proposed establishment?

Residential growth in the area makes this site attractive – close to the commercial area of Hickory Flat and Holly Springs. High traffic counts.

6. What is the projected date that the proposed conditional use business will open?

Twelve months for the construction time, so likely a summer 2023 opening.

7. How many employees are expected to work at the proposed conditional use business?

Two to three employees.

8. What are the expected hours of operation for the proposed conditional use business?

Proposed (based on our other facility in Fayetteville):

Office Hours

Monday–Friday: 9:30 AM–6:00 PM

Saturday: 8:30 AM–5:00 PM

Sunday: 11:00 AM–3:00 PM

Access Hours (with Code or Key Fob)

Daily: 6:00 AM–10:00 PM

9. What licensing requirements, if any, are mandated by the state for this business to operate?
Do the proprietors of this business already possess these credentials?

No specific license other than a general business license.

DRAFT

- 10.** Does the proposed conditional use business conform with the nearby uses already in existence?

Yes, this is a needed service in the area with the recent residential growth. Most customers will be from within a 3-mile radius.

- 11.** Was a feasibility study conducted that provides evidence that the local market demands such a business use? Or is such a study available?

An internal demand study was done checking rates and availability of units in the area. A more formal feasibility will be done at a later time before we received a construction loan.

- 12.** Will the proposed conditional use business create a nuisance or disturbance to nearby or adjacent properties?

No, there will be limited traffic (usually under 10 cars a day will visit the property) and lighting will just be on the property for security.

- 13.** Is the proposed conditional use business a service that is similar or will overlap a nearby establishment already in existence?

No, there are no storage facilities in immediate area and any storage facilities within a 3-mile radius have high occupancy and good rates which shows there is a demand for an additional facility.

- 14.** Will the services provided by the proposed conditional use business complement and correspondent well with the intended character of the respective zoning district area?

Yes, with the residential growth in area of senior housing and small lot homes, self-storage is a needed service that will benefit the local homeowners as well as schools, non-profits, and commercial customers that will use the facility to store equipment, materials, boxes.

- 15.** Will the business have adequate facilities and parking to accommodate the proposed use? If in the Neighborhood Commercial District (NC), could nearby neighborhood residents and local pedestrians be expected to frequent this proposed business establishment without the use of an automobile?

Yes, we will provide what is required.

- 16.** If in the Neighbor Commercial District (NC), could nearby neighborhood residents and local pedestrians be expected to frequent this proposed business establishment without the use of an automobile?

Most people will use an automobile as they will be storing boxes and/or several items to bring to the facility.

**TRAFFIC IMPACT STUDY
FOR
PROPOSED RESIDENTIAL DEVELOPMENT
ON HICKORY ROAD AT EAST CHEROKEE DRIVE
CHEROKEE COUNTY, GEORGIA**



Prepared for:

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March 28, 2023
A & R Project # 22-080

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1.0 INTRODUCTION

The purpose of this study is to determine the traffic impact that will result from the proposed residential development located in the southwest corner of the intersection of East Cherokee Drive and Hickory Road in Cherokee County, Georgia. The traffic analysis evaluates current operations compared to the future conditions with traffic generated by the development. The proposed residential development will consist of 115 senior adult multifamily housing units.



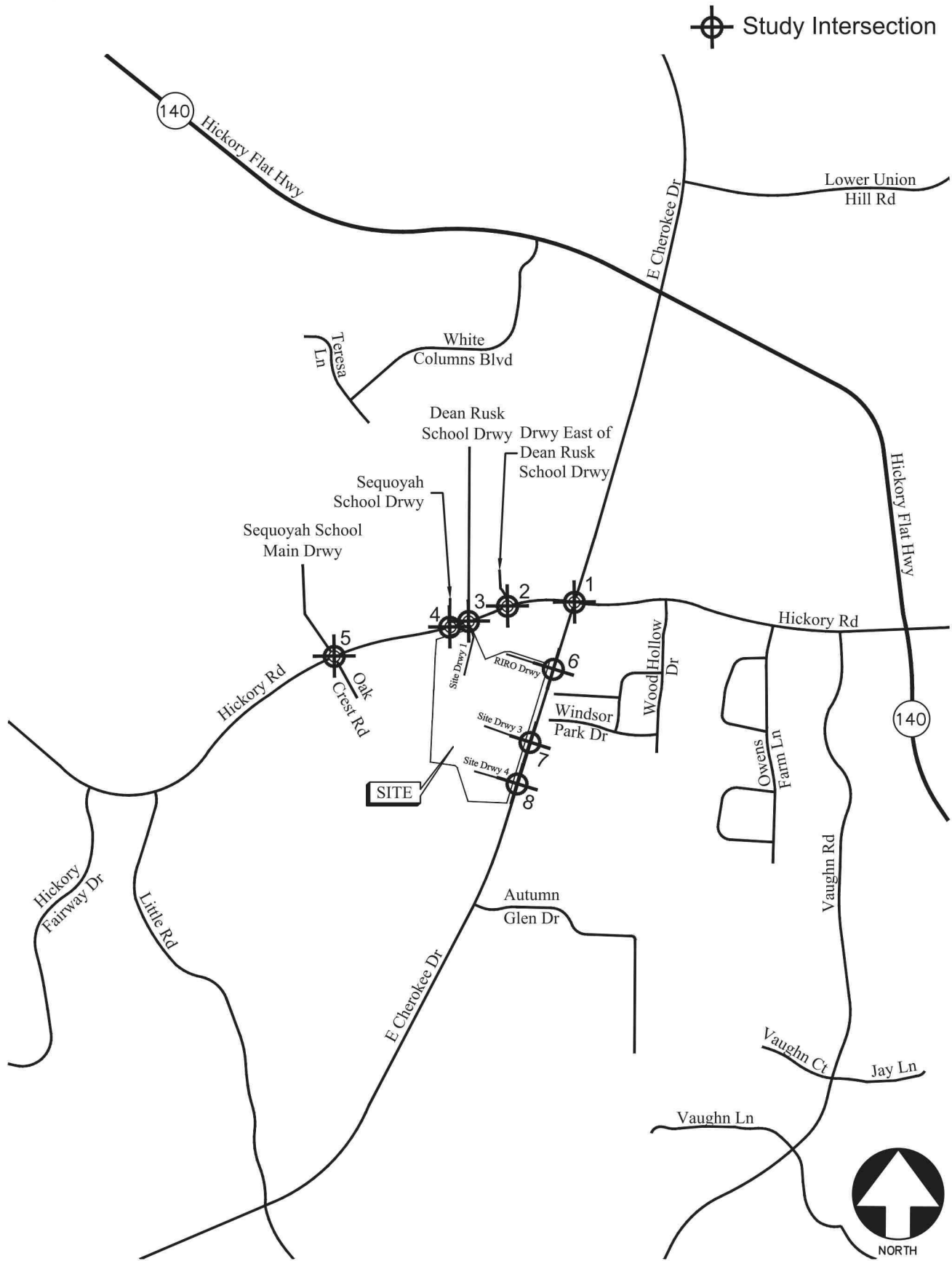
The development proposes access at the following locations:

- Site Driveway 1: Full Access Driveway on Hickory Road
- Site Driveway 2: Right-In/Right-Out Driveway on East Cherokee Drive
- Site Driveway 3: Full Access Driveway on East Cherokee Drive (North)
- Site Driveway 4: Full Access Driveway on East Cherokee Drive (South)

The AM, PM, and school dismissal peak hours have been analyzed in this study. This study includes the evaluation of traffic operations at the intersections of:

- Hickory Road at East Cherokee Drive
- Hickory Road at Driveway East of Dean Rusk Driveway
- Hickory Road at Dean Rusk School Driveway
- Hickory Road at Sequoyah High School Driveway
- Hickory Road at Oak Crest Road/Sequoyah High School Main Driveway

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



LOCATION MAP

FIGURE 1

A&R Engineering Inc.

2.0 EXISTING FACILITIES / CONDITIONS

2.1 Roadway Facilities

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

2.1.1 Hickory Road

Hickory Road is an east-west, two-lane, undivided roadway with a posted speed limit of 40 mph in the vicinity of the site. Georgia Department of Transportation (GDOT) traffic counts (Station ID 057-0305) indicate that the daily traffic volume on Hickory Road in 2021 was 12,100 vehicles per day east of New Light Road. GDOT classifies Hickory Road as a major collector roadway.

2.1.2 East Cherokee Drive

East Cherokee Drive north-south, two-lane, undivided roadway with a posted speed limit of 45 mph south of Hickory Road, and a speed limit of 35 mph to the north of Hickory Road. Georgia Department of Transportation (GDOT) traffic counts (Station ID 057-0165) indicate that the daily traffic volume on East Cherokee Drive in 2021 was 14,000 vehicles per day north of Tripp Road. GDOT classifies East Cherokee Drive as a minor arterial roadway.

2.1.3 Oak Crest Road

Oak Crest Road is a north-south, two-lane, divide roadway with a speed limit of 25 mph in the vicinity of the site.

2.1.4 Sequoyah High School Main Driveway

Sequoyah High School Main Driveway is a north-south, two-lane divided roadway with a speed limit of 25 mph in the vicinity of the site.

2.1.5 Sequoyah High School Driveway

Sequoyah High School Driveway is a north-south, two-lane, undivided roadway with a posted speed limit of 10 mph in the vicinity of the site.

2.1.6 Dean Dusk Driveway

Dean Dusk Driveway is a north-south, two-lane, undivided roadway with a posted speed limit of 15 mph in the vicinity of the site.

3.0 STUDY METHODOLOGY

In this study, the methodology used for evaluating traffic operations at each of the subject intersections is based on the criteria set forth in the Transportation Research Board's Highway Capacity Manual, 6th edition (HCM 6). Synchro software, which utilizes the HCM methodology, was used for the analysis. The following is a description of the methodology employed for the analysis of unsignalized and signalized intersections.

3.1 Unsignalized Intersections

For unsignalized intersections controlled by a stop sign on minor streets, the level-of-service (LOS) for motor vehicles with controlled movements is determined by the computed control delay according to the thresholds stated in Table 1 below. LOS is determined for each minor street movement (or shared movement), as well as major street left turns. LOS is not defined for the intersection as a whole or for major street approaches. The LOS of any controlled movement which experiences a volume to capacity ratio greater than 1 is designated as "F" regardless of the control delay.

Control delay for unsignalized intersections includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. Several factors affect the control delay for unsignalized intersections, such as the availability and distribution of gaps in the conflicting traffic stream, critical gaps, and follow-up time for a vehicle in the queue.

Level-of-service is assigned a letter designation from "A" through "F". Level-of-service "A" indicates excellent operations with little delay to motorists, while level-of-service "F" exists when there are insufficient gaps of acceptable size to allow vehicles on the side street to cross the main road without experiencing long delays.

TABLE 1 — LEVEL-OF-SERVICE CRITERIA FOR UNSIGNALIZED INTERSECTIONS		
Control Delay (sec/vehicle)	LOS by Volume-to-Capacity Ratio*	
	$v/c \leq 1.0$	$v/c > 1.0$
≤ 10	A	F
> 10 and ≤ 15	B	F
> 15 and ≤ 25	C	F
> 25 and ≤ 35	D	F
> 35 and ≤ 50	E	F
> 50	F	F

*The LOS criteria apply to each lane on a given approach and to each approach on the minor street. LOS is not calculated for major-street approaches or for the intersection.

Source: Highway Capacity Manual, 6th edition, Exhibit 20-2 *LOS Criteria: Motorized Vehicle Mode*

3.2 Signalized Intersections

According to HCM procedures, LOS can be calculated for the entire intersection, each intersection approach, and each lane group. HCM uses control delay alone to characterize LOS for the entire intersection or an approach. Control delay per vehicle is composed of initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. Both control delay and volume-to-capacity ratio are used to characterize LOS for a lane group. A volume-to-capacity ratio of 1.0 or more for a lane group indicates failure from capacity perspective. Therefore, such a lane group is assigned LOS F regardless of the amount of control delay.

Table 2 below summarizes the LOS criteria from HCM for motorized vehicles at signalized intersection.

TABLE 2 — LEVEL-OF-SERVICE CRITERIA FOR SIGNALIZED INTERSECTIONS		
Control Delay (sec/vehicle) *	LOS for Lane Group by Volume-to-Capacity Ratio*	
	v/c ≤ 1.0	v/c > 1.0
≤ 10	A	F
> 10 and ≤ 20	B	F
> 20 and ≤ 35	C	F
> 35 and ≤ 55	D	F
> 55 and ≤ 80	E	F
> 80	F	F

*For approach-based and intersection wide assessments, LOS is defined solely by control delay

Source: Highway Capacity Manual, 6th edition, Exhibit 19-8 *LOS Criteria: Motorized Vehicle Mode*

LOS A is typically assigned when the volume-to-capacity (v/c) ratio is low and either progression is exceptionally favorable, or the cycle length is very short. LOS B is typically assigned when the v/c ratio is low and either progression is highly favorable, or the cycle length is short. However, more vehicles are stopped than with LOS A. LOS C is typically assigned when progression is favorable, or the cycle length is moderate. Individual *cycle failures* (one or more queued vehicles are not able to depart because of insufficient capacity during the cycle) may begin to appear at this level. Many vehicles still pass through the intersection without stopping, but the number of vehicles stopping is significant. LOS D is typically assigned when the v/c ratio is high and either progression is ineffective, or the cycle length is long. There are many vehicle-stops and individual cycle failures are noticeable. LOS E is typically assigned when the v/c ratio is high, progression is very poor, the cycle length is long, and individual cycle failures are frequent. LOS F is typically assigned when the v/c ratio is very high, progression is very poor, the cycle length is long, and most cycles fail to clear the queue.

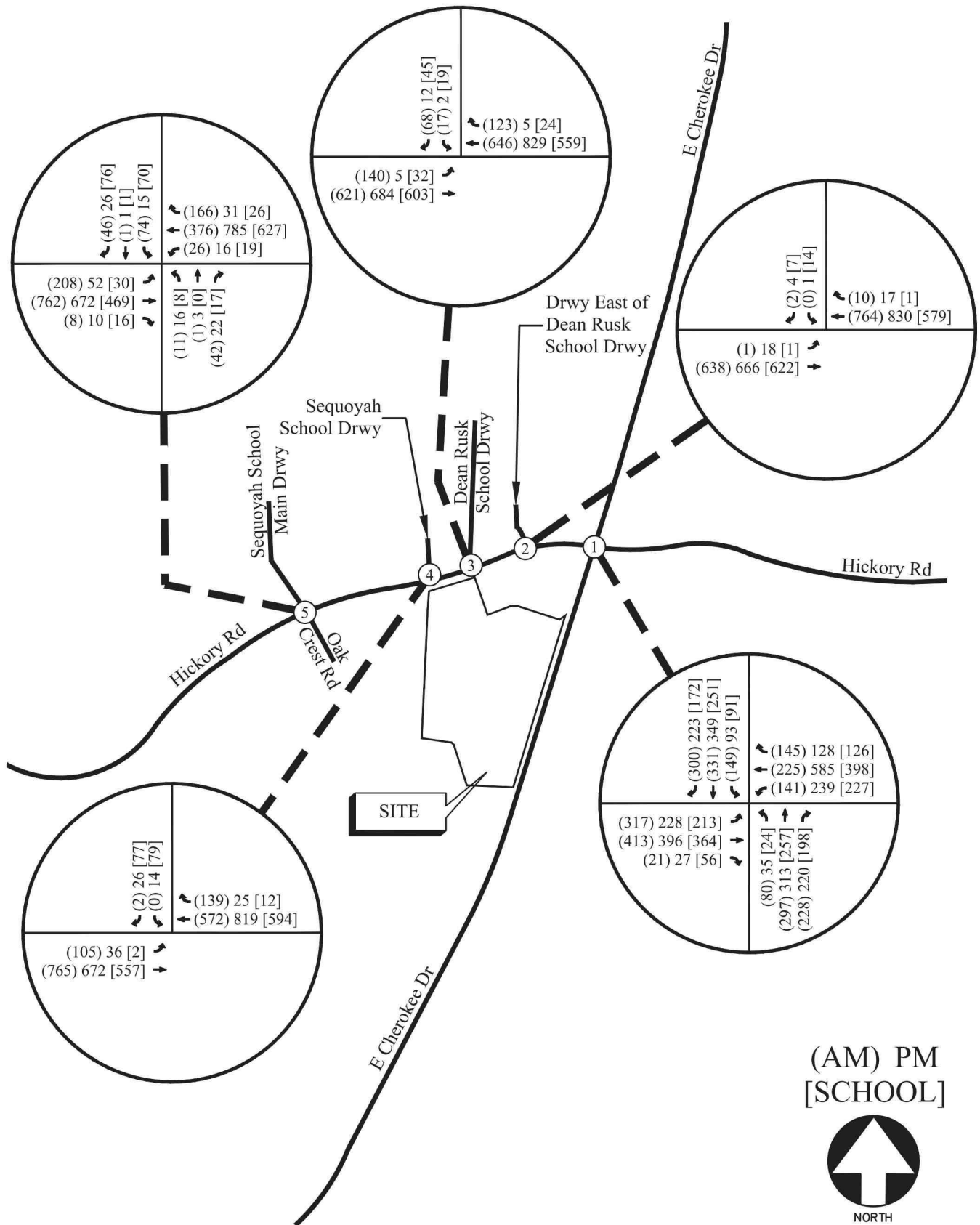
4.0 EXISTING 2022 TRAFFIC ANALYSIS

4.1 Existing Traffic Volumes

Existing traffic counts were obtained at the following study intersections:

- Hickory Road at East Cherokee Drive
- Hickory Road at Driveway East of Dean Rusk Driveway
- Hickory Road at Dean Rusk School Driveway
- Hickory Road at Sequoyah High School Driveway
- Hickory Road at Oak Crest Road/Sequoyah High School Main Driveway

Turning movement counts were collected on Thursday, April 28, 2022. All turning movement counts were recorded during the AM, PM, and school dismissal hours between 7:00 AM to 9:00 AM, 4:00 PM to 6:00 PM and 2:00 PM to 4:00 PM, respectively. The four consecutive 15-minute interval volumes that summed to produce the highest volume at the intersections were then determined. These volumes make up the peak hour traffic volumes and are shown in Figure 2.

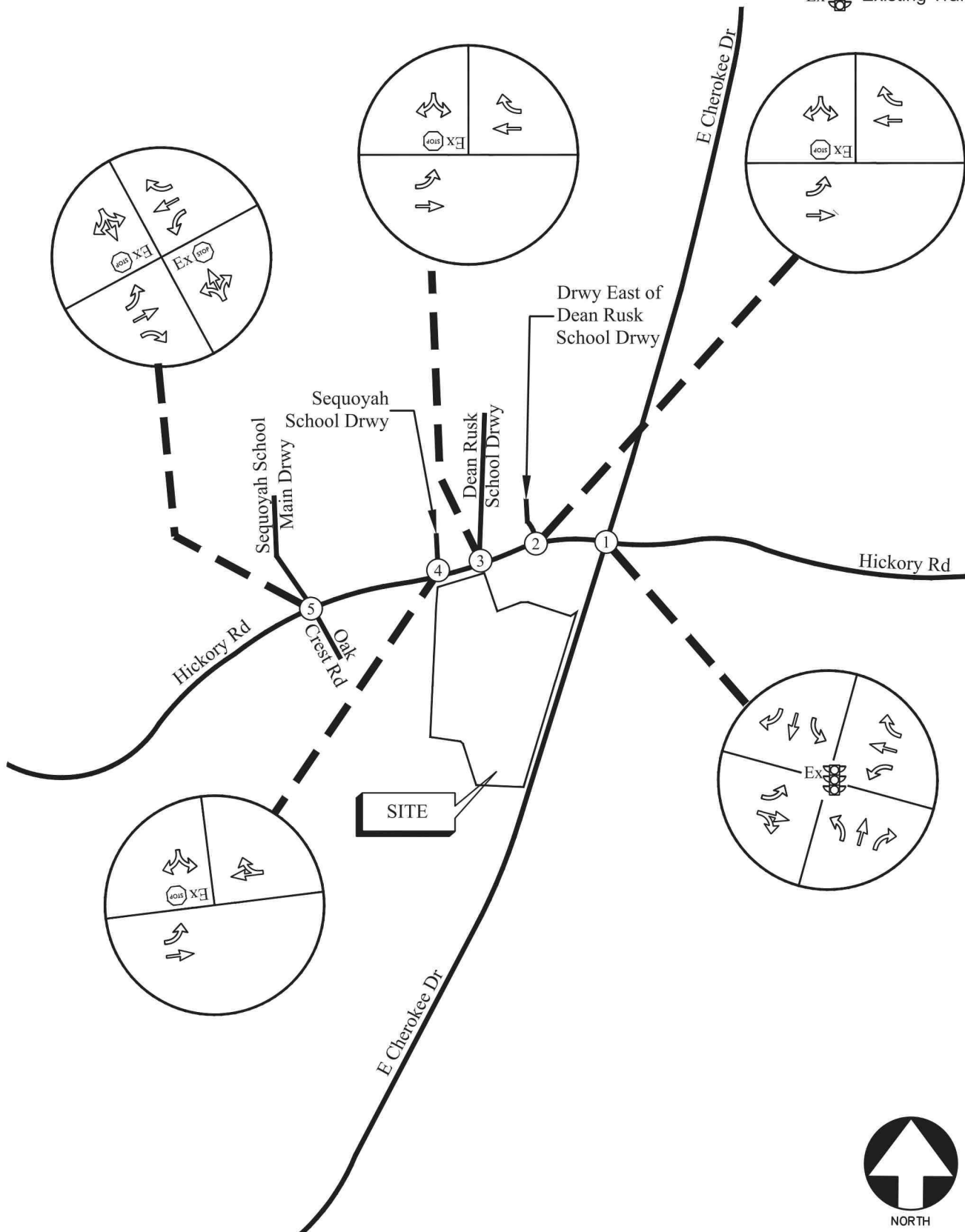


EXISTING WEEKDAY PEAK-HOUR VOLUMES

FIGURE 2
A&R Engineering Inc.

LEGEND

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



EXISTING TRAFFIC CONTROL AND LANE GEOMETRY

FIGURE 3

A&R Engineering Inc.

4.2 Existing Traffic Operations

Existing 2022 traffic operations were analyzed at the study intersections in accordance with the HCM methodology. The results of the analysis are shown in Table 3. The existing traffic control and lane geometry for the intersections are shown in Figure 3.

TABLE 3 — EXISTING INTERSECTION OPERATIONS					
Intersection		Traffic Control	LOS (Delay)		
			AM Peak	PM Peak	School Dismissal
1	<u>Hickory Road @ East Cherokee Drive</u>	Signalized	<u>D (36.1)</u>	<u>D (40.3)</u>	<u>D (37.6)</u>
	-Eastbound Approach		D (49.3)	D (41.9)	D (45.6)
	-Westbound Approach		D (47.5)	D (48.1)	D (49.3)
	-Northbound Approach		C (27.1)	D (35.4)	C (27.3)
	-Southbound Approach		C (25.5)	C (33.4)	C (24.1)
2	<u>Hickory Road @ East Driveway Dean Rusk</u>	Stop Controlled on Southbound Approach			
	-Eastbound Left -Southbound Approach		A (9.4) B (14.5)	A (9.9) C (20.7)	A (8.7) C (21.3)
3	<u>Hickory Road @ Dean Rusk Driveway</u>	Stop Controlled on Southbound Approach			
	-Eastbound Left -Southbound Approach		A (9.8) C (18.5)	A (9.8) C (16.7)	A (8.7) B (14.8)
4	<u>Hickory Road @ Sequoyah Driveway</u>	Stop Controlled on Southbound Approach			
	-Eastbound Left -Southbound Approach		A (9.8) B (13.1)	B (10.1) C (19.8)	A (8.8) C (20.8)
5	<u>Hickory Road @ Oak Crest Road</u>	Stop Controlled on Northbound and Southbound Approaches			
	-Eastbound Left		A (9.6)	B (10.0)	A (9.1)
	-Westbound Left		A (9.6)	A (9.2)	A (8.5)
	-Northbound Approach		E (44.2)	F (51.5)	C (21.8)
	-Southbound Approach		F (*)	E (45.9)	F (57.5)

*Delay exceeds 300 seconds

The results of existing traffic operations analysis indicate that the signalized intersection is operating at overall level-of-service “D” or better in the AM, PM, and School Dismissal peak hours.

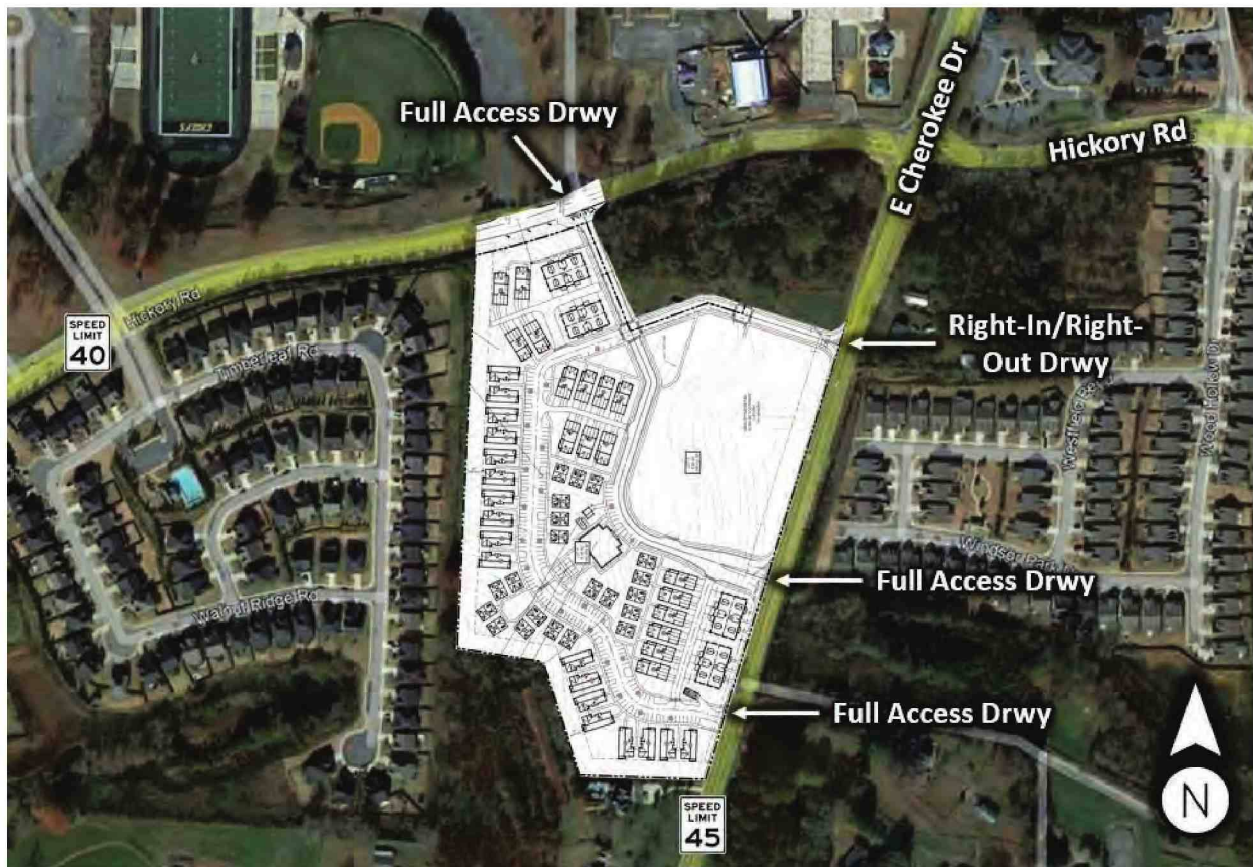
The unsignalized intersections are operating at a level-of-service “E” or better in the AM, PM, and Dismissal peak hours, except for the intersection at Hickory Road and Oak Crest Road whose stop controlled northbound approaches will operate at a level-of-service “F” in the PM peak hour while the southbound approach will operate at a level-of-service “F” in the AM and School Dismissal peak hours. It is not unusual for minor side streets that are stop sign controlled to experience higher delays due to the time gap required for a vehicle to make a turning movement on busy collector/arterial roadways.

5.0 PROPOSED DEVELOPMENT

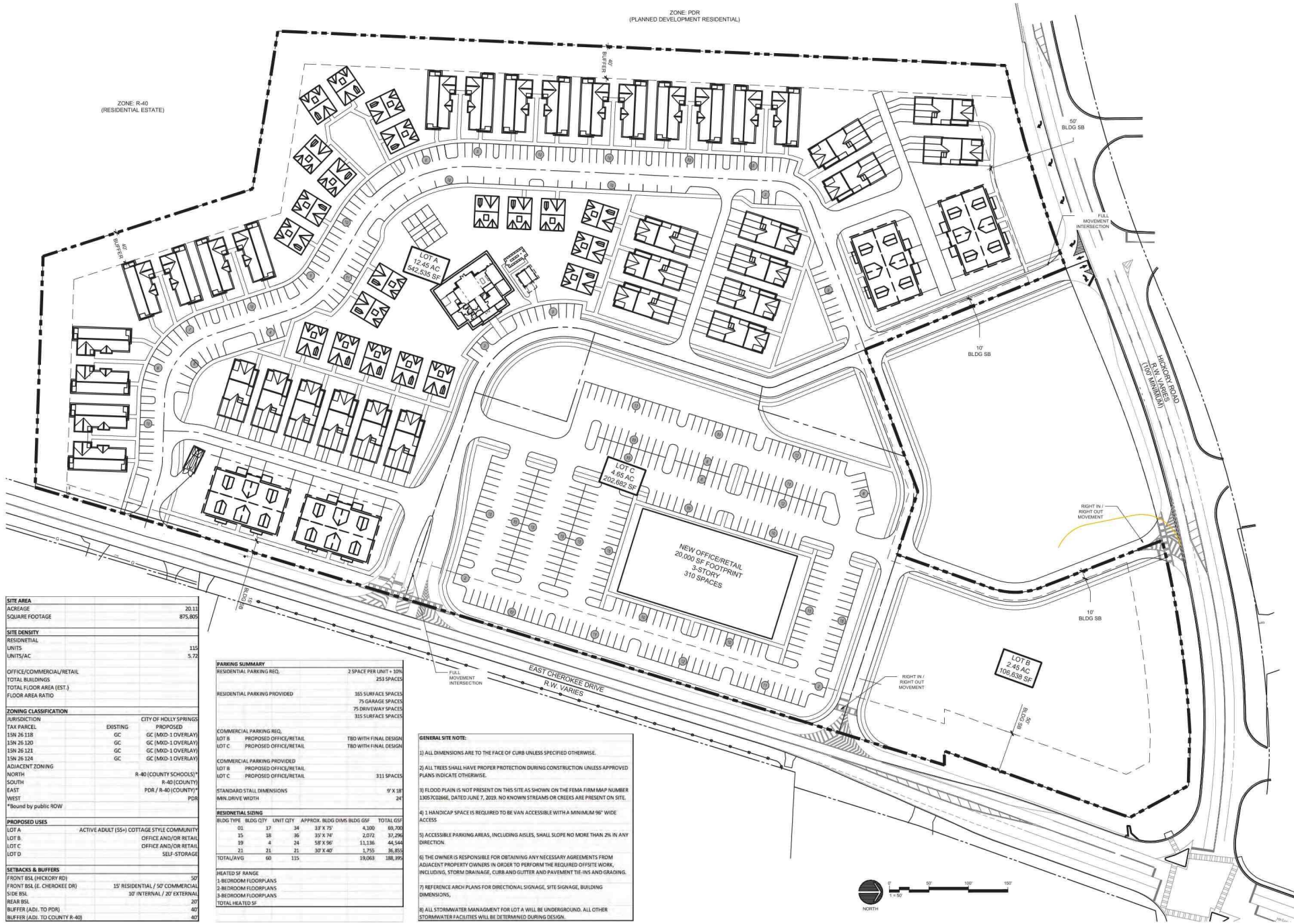
The residential development will consist of 115 senior adult multifamily housing units.

The development proposes access at the following locations:

- Site Driveway 1: Full Access Driveway on Hickory Road
- Site Driveway 2: Right-In/Right-Out Driveway on East Cherokee Drive
- Site Driveway 3: Full Access Driveway on East Cherokee Drive (North)
- Site Driveway 4: Full Access Driveway on East Cherokee Drive (South)



A site plan is shown in Figure 4.



SITE AREA		20.11
ACREAGE		875,805
SITE DENSITY		
RESIDENTIAL		115
UNITS/AC		5.72
OFFICE/COMMERCIAL/RETAIL		
TOTAL BUILDINGS		
TOTAL FLOOR AREA (EST.)		
FLOOR AREA RATIO		
ZONING CLASSIFICATION		
ADJACENT ZONING		
NORTH		R-40 (COUNTY SCHOOLS)
SOUTH		R-40 (COUNTY)
EAST		PDR / R-40 (COUNTY)
WEST		PDR
Bound by public ROW		
PROPOSED USES		
LOT A		ACTIVE ADULT (55+) COTTAGE STYLE COMMUNITY
LOT B		OFFICE AND/OR RETAIL
LOT C		OFFICE AND/OR RETAIL
LOT D		SELF-STORAGE
SETBACKS & BUFFERS		
FRONT BSL (HICKORY RD)		50'
FRONT BSL (E. CHEROKEE DR)		15' RESIDENTIAL / 30' COMMERCIAL
SIDE BSL		30' INTERNAL / 20' EXTERNAL
REAR BSL		30'
BUFFER (ADJ. TO PDR)		40'
BUFFER (ADJ. TO COUNTY R-40)		40'

PARKING SUMMARY					
RESIDENTIAL PARKING REQ.	2 SPACE PER UNIT + 10% 253 SPACES				
RESIDENTIAL PARKING PROVIDED	165 SURFACE SPACES 75 GARAGE SPACES 75 DRIVEWAY SPACES 315 SURFACE SPACES				
COMMERCIAL PARKING REQ.					
LOT B PROPOSED OFFICE/RETAIL	TBD WITH FINAL DESIGN				
LOT C PROPOSED OFFICE/RETAIL	TBD WITH FINAL DESIGN				
COMMERCIAL PARKING PROVIDED					
LOT B PROPOSED OFFICE/RETAIL	311 SPACES				
LOT C PROPOSED OFFICE/RETAIL					
STANDARD STALL DIMENSIONS					
MIN DRIVE WIDTH		9' X 18' 24'			
RESIDENTIAL SIZING					
BLDG TYPE	BLDG QTY	UNIT QTY	APPROX. BLDG DIMS	BLDG GSF	TOTAL GSF
01	17	34	33' X 75'	4,300	69,100
15	38	36	33' X 74'	2,072	37,296
19	4	24	58' X 56'	11,136	44,544
21	21	21	30' X 40'	1,710	36,810
TOTAL/AVG	60	115		19,063	188,850
HEATED SF RANGE					
3-BEDROOM FLOORPLANS					
2-BEDROOM FLOORPLANS					
3-BEDROOM FLOORPLANS					
TOTAL HEATED SF					

GENERAL SITE NOTE:

1) ALL DIMENSIONS ARE TO THE FACE OF CURB UNLESS SPECIFIED OTHERWISE.

2) ALL TREES SHALL HAVE PROPER PROTECTION DURING CONSTRUCTION UNLESS APPROVED PLANS INDICATE OTHERWISE.

3) FLOOD PLAIN IS NOT PRESENT ON THIS SITE AS SHOWN ON THE FEMA FIRM MAP NUMBER 130570266, DATED JUNE 7, 2023. NO KNOWN STREAMS OR CREEKS ARE PRESENT ON SITE.

4) 1 HANDICAP SPACE IS REQUIRED TO BE VAN ACCESSIBLE WITH A MINIMUM 96" WIDE ACCESS.

5) ACCESSIBLE PARKING AREAS, INCLUDING AISLES, SHALL SLOPE NO MORE THAN 2% IN ANY DIRECTION.

6) THE OWNER IS RESPONSIBLE FOR OBTAINING ANY NECESSARY AGREEMENTS FROM ADJACENT PROPERTY OWNERS IN ORDER TO PERFORM THE REQUIRED OFFSITE WORK, INCLUDING, STORM DRAINAGE, CURB AND GUTTER AND PAVEMENT TIE-INS AND GRADING.

7) REFERENCE ARCH PLANS FOR DIRECTIONAL SIGNAGE, SITE SIGNAGE, BUILDING DIMENSIONS.

8) ALL STORMWATER MANAGEMENT FOR LOT A WILL BE UNDERGROUND. ALL OTHER STORMWATER FACILITIES WILL BE DETERMINED DURING DESIGN.

5.1 Trip Generation

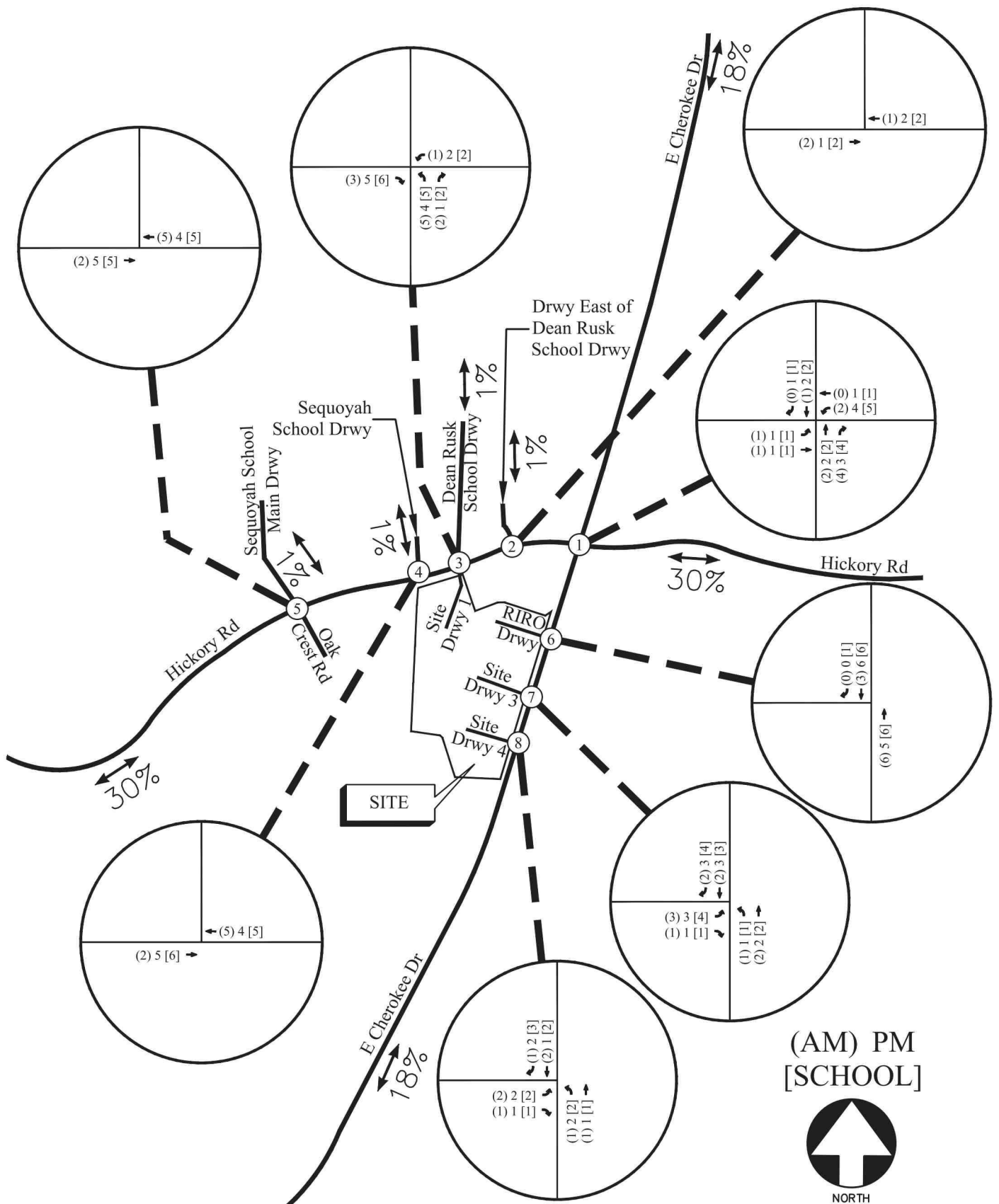
Trip generation estimates for the project were based on the rates and equations published in the 11th edition of the Institute of Transportation Engineers (ITE) Trip Generation report. This reference contains traffic volume count data collected at similar facilities nationwide. The trip generation was based on the ITE Land Use 252 – *Senior housing - Adult Multifamily*. The calculated total trip generation for the proposed development is shown in Table 4.

TABLE 4 — TRIP GENERATION											
Land Use	Size	AM Peak Hour			PM Peak Hour			School Dismissal Peak Hour			24-Hr
		Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total	2-Way
ITE 252 - Senior Housing - Adult Multifamily	115 units	8	15	23	16	13	29	18	16	34	357

5.2 Trip Distribution

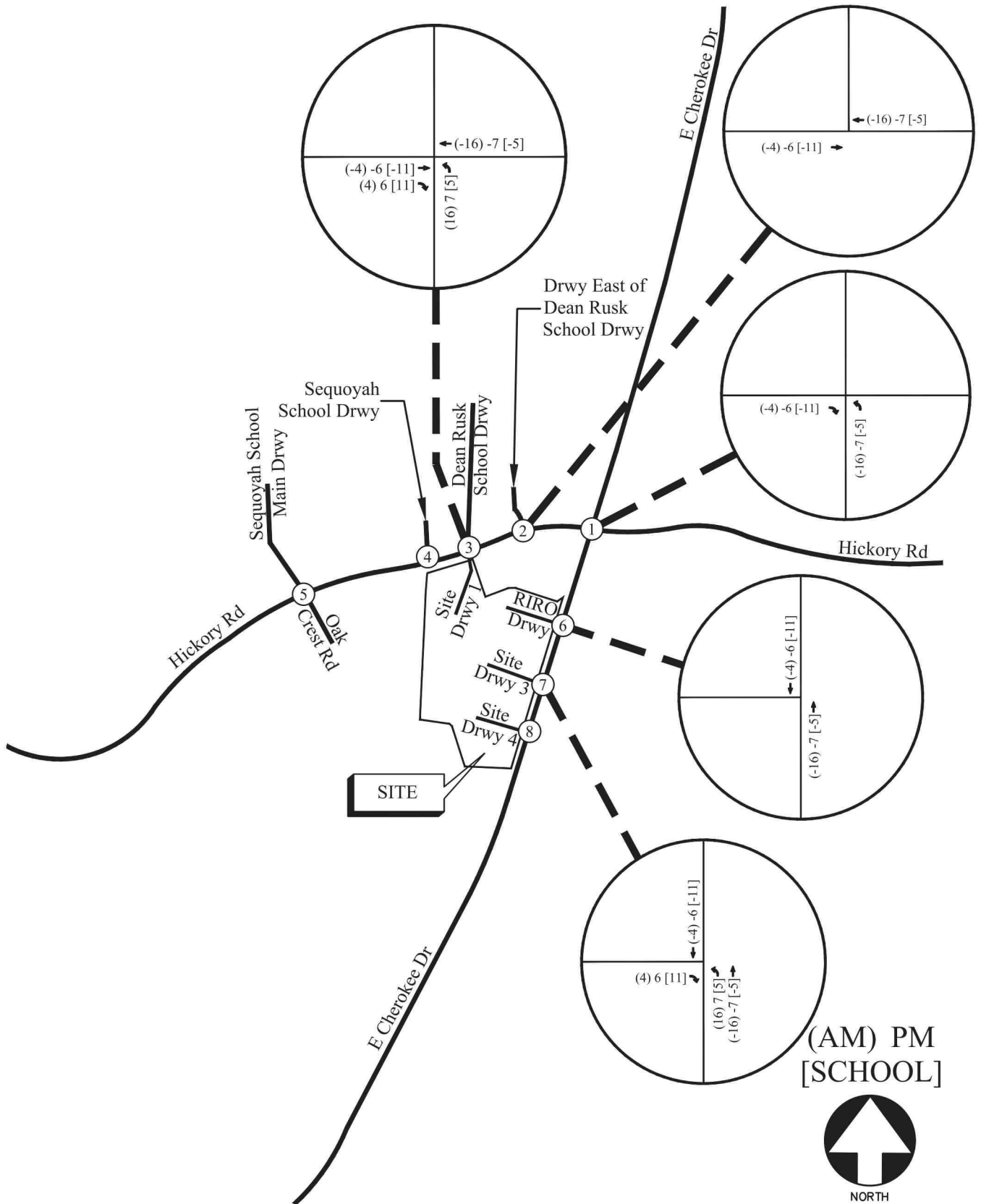
The trip distribution describes how traffic arrives and departs from the site. An overall trip distribution was developed for the site based on a review of the existing travel patterns in the area and the locations of major roadways and highways that will serve the development. The site-generated peak hour traffic volumes, shown in Table 4, were assigned to the study area intersections based on this distribution. The outer-leg distribution and AM, PM and school dismissal peak hour new traffic generated by the site are shown in Figure 5.

As shown in the site plan on Page 12, site driveway 1 will be connected to site driveway 3 to the southeast, which will allow for through eastbound traffic on Hickory Road to turn right at site driveway 1 before turning right out of site driveway 3 to travel south on E Cherokee Drive. For the future “Build” conditions analysis, an estimated 20% of eastbound right-turning traffic at Intersection 1 (Hickory Road at E Cherokee Drive) were shifted to pass through site driveways 1 and 3. An additional 20% of northbound left-turning traffic at Intersection 1 were shifted to instead turn left at site driveway 3 and exit by turning left out of site driveway 1 to travel west on Hickory Road. These shifted traffic volumes are shown in Figure 6.



TRIP DISTRIBUTION AND SITE-GENERATED
WEEKDAY PEAK HOUR VOLUMES

FIGURE 5
A&R Engineering Inc.



SHIFTED WEEKDAY PEAK HOUR VOLUMES

FIGURE 6
A&R Engineering Inc.

6.0 FUTURE 2024 TRAFFIC ANALYSIS

The future 2024 traffic operations are analyzed for the “Build” and “No-Build” conditions.

6.1 Future “No-Build” Conditions

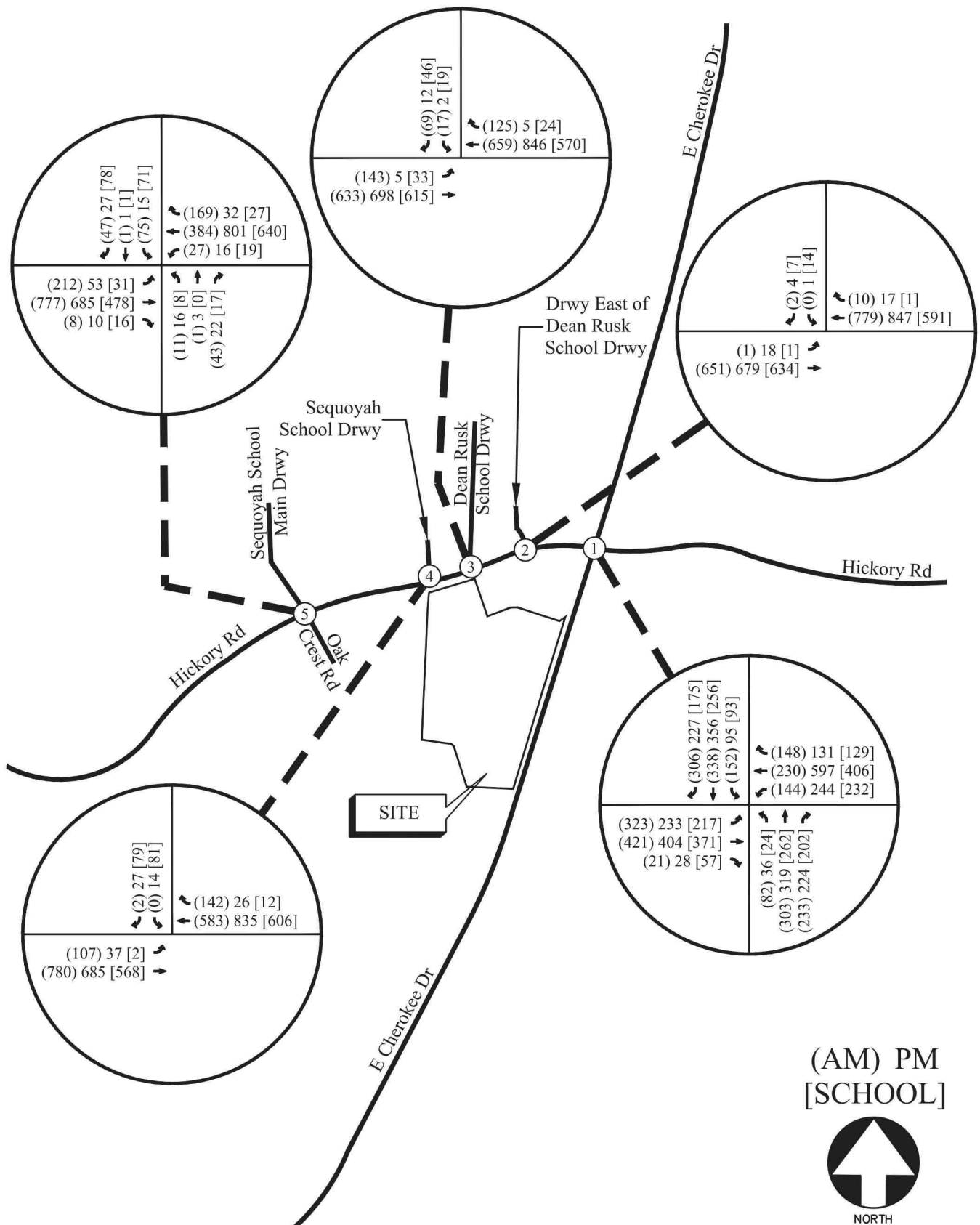
The “No-Build” (or background) conditions provide an assessment of how traffic will operate in the study horizon year without the study site being developed as proposed, with projected increases in through traffic volumes due to normal annual growth. The Future “No-Build” volumes consist of the existing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

6.1.1 Annual Traffic Growth

To evaluate future traffic operations in this area, a projection of normal traffic growth was applied to the existing volumes. The Georgia Department of Transportation recorded average daily traffic volumes at several locations in the vicinity of the site. Reviewing the growth over the last three years revealed growth of approximately 1% in the area. This yearly growth factor was applied to the existing traffic volumes between collector and arterial roadways to estimate the future traffic volumes prior to the addition of site-generated traffic. The resulting Future “No-Build” volumes on the roadway are shown in Figure 6.

6.2 Future “Build” Conditions

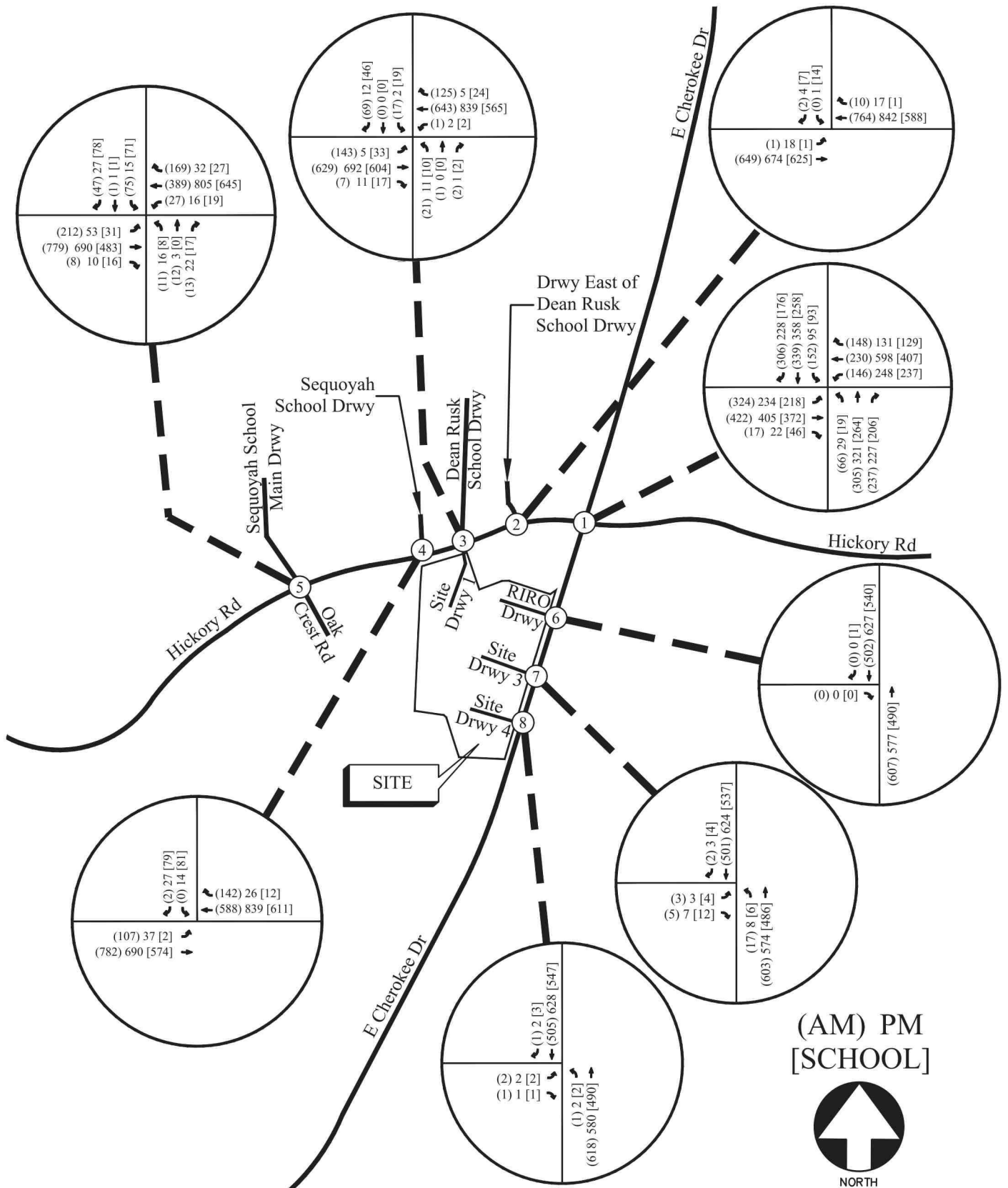
The “Build” or development conditions include the estimated background traffic from the “No-Build” conditions plus the added traffic from the proposed development. To evaluate future traffic operations in this area, the additional traffic volumes from the site (Figure 5) and shifted volumes (Figure 6) were added to base traffic volumes (Figure 7) to calculate the future traffic volumes after the construction of the development. These total future “Build” traffic volumes are shown in Figure 8.



FUTURE (NO-BUILD) WEEKDAY PEAK HOUR VOLUMES

FIGURE 7

A&R Engineering Inc.



FUTURE (BUILD) WEEKDAY PEAK HOUR VOLUMES

FIGURE 8

A&R Engineering Inc.

6.3 Auxiliary Lane Analysis

Included below are analyses for left turn lanes for site driveways 3 and 4 per GDOT standards. No left turn lane analysis was conducted for site driveway 1 as there is already an existing two-way left turn lane on Hickory Road at the location of the proposed driveway, and no left turn lane analysis was conducted for site driveway 2 as it will only provide right-in/right-out access. The analyses below are based off the trip distribution included in Section 5.2. According to the trip distribution, the 24-hour two-way volume entering and exiting the site is 357 vehicles.

6.3.1 Left Turn Lane Analysis (GDOT)

According to GDOT standards, for a two-lane roadway with AADT's greater than or equal to 10,000 vehicles and a posted speed limit of 45 mph, the daily site generated traffic left-turning movements threshold to warrant a left turn lane is 175 left-turning vehicles a day. The projected left turn volumes per day for the site driveways 3 and 4 are shown in Table 5.

Intersection	Left Turn Traffic (% Total Entering)	Left Turn Volume (vehicles/day)	Roadway Speed / # Lanes / ADT	GDOT Threshold (vehicles/ day)	Warrants Met?
Hickory Road @ Site Driveway 3	8%	14 $(\text{Total Trips}) \div 2 \times 0.08$ $= (357) \div 2 \times 0.08 = 14$	35 mph / 2-Lane / $\geq 10,000$	200	No
Hickory Road @ Site Driveway 4	10%	18 $(\text{Total Trips}) \div 2 \times 0.1 =$ $(357) \div 2 \times 0.1 = 18$	35 mph / 2-Lane / $\geq 10,000$	200	No

Left turn lanes are not warranted at site driveways 3 or 4 per GDOT standards.

6.3.2 Deceleration Turn Lane Analysis

According to GDOT standards, for a two-lane roadway with AADT's greater than or equal to 10,000 vehicles and a posted speed limit of 40 mph, the daily site generated traffic right-turning movements threshold to warrant a deceleration lane is 75 right-turning vehicles a day (this same threshold applies to roads with speed limits of 45 mph). The projected right turn volumes per day for the proposed driveways are included below in Table 6.

TABLE 6 – GDOT REQUIREMENTS FOR DECELERATION LANES					
Intersection	Right Turn Traffic (% Total Entering)	Right Turn Volume (vehicles/day)	Roadway Speed / # Lanes / ADT	GDOT Threshold (vehicles/ day)	Warrants Met?
Hickory Road @ Site Driveway 1	32%	57 $(\text{Total Trips}) \div 2 \times 0.32 =$ $(357) \div 2 \times 0.32 = 57$	40 mph / 2-Lane / $\geq 10,000$	75	No
E Cherokee Drive @ RIRO Driveway	3%	5 $(\text{Total Trips}) \div 2 \times 0.03 =$ $(357) \div 2 \times 0.03 = 5$	45 mph / 2-Lane / $\geq 10,000$	75	No
Hickory Road @ Site Driveway 3	20%	36 $(\text{Total Trips}) \div 2 \times 0.20 =$ $(357) \div 2 \times 0.20 = 36$	45 mph / 2-Lane / $\geq 10,000$	75	No
Hickory Road @ Site Driveway 4	15%	27 $(\text{Total Trips}) \div 2 \times 0.15 =$ $(357) \div 2 \times 0.15 = 27$	45 mph / 2-Lane / $\geq 10,000$	75	No

Deceleration lanes are not warranted at any of the site driveways per GDOT standards.

6.4 Future Traffic Operations

The future “No-Build” and “Build” traffic operations were analyzed using the volumes in Figures 7 and 8, respectively. The results of the future traffic operations analysis are shown below in Table 7. Recommendations on traffic control and lane geometry are shown graphically in Figure 9.

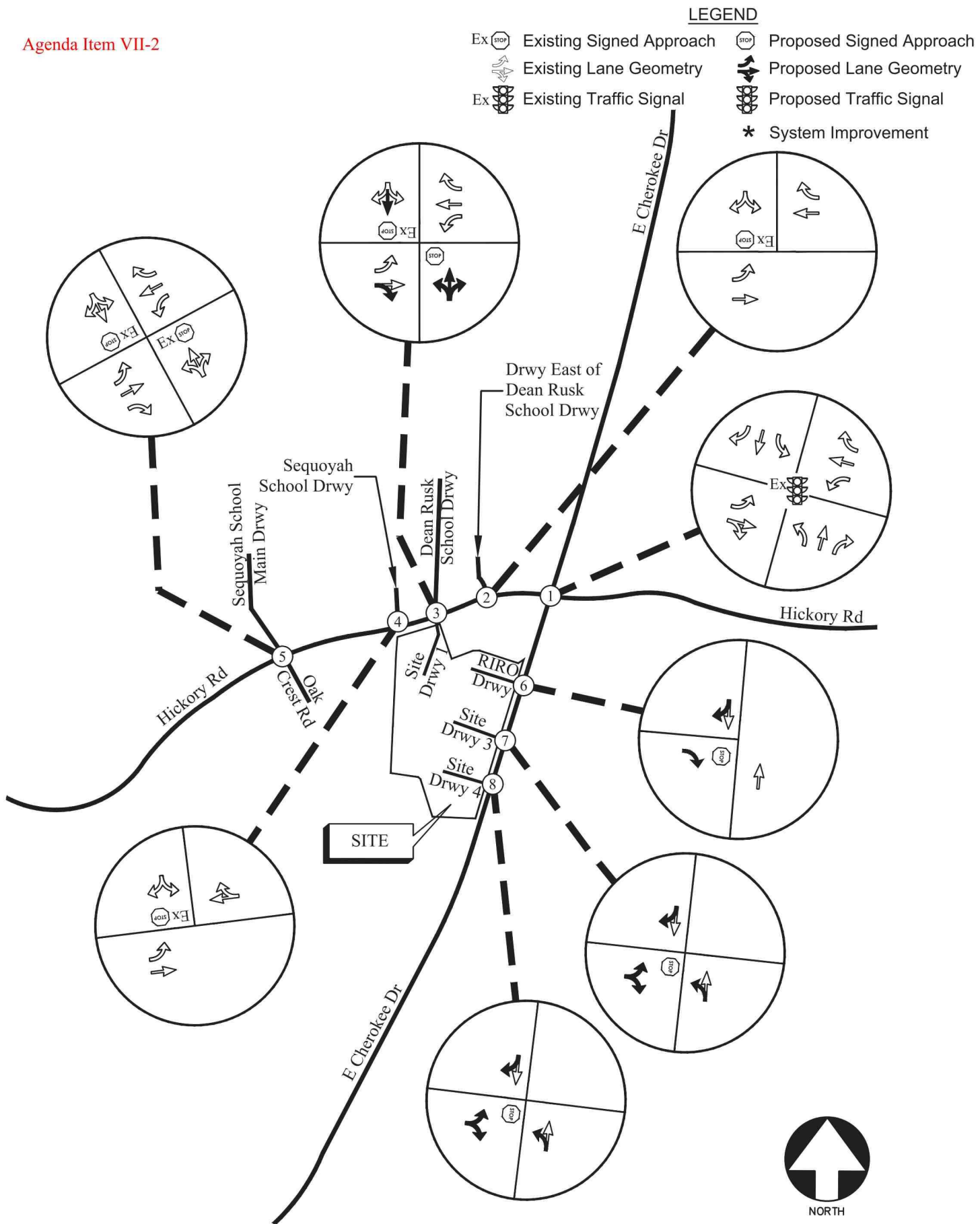
TABLE 7 — FUTURE INTERSECTION OPERATIONS							
Intersection		Future Condition: LOS (Delay)					
		NO-BUILD			BUILD		
		AM	PM	Dismissal	AM	PM	Dismissal
1	Hickory Road @ East Cherokee Drive	D (37.1)	D (42.3)	D (43.2)	D (37.4)	D (42.5)	D (43.5)
	-Eastbound Approach	D (50.5)	D (52.1)	E (68.0)	D (51.4)	D (53.1)	E (67.9)
	-Westbound Approach	D (51.5)	D (46.6)	D (50.6)	D (51.7)	D (47.3)	D (51.9)
	-Northbound Approach	C (27.2)	D (35.7)	C (25.7)	C (27.4)	D (35.4)	C (25.9)
	-Southbound Approach	C (25.6)	C (33.2)	C (22.6)	C (25.1)	C (32.8)	C (22.4)
2	Hickory Road @ East Driveway Dean Rusk						
	-Eastbound Left	A (9.5)	A (9.9)	A (8.7)	A (9.4)	A (10.0)	A (8.7)
	-Southbound Approach	B (14.7)	C (20.7)	C (21.8)	B (14.5)	C (16.9)	C (15.3)
3	Hickory Road @ Dean Rusk Driveway						
	-Eastbound Left	A (9.9)	A (9.8)	A (8.8)	A (9.6)	A (9.7)	A (8.8)
	-Westbound Left	-	-	-	A (8.9)	A (9.1)	A (8.8)
	-Northbound Approach	-	-	-	F (102.2)	F (53.1)	D (34.3)
	-Southbound Approach	C (18.9)	C (17.0)	C (15.0)	D (33.4)	C (20.7)	C (21.8)
4	Hickory Road @ Sequoyah Driveway						
	-Eastbound Left	A (9.9)	B (10.1)	A (8.9)	A (10.0)	B (10.2)	A (9.0)
	-Southbound Approach	B (13.2)	C (19.7)	C (21.6)	B (13.3)	C (20.3)	C (23.2)
5	Hickory Road @ Oak Crest Road						
	-Eastbound Left	A (9.7)	B (10.0)	A (9.2)	A (9.7)	B (10.1)	A (9.2)
	-Westbound Left	A (9.8)	A (9.2)	A (8.6)	A (9.8)	A (9.2)	A (8.6)
	-Northbound Approach	E (47.3)	F (56.0)	C (23.2)	F (48.2)	F (57.4)	C (23.4)
	-Southbound Approach	F (*)	E (48.8)	F (64.5)	F (*)	E (49.8)	F (70.4)
6	East Cherokee Drive @ Right-In/Right-Out Driveway						
	-Eastbound Approach	-	-	-	B (11.1)	B (12.4)	B (11.5)
7	East Cherokee Drive @ Site Driveway 3						
	-Eastbound Approach	-	-	-	C (16.6)	C (17.4)	B (14.7)
	-Northbound Left				A (8.6)	A (9.0)	A (8.7)
8	East Cherokee Drive @ Site Driveway 4						
	-Eastbound Approach	-	-	-	C (19.5)	C (21.8)	C (18.3)
	-Northbound Left				A (8.5)	A (9.0)	A (8.7)

*Delay exceeds 300 seconds

The results of future traffic operations analysis indicate that the signalized intersection will operate at an overall level-of-service “D” or better in the AM, PM, and School Dismissal peak hours. The approaches at the unsignalized intersections will operate at a level-of-service “E” or better in the AM, PM, and dismissal peak hours apart from two intersections.

1. Hickory Road and Dean Rusk Driveway (Intersection 3), where the stop controlled northbound approach will operate at a level-of-service “F” in the AM and PM peak hours.
2. Hickory Road and Oak Crest Road (Intersection 5), where the stop controlled northbound and southbound approaches will operate at a level-of-service “F” during certain traffic peak hours

It is not unusual for minor side streets that are stop sign controlled to experience higher delays due to the time gap required for a vehicle to make a turning movement on busy collector/arterial roadways. Neither of these intersections will meet signal warrants after the addition of site-generated traffic.



FUTURE TRAFFIC CONTROL AND LANE GEOMETRY

FIGURE 9

A&R Engineering Inc.

7.0 CONCLUSIONS AND RECOMMENDATIONS

Traffic impacts were evaluated for the proposed residential development that will be located in the southwest corner of the intersection of East Cherokee Drive and Hickory Road in Cherokee County, Georgia. The proposed residential development will consist of 115 senior adult multifamily housing units.

The development proposes access at the following locations:

- Site Driveway 1: Full Access Driveway on Hickory Road
- Site Driveway 2: Right-In/Right-Out Driveway on East Cherokee Drive
- Site Driveway 3: Full Access Driveway on East Cherokee Drive
- Site Driveway 4: Full Access Driveway on East Cherokee Drive

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

- Hickory Road at East Cherokee Drive
- Hickory Road at Driveway East of Dean Rusk Driveway
- Hickory Road at Dean Rusk School Driveway / Site Driveway 1
- Hickory Road at Sequoyah High School Driveway
- Hickory Road at Oak Crest Road/Sequoyah High School Main Driveway
- East Cherokee Drive at Site Driveway (RIRO)
- East Cherokee Drive at Site Driveway 3 (North)
- East Cherokee Drive at Site Driveway 4 (South)

The analysis included the evaluation of future traffic operations for “No-Build” and “Build” conditions, the differences between “No-Build” and “Build” accounts for increases in traffic due to proposed site. The results of future traffic operations analysis indicate that the signalized intersection will operate at an overall level-of-service “D” or better in the AM, PM, and School Dismissal peak hours. The approaches at the unsignalized intersections will operate at a level-of-service “E” or better in the AM, PM, and dismissal peak hours apart from two intersections.

1. Hickory Road and Dean Rusk Driveway (Intersection 3), where the stop controlled northbound approach will operate at a level-of-service “F” in the AM and PM peak hours.
2. Hickory Road and Oak Crest Road (Intersection 5), where the stop controlled northbound and southbound approaches will operate at a level-of-service “F” during certain traffic peak hours

It is not unusual for minor side streets that are stop sign controlled to experience higher delays due to the time gap required for a vehicle to make a turning movement on busy collector/arterial roadways. Neither of these intersections will meet signal warrants after the addition of site-generated traffic. Based on the analysis, the proposed development will have minimal impact on traffic operations in the study network.

7.1 Recommendations for Site Access Configuration

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

- Site Driveway 1: Full Access Driveway on Hickory Road
 - One entering lane and one exiting lane
 - Stop-sign controlled on the driveway approach with Hickory Road remaining free flow
 - Provide adequate sight distance per AASHTO standards

- Site Driveway 2: Right-In/Right-Out Driveway on East Cherokee Drive
 - One entering lane and one exiting lane
 - Stop-sign controlled on the driveway approach with East Cherokee Drive remaining free flow
 - Provide adequate sight distance per AASHTO standards

- Site Driveway 3: Full Access Driveway on East Cherokee Drive
 - One entering lane and one exiting lane
 - Stop-sign controlled on the driveway approach with East Cherokee Drive remaining free flow
 - Provide adequate sight distance per AASHTO standards

- Site Driveway 4: Full Access Driveway on East Cherokee Drive
 - One entering lane and one exiting lane
 - Stop-sign controlled on the driveway approach with East Cherokee Drive remaining free flow
 - Provide adequate sight distance per AASHTO standards

Appendix

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

EXISTING INTERSECTION TRAFFIC COUNTS

Greater Traffic Company

File Name : 01

Site Code :

Start Date : 4/28/2022

Page No : 1

Groups Printed- Vehicles - Trucks - Buses

	E Cherokee Dr Northbound					E Cherokee Dr Southbound					Hickory Rd Eastbound					Hickory Rd Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	12	80	69	0	161	33	73	54	0	160	76	119	3	0	198	19	30	38	0	87	606
07:15 AM	20	52	43	0	115	41	69	100	0	210	109	136	2	0	247	38	50	66	0	154	726
07:30 AM	24	59	48	0	131	37	102	91	0	230	46	102	7	0	155	33	59	15	0	107	623
07:45 AM	49	45	74	0	168	14	76	58	0	148	43	84	7	0	134	50	103	18	0	171	621
Total	105	236	234	0	575	125	320	303	0	748	274	441	19	0	734	140	242	137	0	519	2576
08:00 AM	64	75	70	0	209	24	78	70	0	172	49	73	9	0	131	39	91	19	0	149	661
08:15 AM	6	70	66	0	142	28	83	68	0	179	82	131	5	0	218	37	43	39	0	119	658
08:30 AM	9	67	48	0	124	36	80	80	0	196	87	105	5	0	197	24	38	41	0	103	620
08:45 AM	1	85	44	0	130	61	90	82	0	233	99	104	2	0	205	41	53	46	0	140	708
Total	80	297	228	0	605	149	331	300	0	780	317	413	21	0	751	141	225	145	0	511	2647
*** BREAK ***																					
02:00 PM	2	47	43	0	92	19	68	53	0	140	41	62	3	0	106	34	86	35	0	155	493
02:15 PM	5	73	50	0	128	25	55	54	0	134	52	70	2	0	124	46	95	23	0	164	550
02:30 PM	3	58	39	0	100	28	67	67	0	162	48	62	3	0	113	51	95	25	0	171	546
02:45 PM	10	60	49	0	119	10	66	38	0	114	31	81	5	0	117	42	93	22	0	157	507
Total	20	238	181	0	439	82	256	212	0	550	172	275	13	0	460	173	369	105	0	647	2096
03:00 PM	8	67	45	0	120	16	50	56	0	122	43	66	7	0	116	36	106	33	0	175	533
03:15 PM	4	60	51	0	115	40	78	35	0	153	58	106	24	0	188	65	71	41	0	177	633
03:30 PM	6	60	48	0	114	21	59	43	0	123	62	88	9	0	159	65	113	23	0	201	597
03:45 PM	6	70	54	0	130	14	64	38	0	116	50	104	16	0	170	61	108	29	0	198	614
Total	24	257	198	0	479	91	251	172	0	514	213	364	56	0	633	227	398	126	0	751	2377
04:00 PM	8	44	51	0	103	22	79	49	0	150	48	78	6	0	132	51	115	24	0	190	575
04:15 PM	11	84	55	0	150	50	85	82	0	217	39	88	10	0	137	59	126	18	0	203	707
04:30 PM	7	57	70	0	134	21	82	60	0	163	50	95	5	0	150	53	155	29	0	237	684
04:45 PM	14	77	60	0	151	18	70	62	0	150	55	93	8	0	156	61	149	35	0	245	702
Total	40	262	236	0	538	111	316	253	0	680	192	354	29	0	575	224	545	106	0	875	2668
05:00 PM	3	83	50	0	136	30	89	54	0	173	42	94	8	0	144	54	148	39	0	241	694
05:15 PM	4	76	48	0	128	16	83	59	0	158	66	108	10	0	184	67	147	31	0	245	715
05:30 PM	15	76	65	0	156	35	100	55	0	190	69	94	2	0	165	57	131	25	0	213	724
05:45 PM	13	78	57	0	148	12	77	55	0	144	51	100	7	0	158	61	159	33	0	253	703
Total	35	313	220	0	568	93	349	223	0	665	228	396	27	0	651	239	585	128	0	952	2836
Grand Total	304	1603	1297	0	3204	651	1823	1463	0	3937	1396	2243	165	0	3804	1144	2364	747	0	4255	15200
Apprch %	9.5	50	40.5	0		16.5	46.3	37.2	0		36.7	59	4.3	0		26.9	55.6	17.6	0		
Total %	2	10.5	8.5	0	21.1	4.3	12	9.6	0	25.9	9.2	14.8	1.1	0	25	7.5	15.6	4.9	0	28	
Vehicles	290	1554	1255	0	3099	620	1762	1424	0	3806	1371	2184	160	0	3715	1102	2251	737	0	4090	14710
% Vehicles	95.4	96.9	96.8	0	96.7	95.2	96.7	97.3	0	96.7	98.2	97.4	97	0	97.7	96.3	95.2	98.7	0	96.1	96.8
Trucks	4	48	40	0	92	0	53	24	0	77	21	52	5	0	78	42	72	5	0	119	366
% Trucks	1.3	3	3.1	0	2.9	0	2.9	1.6	0	2	1.5	2.3	3	0	2.1	3.7	3	0.7	0	2.8	2.4
Buses	10	1	2	0	13	31	8	15	0	54	4	7	0	0	11	0	41	5	0	46	124
% Buses	3.3	0.1	0.2	0	0.4	4.8	0.4	1	0	1.4	0.3	0.3	0	0	0.3	0	1.7	0.7	0	1.1	0.8

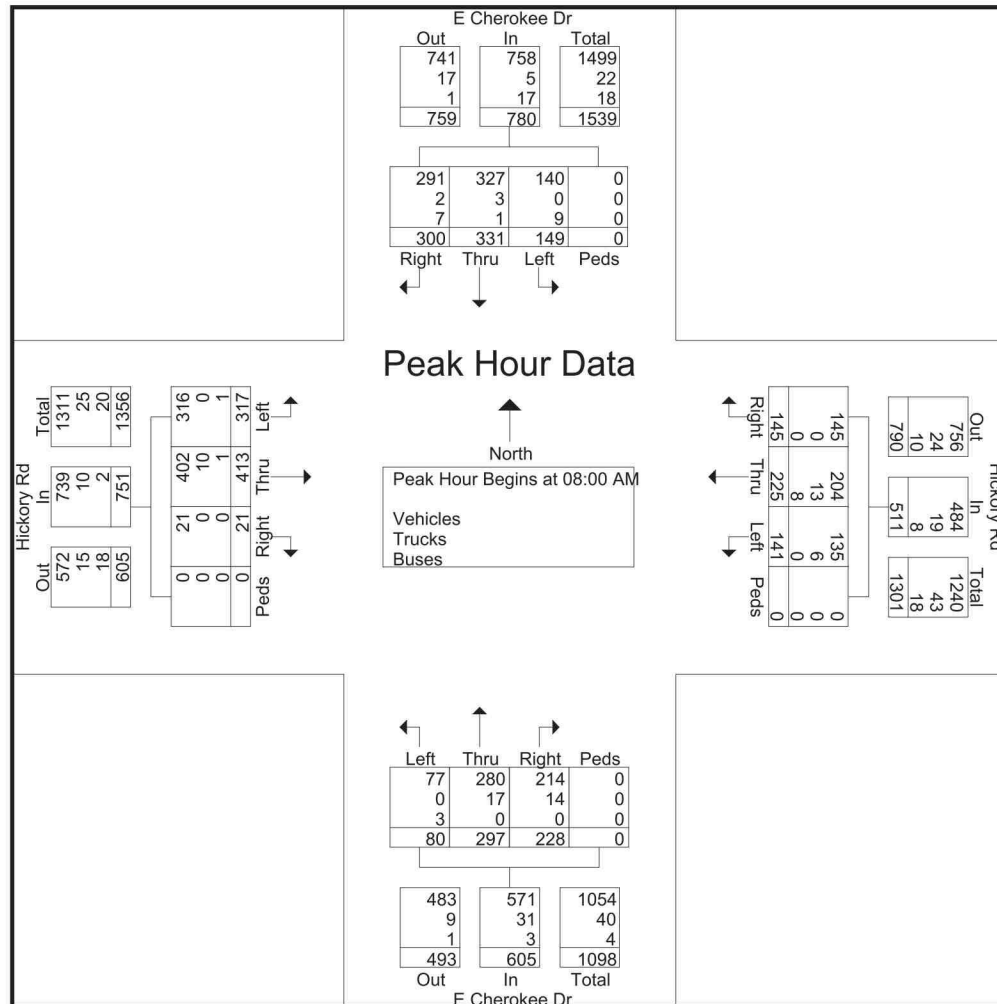
File Name : 01

Site Code :

Start Date : 4/28/2022

Page No : 2

	E Cherokee Dr Northbound					E Cherokee Dr Southbound					Hickory Rd Eastbound					Hickory Rd Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	64	75	70	0	209	24	78	70	0	172	49	73	9	0	131	39	91	19	0	149	661
08:15 AM	6	70	66	0	142	28	83	68	0	179	82	131	5	0	218	37	43	39	0	119	658
08:30 AM	9	67	48	0	124	36	80	80	0	196	87	105	5	0	197	24	38	41	0	103	620
08:45 AM	1	85	44	0	130	61	90	82	0	233	99	104	2	0	205	41	53	46	0	140	708
Total Volume	80	297	228	0	605	149	331	300	0	780	317	413	21	0	751	141	225	145	0	511	2647
% App. Total	13.2	49.1	37.7	0		19.1	42.4	38.5	0		42.2	55	2.8	0		27.6	44	28.4	0		
PHF	.313	.874	.814	.000	.724	.611	.919	.915	.000	.837	.801	.788	.583	.000	.861	.860	.618	.788	.000	.857	.935
Vehicles	77	280	214	0	571	140	327	291	0	758	316	402	21	0	739	135	204	145	0	484	2552
% Vehicles																					
Trucks	0	17	14	0	31	0	3	2	0	5	0	10	0	0	10	6	13	0	0	19	65
% Trucks	0	5.7	6.1	0	5.1	0	0.9	0.7	0	0.6	0	2.4	0	0	1.3	4.3	5.8	0	0	3.7	2.5
Buses	3	0	0	0	3	9	1	7	0	17	1	1	0	0	2	0	8	0	0	8	30
% Buses	3.8	0	0	0	0.5	6.0	0.3	2.3	0	2.2	0.3	0.2	0	0	0.3	0	3.6	0	0	1.6	1.1



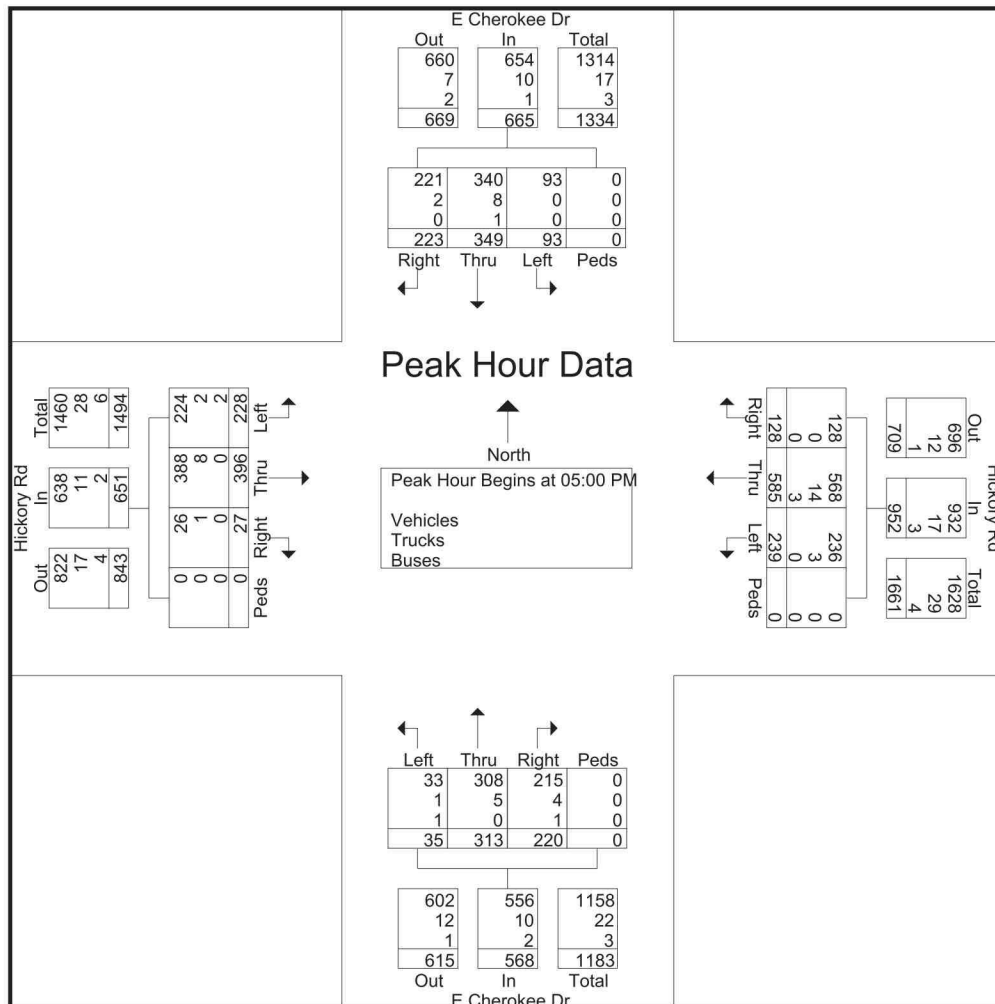
File Name : 01

Site Code :

Start Date : 4/28/2022

Page No : 3

	E Cherokee Dr Northbound					E Cherokee Dr Southbound					Hickory Rd Eastbound					Hickory Rd Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 02:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	3	83	50	0	136	30	89	54	0	173	42	94	8	0	144	54	148	39	0	241	694
05:15 PM	4	76	48	0	128	16	83	59	0	158	66	108	10	0	184	67	147	31	0	245	715
05:30 PM	15	76	65	0	156	35	100	55	0	190	69	94	2	0	165	57	131	25	0	213	724
05:45 PM	13	78	57	0	148	12	77	55	0	144	51	100	7	0	158	61	159	33	0	253	703
Total Volume	35	313	220	0	568	93	349	223	0	665	228	396	27	0	651	239	585	128	0	952	2836
% App. Total	6.2	55.1	38.7	0		14	52.5	33.5	0		35	60.8	4.1	0		25.1	61.4	13.4	0		
PHF	.583	.943	.846	.000	.910	.664	.873	.945	.000	.875	.826	.917	.675	.000	.885	.892	.920	.821	.000	.941	.979
Vehicles	33	308	215	0	556	93	340	221	0	654	224	388	26	0	638	236	568	128	0	932	2780
% Vehicles																					
Trucks	1	5	4	0	10	0	8	2	0	10	2	8	1	0	11	3	14	0	0	17	48
% Trucks	2.9	1.6	1.8	0	1.8	0	2.3	0.9	0	1.5	0.9	2.0	3.7	0	1.7	1.3	2.4	0	0	1.8	1.7
Buses	1	0	1	0	2	0	1	0	0	1	2	0	0	0	2	0	3	0	0	3	8
% Buses	2.9	0	0.5	0	0.4	0	0.3	0	0	0.2	0.9	0	0	0	0.3	0	0.5	0	0	0.3	0.3



Greater Traffic Company

File Name : 03

Site Code :

Start Date : 4/28/2022

Page No : 1

Groups Printed- Vehicles - Trucks - Buses

	Northbound					Dean Ruck Southbound					Hickory Rd Eastbound					Hickory Rd Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	0	0	0	0	0	1	0	6	0	7	12	238	0	0	250	0	93	6	0	99	356
07:15 AM	0	0	0	0	0	3	0	8	0	11	36	210	0	0	246	0	138	26	0	164	421
07:30 AM	0	0	0	0	0	4	0	11	0	15	24	144	0	0	168	0	154	23	0	177	360
07:45 AM	0	0	0	0	0	2	0	14	0	16	36	117	0	0	153	0	189	40	0	229	398
Total	0	0	0	0	0	10	0	39	0	49	108	709	0	0	817	0	574	95	0	669	1535
08:00 AM	0	0	0	0	0	8	0	35	0	43	44	150	0	0	194	0	165	34	0	199	436
08:15 AM	0	0	0	0	0	1	0	7	0	8	16	196	0	0	212	0	94	7	0	101	321
08:30 AM	0	0	0	0	0	0	0	17	0	17	13	231	0	0	244	0	115	11	0	126	387
08:45 AM	0	0	0	0	0	2	0	5	0	7	0	167	0	0	167	0	141	4	0	145	319
Total	0	0	0	0	0	11	0	64	0	75	73	744	0	0	817	0	515	56	0	571	1463
*** BREAK ***																					
02:00 PM	0	0	0	0	0	3	0	7	0	10	7	111	0	0	118	0	130	5	0	135	263
02:15 PM	0	0	0	0	0	4	0	4	0	8	2	111	0	0	113	0	170	5	0	175	296
02:30 PM	0	0	0	0	0	2	0	1	0	3	1	113	0	0	114	0	155	1	0	156	273
02:45 PM	0	0	0	0	0	0	0	1	0	1	9	119	0	0	128	0	137	5	0	142	271
Total	0	0	0	0	0	9	0	13	0	22	19	454	0	0	473	0	592	16	0	608	1103
03:00 PM	0	0	0	0	0	3	0	10	0	13	5	125	0	0	130	0	150	10	0	160	303
03:15 PM	0	0	0	0	0	4	0	20	0	24	5	185	0	0	190	0	104	1	0	105	319
03:30 PM	0	0	0	0	0	5	0	10	0	15	8	137	0	0	145	0	166	5	0	171	331
03:45 PM	0	0	0	0	0	7	0	5	0	12	14	156	0	0	170	0	139	8	0	147	329
Total	0	0	0	0	0	19	0	45	0	64	32	603	0	0	635	0	559	24	0	583	1282
04:00 PM	0	0	0	0	0	11	0	25	0	36	3	112	0	0	115	0	185	6	0	191	342
04:15 PM	0	0	0	0	0	5	0	17	0	22	1	137	0	0	138	0	226	4	0	230	390
04:30 PM	0	0	0	0	0	2	0	15	0	17	3	147	0	0	150	0	217	1	0	218	385
04:45 PM	0	0	0	0	0	1	0	4	0	5	3	142	0	0	145	0	222	3	0	225	375
Total	0	0	0	0	0	19	0	61	0	80	10	538	0	0	548	0	850	14	0	864	1492
05:00 PM	0	0	0	0	0	2	0	10	0	12	2	164	0	0	166	0	202	2	0	204	382
05:15 PM	0	0	0	0	0	0	0	1	0	1	2	167	0	0	169	0	193	1	0	194	364
05:30 PM	0	0	0	0	0	0	0	0	0	0	1	195	0	0	196	0	219	0	0	219	415
05:45 PM	0	0	0	0	0	0	0	1	0	1	0	158	0	0	158	0	215	2	0	217	376
Total	0	0	0	0	0	2	0	12	0	14	5	684	0	0	689	0	829	5	0	834	1537
Grand Total	0	0	0	0	0	70	0	234	0	304	247	3732	0	0	3979	0	3919	210	0	4129	8412
Apprch %	0	0	0	0		23	0	77	0		6.2	93.8	0	0		0	94.9	5.1	0		
Total %	0	0	0	0	0	0.8	0	2.8	0	3.6	2.9	44.4	0	0	47.3	0	46.6	2.5	0	49.1	
Vehicles	0	0	0	0	0	69	0	183	0	252	196	3637	0	0	3833	0	3804	181	0	3985	8070
% Vehicles	0	0	0	0	0	98.6	0	78.2	0	82.9	79.4	97.5	0	0	96.3	0	97.1	86.2	0	96.5	95.9
Trucks	0	0	0	0	0	0	0	1	0	1	1	85	0	0	86	0	79	0	0	79	166
% Trucks	0	0	0	0	0	0	0	0.4	0	0.3	0.4	2.3	0	0	2.2	0	2	0	0	1.9	2
Buses	0	0	0	0	0	1	0	50	0	51	50	10	0	0	60	0	36	29	0	65	176
% Buses	0	0	0	0	0	1.4	0	21.4	0	16.8	20.2	0.3	0	0	1.5	0	0.9	13.8	0	1.6	2.1

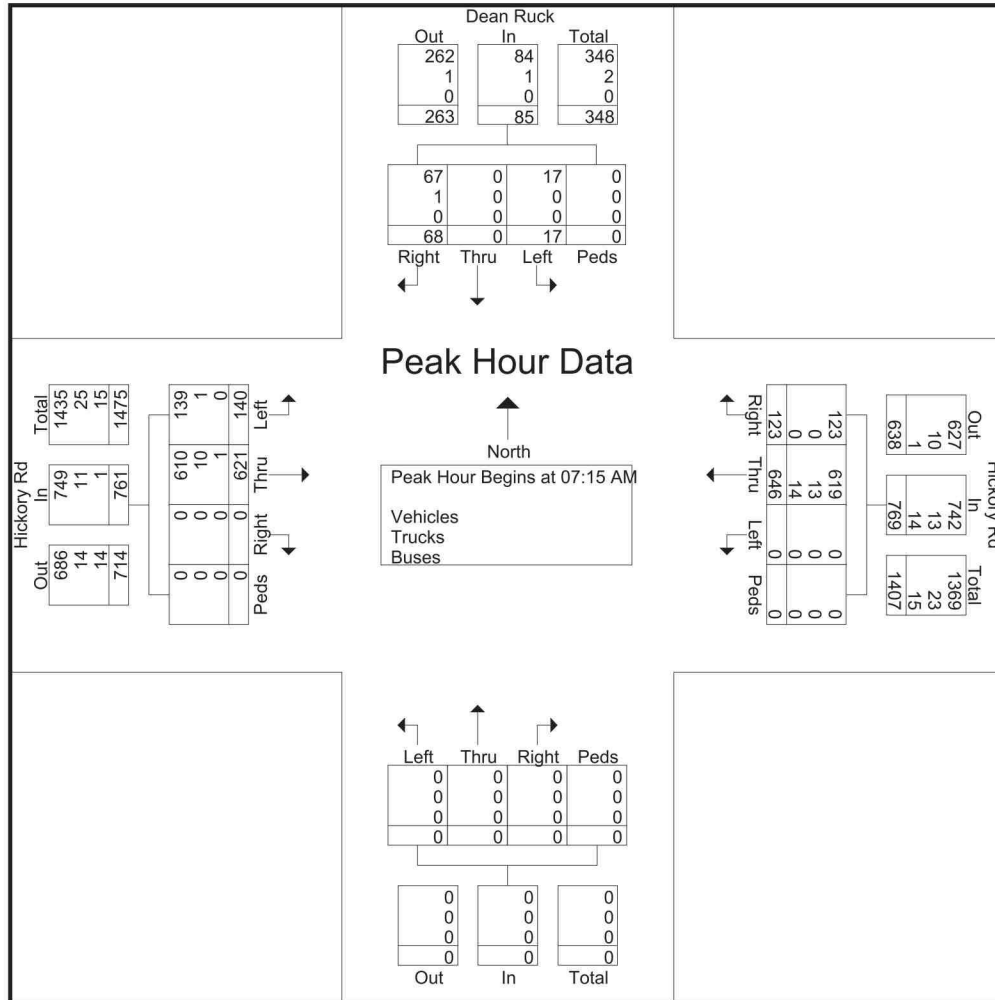
File Name : 03

Site Code :

Start Date : 4/28/2022

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	Northbound					Dean Ruck Southbound					Hickory Rd Eastbound					Hickory Rd Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
07:15 AM	0	0	0	0	0	3	0	8	0	11	36	210	0	0	246	0	138	26	0	164	421
07:30 AM	0	0	0	0	0	4	0	11	0	15	24	144	0	0	168	0	154	23	0	177	360
07:45 AM	0	0	0	0	0	2	0	14	0	16	36	117	0	0	153	0	189	40	0	229	398
08:00 AM	0	0	0	0	0	8	0	35	0	43	44	150	0	0	194	0	165	34	0	199	436
Total Volume	0	0	0	0	0	17	0	68	0	85	140	621	0	0	761	0	646	123	0	769	1615
% App. Total	0	0	0	0	0	20	0	80	0	18.4	81.6	0	0	0	0	0	84	16	0	0	0
PHF	.000	.000	.000	.000	.000	.531	.000	.486	.000	.494	.795	.739	.000	.000	.773	.000	.854	.769	.000	.840	.926
Vehicles	0	0	0	0	0	17	0	67	0	84	139	610	0	0	749	0	619	123	0	742	1575
% Vehicles	0	0	0	0	0	0	0	1	0	1	1	10	0	0	11	0	13	0	0	13	25
Trucks	0	0	0	0	0	0	0	1.5	0	1.2	0.7	1.6	0	0	1.4	0	2.0	0	0	1.7	1.5
Buses	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	14	0	0	14	15
% Buses	0	0	0	0	0	0	0	0	0	0	0	0.2	0	0	0.1	0	2.2	0	0	1.8	0.9



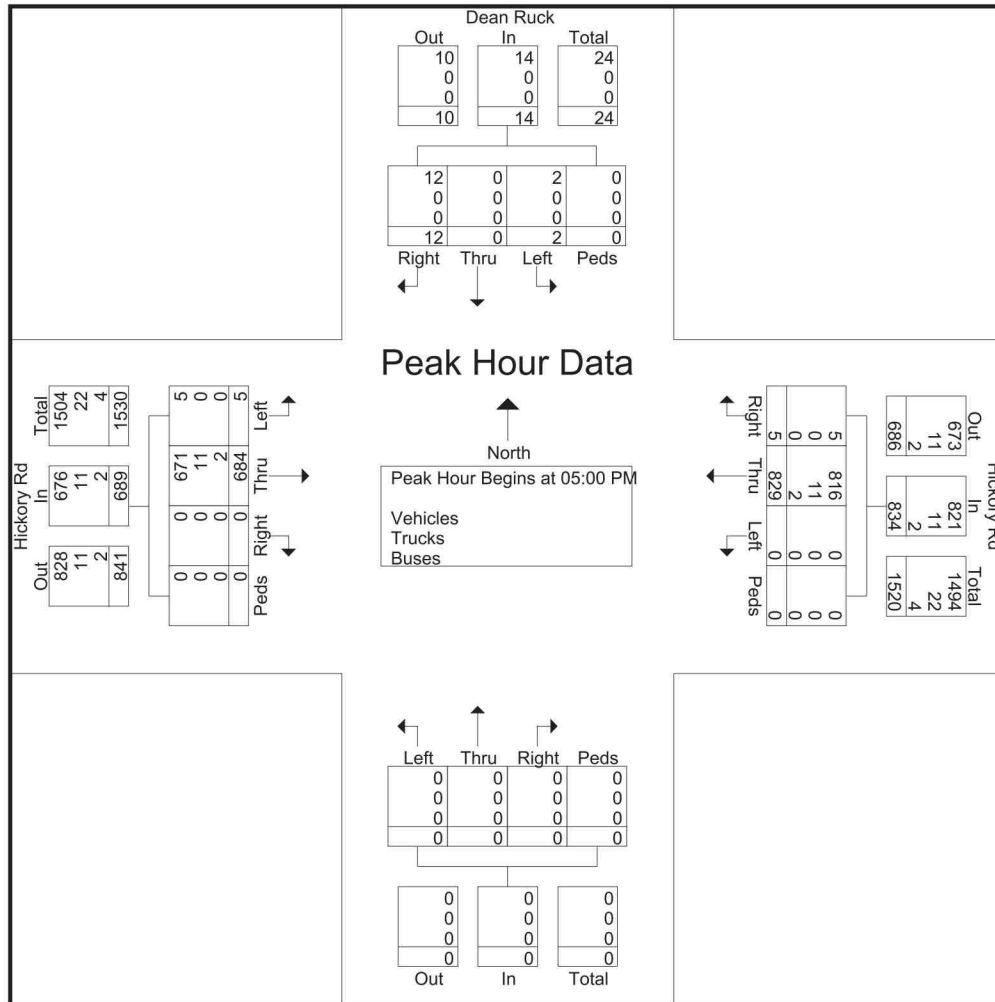
File Name : 03

Site Code :

Start Date : 4/28/2022

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	Northbound					Dean Ruck Southbound					Hickory Rd Eastbound					Hickory Rd Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 02:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	0	0	0	0	0	2	0	10	0	12	2	164	0	0	166	0	202	2	0	204	382
05:15 PM	0	0	0	0	0	0	0	1	0	1	2	167	0	0	169	0	193	1	0	194	364
05:30 PM	0	0	0	0	0	0	0	0	0	0	1	195	0	0	196	0	219	0	0	219	415
05:45 PM	0	0	0	0	0	0	0	1	0	1	0	158	0	0	158	0	215	2	0	217	376
Total Volume	0	0	0	0	0	2	0	12	0	14	5	684	0	0	689	0	829	5	0	834	1537
% App. Total	0	0	0	0	0	14.3	0	85.7	0	0	0.7	99.3	0	0	0	0	99.4	0.6	0	0	0
PHF	.000	.000	.000	.000	.000	.250	.000	.300	.000	.292	.625	.877	.000	.000	.879	.000	.946	.625	.000	.952	.926
Vehicles	0	0	0	0	0	2	0	12	0	14	5	671	0	0	676	0	816	5	0	821	1511
% Vehicles																					
Trucks	0	0	0	0	0	0	0	0	0	0	0	11	0	0	11	0	11	0	0	11	22
% Trucks	0	0	0	0	0	0	0	0	0	0	0	1.6	0	0	1.6	0	1.3	0	0	1.3	1.4
Buses	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	2	0	0	2	4
% Buses	0	0	0	0	0	0	0	0	0	0	0	0.3	0	0	0.3	0	0.2	0	0	0.2	0.3



Greater Traffic Company

File Name : 02

Site Code :

Start Date : 4/28/2022

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Groups Printed- Vehicles - Trucks - Buses

Start Time	Northbound					Driveway e/o Dean Ruck Southbound					Hickory Rd Eastbound					Hickory Rd Westbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
07:00 AM	0	0	0	0	0	0	0	1	0	1	3	238	0	0	241	0	98	11	0	109	351
07:15 AM	0	0	0	0	0	0	0	0	0	0	1	204	0	0	205	0	163	4	0	167	372
07:30 AM	0	0	0	0	0	0	0	2	0	2	0	159	0	0	159	0	172	2	0	174	335
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	119	0	0	119	0	235	2	0	237	356
Total	0	0	0	0	0	0	0	3	0	3	4	720	0	0	724	0	668	19	0	687	1414
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	156	0	0	156	0	194	2	0	196	352
08:15 AM	0	0	0	0	0	1	0	0	0	1	0	200	0	0	200	0	102	0	0	102	303
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	225	0	0	225	0	127	2	0	129	354
08:45 AM	0	0	0	0	0	0	0	1	0	1	0	173	0	0	173	0	144	0	0	144	318
Total	0	0	0	0	0	1	0	1	0	2	0	754	0	0	754	0	567	4	0	571	1327
*** BREAK ***																					
02:00 PM	0	0	0	0	0	0	0	0	0	0	1	114	0	0	115	0	135	1	0	136	251
02:15 PM	0	0	0	0	0	0	0	2	0	2	0	115	0	0	115	0	177	1	0	178	295
02:30 PM	0	0	0	0	0	3	0	2	0	5	0	116	0	0	116	0	151	0	0	151	272
02:45 PM	0	0	0	0	0	4	0	1	0	5	0	118	0	0	118	0	140	0	0	140	263
Total	0	0	0	0	0	7	0	5	0	12	1	463	0	0	464	0	603	2	0	605	1081
03:00 PM	0	0	0	0	0	2	0	0	0	2	0	126	0	0	126	0	162	0	0	162	290
03:15 PM	0	0	0	0	0	5	0	1	0	6	0	192	0	0	192	0	109	0	0	109	307
03:30 PM	0	0	0	0	0	3	0	4	0	7	0	140	0	0	140	0	164	0	0	164	311
03:45 PM	0	0	0	0	0	4	0	2	0	6	1	164	0	0	165	0	144	1	0	145	316
Total	0	0	0	0	0	14	0	7	0	21	1	622	0	0	623	0	579	1	0	580	1224
04:00 PM	0	0	0	0	0	1	0	0	0	1	0	123	0	0	123	0	192	0	0	192	316
04:15 PM	0	0	0	0	0	2	0	5	0	7	0	142	0	0	142	0	226	0	0	226	375
04:30 PM	0	0	0	0	0	1	0	2	0	3	0	147	0	0	147	0	218	1	0	219	369
04:45 PM	0	0	0	0	0	0	0	1	0	1	0	145	0	0	145	0	218	0	0	218	364
Total	0	0	0	0	0	4	0	8	0	12	0	557	0	0	557	0	854	1	0	855	1424
05:00 PM	0	0	0	0	0	1	0	2	0	3	0	167	0	0	167	0	206	0	0	206	376
05:15 PM	0	0	0	0	0	0	0	0	0	0	1	166	0	0	167	0	194	4	0	198	365
05:30 PM	0	0	0	0	0	0	0	2	0	2	8	182	0	0	190	0	215	7	0	222	414
05:45 PM	0	0	0	0	0	0	0	0	0	0	9	151	0	0	160	0	215	6	0	221	381
Total	0	0	0	0	0	1	0	4	0	5	18	666	0	0	684	0	830	17	0	847	1536
Grand Total	0	0	0	0	0	27	0	28	0	55	24	3782	0	0	3806	0	4101	44	0	4145	8006
Apprch %	0	0	0	0	0	49.1	0	50.9	0	0	0.6	99.4	0	0	0	0	98.9	1.1	0	0	
Total %	0	0	0	0	0	0.3	0	0.3	0	0.7	0.3	47.2	0	0	47.5	0	51.2	0.5	0	51.8	
Vehicles	0	0	0	0	0	26	0	28	0	54	24	3693	0	0	3717	0	3939	43	0	3982	7753
% Vehicles	0	0	0	0	0	96.3	0	100	0	98.2	100	97.6	0	0	97.7	0	96	97.7	0	96.1	96.8
Trucks	0	0	0	0	0	1	0	0	0	1	0	78	0	0	78	0	97	1	0	98	177
% Trucks	0	0	0	0	0	3.7	0	0	0	1.8	0	2.1	0	0	2	0	2.4	2.3	0	2.4	2.2
Buses	0	0	0	0	0	0	0	0	0	0	0	11	0	0	11	0	65	0	0	65	76
% Buses	0	0	0	0	0	0	0	0	0	0	0	0.3	0	0	0.3	0	1.6	0	0	1.6	0.9

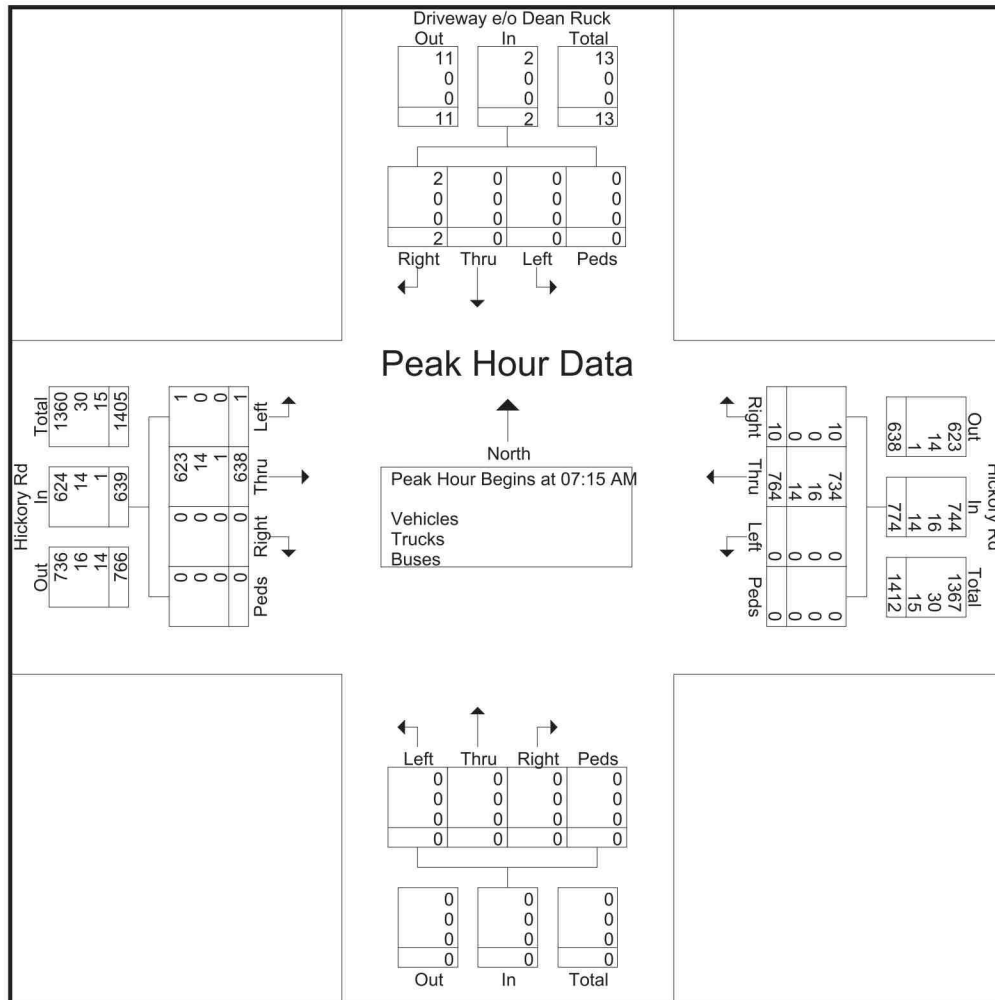
File Name : 02

Site Code :

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	Northbound					Driveway e/o Dean Ruck Southbound					Hickory Rd Eastbound					Hickory Rd Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
07:15 AM	0	0	0	0	0	0	0	0	0	0	1	204	0	0	205	0	163	4	0	167	372
07:30 AM	0	0	0	0	0	0	0	2	0	2	0	159	0	0	159	0	172	2	0	174	335
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	119	0	0	119	0	235	2	0	237	356
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	156	0	0	156	0	194	2	0	196	352
Total Volume	0	0	0	0	0	0	0	2	0	2	1	638	0	0	639	0	764	10	0	774	1415
% App. Total	0	0	0	0	0	0	0	100	0	0	0.2	99.8	0	0	0	0	98.7	1.3	0	0	0
PHF	.000	.000	.000	.000	.000	.000	.000	.250	.000	.250	.250	.782	.000	.000	.779	.000	.813	.625	.000	.816	.951
Vehicles	0	0	0	0	0	0	0	2	0	2	1	623	0	0	624	0	734	10	0	744	1370
% Vehicles	0	0	0	0	0	0	0	0	0	0	0	14	0	0	14	0	16	0	0	16	30
Trucks	0	0	0	0	0	0	0	0	0	0	0	2.2	0	0	2.2	0	2.1	0	0	2.1	2.1
% Trucks	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	14	0	0	14	15
Buses	0	0	0	0	0	0	0	0	0	0	0	0.2	0	0	0.2	0	1.8	0	0	1.8	1.1
% Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0



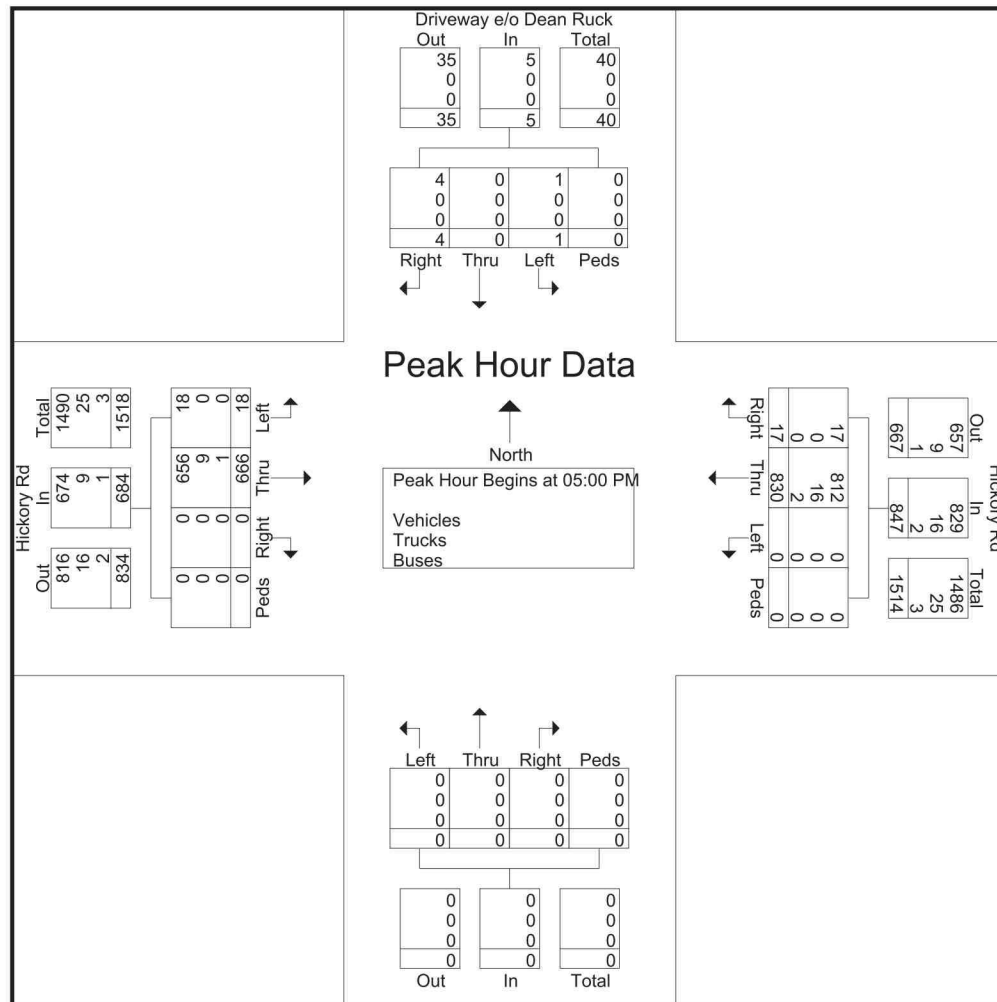
File Name : 02

Site Code :

Start Date : 4/28/2022

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	Northbound					Driveway e/o Dean Ruck Southbound					Hickory Rd Eastbound					Hickory Rd Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 02:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	0	0	0	0	0	1	0	2	0	3	0	167	0	0	167	0	206	0	0	206	376
05:15 PM	0	0	0	0	0	0	0	0	0	0	1	166	0	0	167	0	194	4	0	198	365
05:30 PM	0	0	0	0	0	0	0	2	0	2	8	182	0	0	190	0	215	7	0	222	414
05:45 PM	0	0	0	0	0	0	0	0	0	0	9	151	0	0	160	0	215	6	0	221	381
Total Volume	0	0	0	0	0	1	0	4	0	5	18	666	0	0	684	0	830	17	0	847	1536
% App. Total	0	0	0	0		20	0	80	0		2.6	97.4	0	0		0	98	2	0		
PHF	.000	.000	.000	.000	.000	.250	.000	.500	.000	.417	.500	.915	.000	.000	.900	.000	.965	.607	.000	.954	.928
Vehicles	0	0	0	0	0	1	0	4	0	5	18	656	0	0	674	0	812	17	0	829	1508
Trucks	0	0	0	0	0	0	0	0	0	0	0	9	0	0	9	0	16	0	0	16	25
% Trucks	0	0	0	0	0	0	0	0	0	0	0	1.4	0	0	1.3	0	1.9	0	0	1.9	1.6
Buses	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	2	0	0	2	3
% Buses	0	0	0	0	0	0	0	0	0	0	0	0.2	0	0	0.1	0	0.2	0	0	0.2	0.2



Greater Traffic Company

File Name : 05

Site Code :

Start Date : 4/28/2022

Page No : 1

Groups Printed- Vehicles - Trucks - Buses

	Oak Crest Rd Northbound					Sequoyah HS Southbound					Hickory Rd Eastbound					Hickory Rd Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	0	0	15	0	15	1	0	0	0	1	11	227	0	0	238	4	70	7	0	81	335
07:15 AM	1	0	14	0	15	2	0	5	0	7	19	246	1	0	266	10	100	18	0	128	416
07:30 AM	4	0	9	0	13	9	0	11	0	20	52	190	2	0	244	7	115	38	0	160	437
07:45 AM	3	0	4	0	7	19	0	14	0	33	77	157	3	0	237	2	79	55	0	136	413
Total	8	0	42	0	50	31	0	30	0	61	159	820	6	0	985	23	364	118	0	505	1601
08:00 AM	3	1	15	0	19	44	1	16	0	61	60	169	2	0	231	7	82	55	0	144	455
08:15 AM	5	0	6	0	11	8	0	9	0	17	7	206	3	0	216	5	94	11	0	110	354
08:30 AM	1	0	5	0	6	3	0	2	0	5	2	213	1	0	216	2	118	8	0	128	355
08:45 AM	4	0	8	0	12	1	0	3	0	4	1	194	1	0	196	3	145	3	0	151	363
Total	13	1	34	0	48	56	1	30	0	87	70	782	7	0	859	17	439	77	0	533	1527
*** BREAK ***																					
02:00 PM	0	1	5	0	6	2	0	5	0	7	5	113	2	0	120	9	127	4	0	140	273
02:15 PM	4	0	5	0	9	9	0	8	0	17	6	93	2	0	101	8	139	6	0	153	280
02:30 PM	1	1	6	0	8	3	0	2	0	5	9	100	2	0	111	6	151	14	0	171	295
02:45 PM	3	0	4	0	7	2	0	1	0	3	3	114	4	0	121	3	131	2	0	136	267
Total	8	2	20	0	30	16	0	16	0	32	23	420	10	0	453	26	548	26	0	600	1115
03:00 PM	2	0	2	0	4	0	0	2	0	2	0	121	2	0	123	5	141	0	0	146	275
03:15 PM	4	0	5	0	9	40	0	36	0	76	16	92	5	0	113	5	139	15	0	159	357
03:30 PM	1	0	2	0	3	11	0	17	0	28	6	110	3	0	119	9	216	6	0	231	381
03:45 PM	1	0	8	0	9	19	1	21	0	41	8	146	6	0	160	0	131	5	0	136	346
Total	8	0	17	0	25	70	1	76	0	147	30	469	16	0	515	19	627	26	0	672	1359
04:00 PM	1	0	8	0	9	8	0	12	0	20	4	109	2	0	115	8	176	2	0	186	330
04:15 PM	1	0	5	0	6	8	0	9	0	17	5	112	2	0	119	7	243	5	0	255	397
04:30 PM	2	0	5	0	7	8	0	9	0	17	7	142	2	0	151	4	223	4	0	231	406
04:45 PM	1	0	2	0	3	11	0	9	0	20	9	130	3	0	142	5	225	8	0	238	403
Total	5	0	20	0	25	35	0	39	0	74	25	493	9	0	527	24	867	19	0	910	1536
05:00 PM	4	0	7	0	11	3	1	7	0	11	4	149	3	0	156	3	209	1	0	213	391
05:15 PM	5	0	3	0	8	2	0	3	0	5	4	171	2	0	177	6	185	4	0	195	385
05:30 PM	2	1	6	0	9	2	0	6	0	8	10	180	1	0	191	2	198	5	0	205	413
05:45 PM	5	2	6	0	13	8	0	10	0	18	34	172	4	0	210	5	193	21	0	219	460
Total	16	3	22	0	41	15	1	26	0	42	52	672	10	0	734	16	785	31	0	832	1649
Grand Total	58	6	155	0	219	223	3	217	0	443	359	3656	58	0	4073	125	3630	297	0	4052	8787
Apprch %	26.5	2.7	70.8	0		50.3	0.7	49	0		8.8	89.8	1.4	0		3.1	89.6	7.3	0		
Total %	0.7	0.1	1.8	0	2.5	2.5	0	2.5	0	5	4.1	41.6	0.7	0	46.4	1.4	41.3	3.4	0	46.1	
Vehicles	56	6	153	0	215	223	3	216	0	442	359	3525	58	0	3942	122	3446	296	0	3864	8463
% Vehicles	96.6	100	98.7	0	98.2	100	100	99.5	0	99.8	100	96.4	100	0	96.8	97.6	94.9	99.7	0	95.4	96.3
Trucks	2	0	2	0	4	0	0	1	0	1	0	69	0	0	69	3	97	1	0	101	175
% Trucks	3.4	0	1.3	0	1.8	0	0	0.5	0	0.2	0	1.9	0	0	1.7	2.4	2.7	0.3	0	2.5	2
Buses	0	0	0	0	0	0	0	0	0	0	0	62	0	0	62	0	87	0	0	87	149
% Buses	0	0	0	0	0	0	0	0	0	0	0	1.7	0	0	1.5	0	2.4	0	0	2.1	1.7

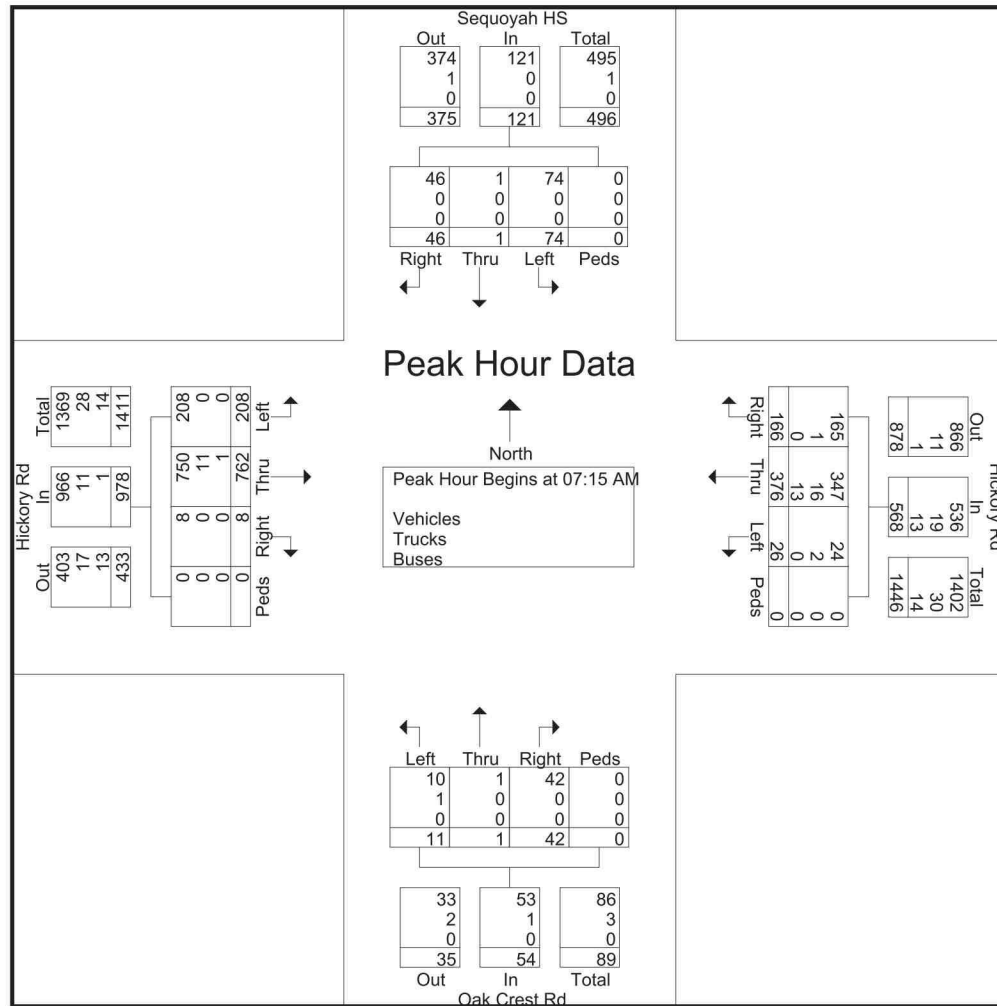
File Name : 05

Site Code :

Start Date : 4/28/2022

Page No : 2

	Oak Crest Rd Northbound					Sequoyah HS Southbound					Hickory Rd Eastbound					Hickory Rd Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
07:15 AM	1	0	14	0	15	2	0	5	0	7	19	246	1	0	266	10	100	18	0	128	416
07:30 AM	4	0	9	0	13	9	0	11	0	20	52	190	2	0	244	7	115	38	0	160	437
07:45 AM	3	0	4	0	7	19	0	14	0	33	77	157	3	0	237	2	79	55	0	136	413
08:00 AM	3	1	15	0	19	44	1	16	0	61	60	169	2	0	231	7	82	55	0	144	455
Total Volume	11	1	42	0	54	74	1	46	0	121	208	762	8	0	978	26	376	166	0	568	1721
% App. Total	20.4	1.9	77.8	0		61.2	0.8	38	0		21.3	77.9	0.8	0		4.6	66.2	29.2	0		
PHF	.688	.250	.700	.000	.711	.420	.250	.719	.000	.496	.675	.774	.667	.000	.919	.650	.817	.755	.000	.888	.946
Vehicles	10	1	42	0	53	74	1	46	0	121	208	750	8	0	966	24	347	165	0	536	1676
% Vehicles																					
Trucks	1	0	0	0	1	0	0	0	0	0	0	11	0	0	11	2	16	1	0	19	31
% Trucks	9.1	0	0	0	1.9	0	0	0	0	0	0	1.4	0	0	1.1	7.7	4.3	0.6	0	3.3	1.8
Buses	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	13	0	0	13	14
% Buses	0	0	0	0	0	0	0	0	0	0	0	0.1	0	0	0.1	0	3.5	0	0	2.3	0.8



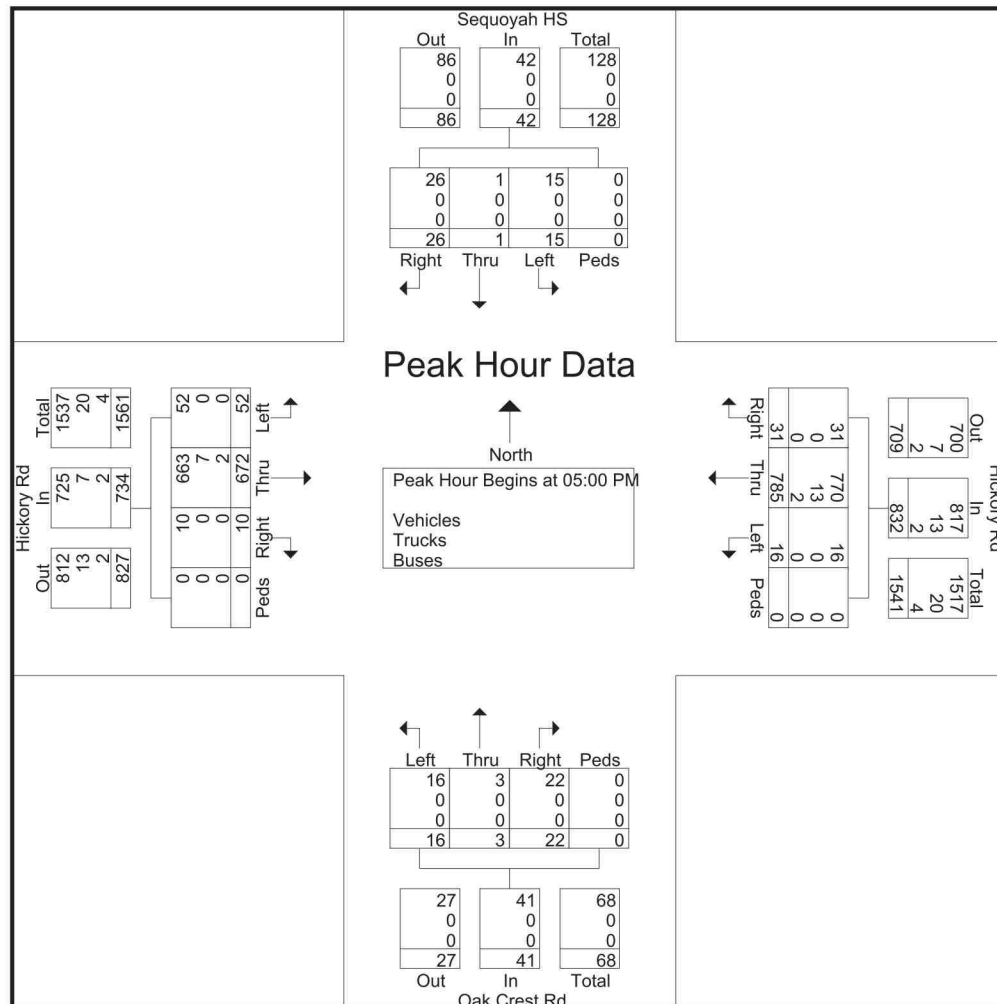
File Name : 05

Site Code :

Start Date : 4/28/2022

Page No : 3

	Oak Crest Rd Northbound					Sequoiah HS Southbound					Hickory Rd Eastbound					Hickory Rd Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 02:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	4	0	7	0	11	3	1	7	0	11	4	149	3	0	156	3	209	1	0	213	391
05:15 PM	5	0	3	0	8	2	0	3	0	5	4	171	2	0	177	6	185	4	0	195	385
05:30 PM	2	1	6	0	9	2	0	6	0	8	10	180	1	0	191	2	198	5	0	205	413
05:45 PM	5	2	6	0	13	8	0	10	0	18	34	172	4	0	210	5	193	21	0	219	460
Total Volume	16	3	22	0	41	15	1	26	0	42	52	672	10	0	734	16	785	31	0	832	1649
% App. Total	39	7.3	53.7	0		35.7	2.4	61.9	0		7.1	91.6	1.4	0		1.9	94.4	3.7	0		
PHF	.800	.375	.786	.000	.788	.469	.250	.650	.000	.583	.382	.933	.625	.000	.874	.667	.939	.369	.000	.950	.896
Vehicles	16	3	22	0	41	15	1	26	0	42	52	663	10	0	725	16	770	31	0	817	1625
% Vehicles																					
Trucks	0	0	0	0	0	0	0	0	0	0	0	7	0	0	7	0	13	0	0	13	20
% Trucks	0	0	0	0	0	0	0	0	0	0	0	1.0	0	0	1.0	0	1.7	0	0	1.6	1.2
Buses	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	2	0	0	2	4
% Buses	0	0	0	0	0	0	0	0	0	0	0	0.3	0	0	0.3	0	0.3	0	0	0.2	0.2



Greater Traffic Company

File Name : 04

Site Code :

Start Date : 4/28/2022

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Groups Printed- Vehicles - Trucks - Buses

Start Time	Northbound					Sequoyah HS Driveway Southbound					Hickory Rd Eastbound					Hickory Rd Westbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
07:00 AM	0	0	0	0	0	0	0	0	0	0	5	251	0	0	256	0	95	4	0	99	355
07:15 AM	0	0	0	0	0	0	0	1	0	1	11	251	0	0	262	0	141	5	0	146	409
07:30 AM	0	0	0	0	0	0	0	1	0	1	28	170	0	0	198	0	149	15	0	164	363
07:45 AM	0	0	0	0	0	0	0	0	0	0	38	153	0	0	191	0	137	63	0	200	391
Total	0	0	0	0	0	0	0	2	0	2	82	825	0	0	907	0	522	87	0	609	1518
08:00 AM	0	0	0	0	0	0	0	0	0	0	28	191	0	0	219	0	145	56	0	201	420
08:15 AM	0	0	0	0	0	0	0	2	0	2	2	208	0	0	210	0	99	2	0	101	313
08:30 AM	0	0	0	0	0	1	0	1	0	2	0	241	0	0	241	0	131	2	0	133	376
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	168	0	0	168	0	145	1	0	146	314
Total	0	0	0	0	0	1	0	3	0	4	30	808	0	0	838	0	520	61	0	581	1423
*** BREAK ***																					
02:00 PM	0	0	0	0	0	3	0	5	0	8	3	116	0	0	119	0	133	4	0	137	264
02:15 PM	0	0	0	0	0	11	0	5	0	16	0	101	0	0	101	0	172	2	0	174	291
02:30 PM	0	0	0	0	0	0	0	0	0	0	0	112	0	0	112	0	154	0	0	154	266
02:45 PM	0	0	0	0	0	1	0	2	0	3	1	127	0	0	128	0	135	3	0	138	269
Total	0	0	0	0	0	15	0	12	0	27	4	456	0	0	460	0	594	9	0	603	1090
03:00 PM	0	0	0	0	0	22	0	22	0	44	2	109	0	0	111	0	154	7	0	161	316
03:15 PM	0	0	0	0	0	46	0	49	0	95	0	142	0	0	142	0	124	2	0	126	363
03:30 PM	0	0	0	0	0	5	0	4	0	9	0	140	0	0	140	0	173	2	0	175	324
03:45 PM	0	0	0	0	0	6	0	2	0	8	0	166	0	0	166	0	143	1	0	144	318
Total	0	0	0	0	0	79	0	77	0	156	2	557	0	0	559	0	594	12	0	606	1321
04:00 PM	0	0	0	0	0	3	0	5	0	8	1	109	0	0	110	0	207	2	0	209	327
04:15 PM	0	0	0	0	0	3	0	4	0	7	0	135	0	0	135	0	243	1	0	244	386
04:30 PM	0	0	0	0	0	3	0	5	0	8	1	147	0	0	148	0	230	1	0	231	387
04:45 PM	0	0	0	0	0	1	0	1	0	2	0	144	0	0	144	0	226	0	0	226	372
Total	0	0	0	0	0	10	0	15	0	25	2	535	0	0	537	0	906	4	0	910	1472
05:00 PM	0	0	0	0	0	0	0	1	0	1	0	163	0	0	163	0	211	1	0	212	376
05:15 PM	0	0	0	0	0	3	0	1	0	4	2	165	0	0	167	0	191	2	0	193	364
05:30 PM	0	0	0	0	0	3	0	5	0	8	14	193	0	0	207	0	211	9	0	220	435
05:45 PM	0	0	0	0	0	8	0	19	0	27	20	151	0	0	171	0	206	13	0	219	417
Total	0	0	0	0	0	14	0	26	0	40	36	672	0	0	708	0	819	25	0	844	1592
Grand Total	0	0	0	0	0	119	0	135	0	254	156	3853	0	0	4009	0	3955	198	0	4153	8416
Apprch %	0	0	0	0	0	46.9	0	53.1	0		3.9	96.1	0	0		0	95.2	4.8	0		
Total %	0	0	0	0	0	1.4	0	1.6	0	3	1.9	45.8	0	0	47.6	0	47	2.4	0	49.3	
Vehicles	0	0	0	0	0	119	0	134	0	253	155	3710	0	0	3865	0	3779	198	0	3977	8095
% Vehicles	0	0	0	0	0	100	0	99.3	0	99.6	99.4	96.3	0	0	96.4	0	95.5	100	0	95.8	96.2
Trucks	0	0	0	0	0	0	0	0	0	0	0	83	0	0	83	0	90	0	0	90	173
% Trucks	0	0	0	0	0	0	0	0	0	0	0	2.2	0	0	2.1	0	2.3	0	0	2.2	2.1
Buses	0	0	0	0	0	0	0	1	0	1	1	60	0	0	61	0	86	0	0	86	148
% Buses	0	0	0	0	0	0	0	0.7	0	0.4	0.6	1.6	0	0	1.5	0	2.2	0	0	2.1	1.8

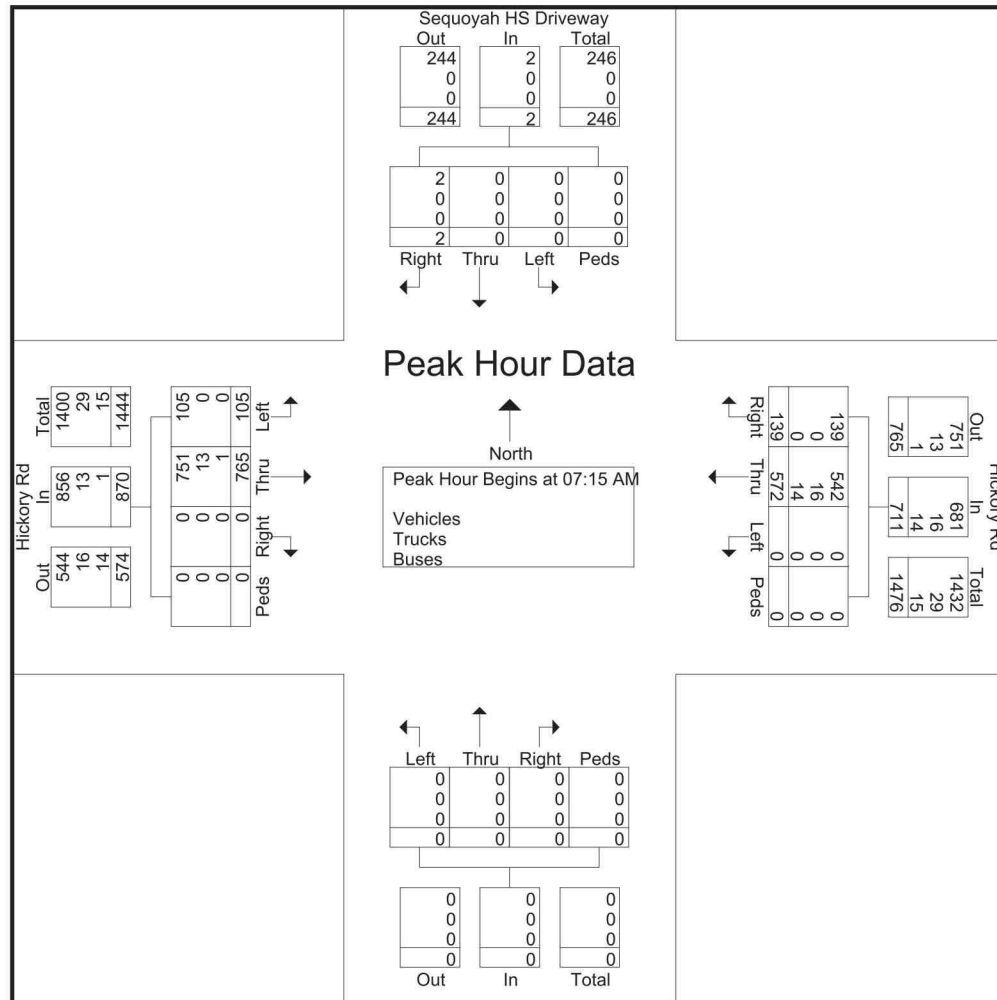
File Name : 04

Site Code :

Start Date : 4/28/2022

Page No : 2

	Northbound					Sequoiah HS Driveway Southbound					Hickory Rd Eastbound					Hickory Rd Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
07:15 AM	0	0	0	0	0	0	0	1	0	1	11	251	0	0	262	0	141	5	0	146	409
07:30 AM	0	0	0	0	0	0	0	1	0	1	28	170	0	0	198	0	149	15	0	164	363
07:45 AM	0	0	0	0	0	0	0	0	0	0	38	153	0	0	191	0	137	63	0	200	391
08:00 AM	0	0	0	0	0	0	0	0	0	0	28	191	0	0	219	0	145	56	0	201	420
Total Volume	0	0	0	0	0	0	0	2	0	2	105	765	0	0	870	0	572	139	0	711	1583
% App. Total	0	0	0	0	0	0	0	100	0	0	12.1	87.9	0	0	0	0	80.5	19.5	0	0	0
PHF	.000	.000	.000	.000	.000	.000	.000	.500	.000	.500	.691	.762	.000	.000	.830	.000	.960	.552	.000	.884	.942
Vehicles	0	0	0	0	0	0	0	2	0	2	105	751	0	0	856	0	542	139	0	681	1539
% Vehicles	0	0	0	0	0	0	0	0	0	0	0	13	0	0	13	0	16	0	0	16	29
Trucks	0	0	0	0	0	0	0	0	0	0	0	1.7	0	0	1.5	0	2.8	0	0	2.3	1.8
% Trucks	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	14	0	0	14	15
Buses	0	0	0	0	0	0	0	0	0	0	0	0.1	0	0	0.1	0	2.4	0	0	2.0	0.9
% Buses	0	0	0	0	0	0	0	0	0	0	0	0.1	0	0	0.1	0	2.4	0	0	2.0	0.9



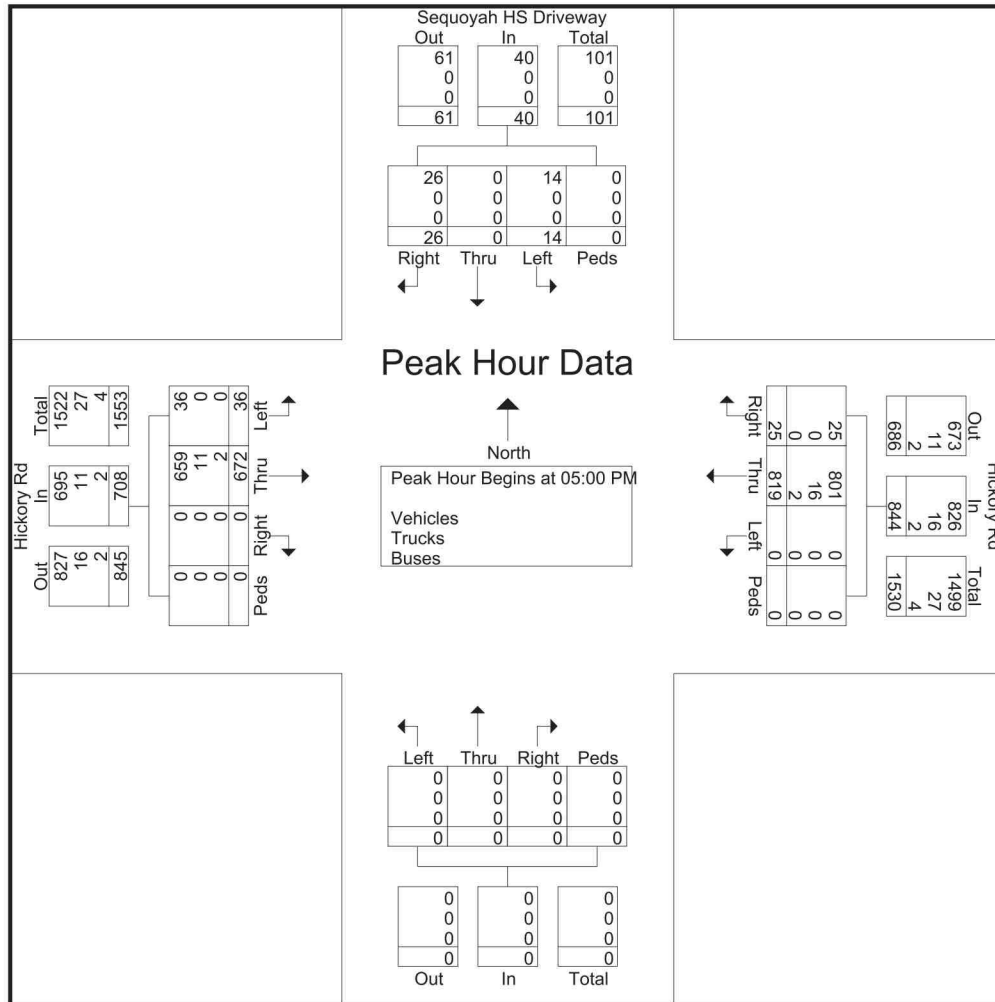
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Site Code :

Start Date : 4/28/2022

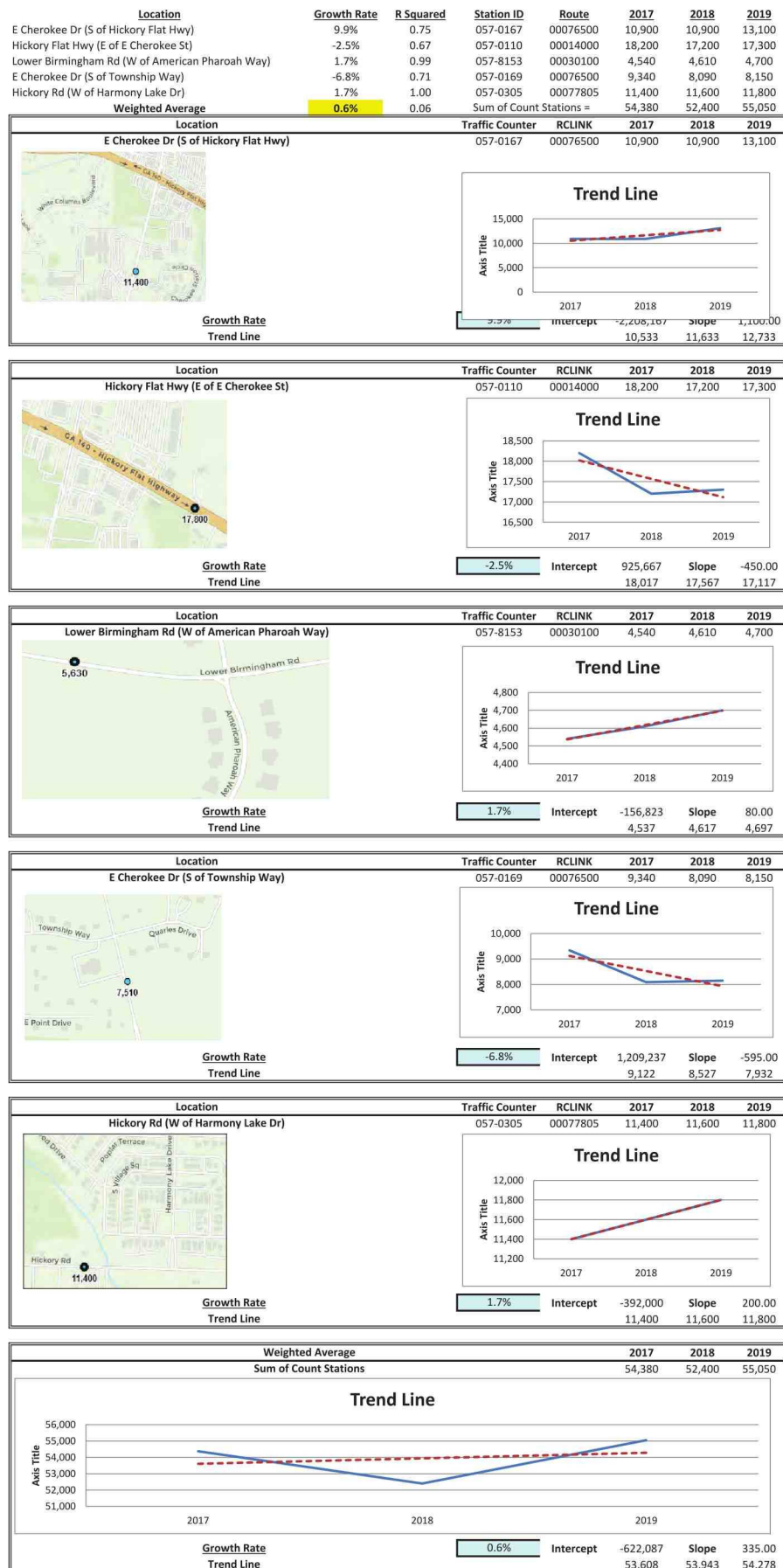
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	Northbound					Sequoyah HS Driveway Southbound					Hickory Rd Eastbound					Hickory Rd Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 02:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	0	0	0	0	0	0	0	1	0	1	0	163	0	0	163	0	211	1	0	212	376
05:15 PM	0	0	0	0	0	3	0	1	0	4	2	165	0	0	167	0	191	2	0	193	364
05:30 PM	0	0	0	0	0	3	0	5	0	8	14	193	0	0	207	0	211	9	0	220	435
05:45 PM	0	0	0	0	0	8	0	19	0	27	20	151	0	0	171	0	206	13	0	219	417
Total Volume	0	0	0	0	0	14	0	26	0	40	36	672	0	0	708	0	819	25	0	844	1592
% App. Total	0	0	0	0	0	35	0	65	0	0	5.1	94.9	0	0	0	0	97	3	0	0	0
PHF	.000	.000	.000	.000	.000	.438	.000	.342	.000	.370	.450	.870	.000	.000	.855	.000	.970	.481	.000	.959	.915
Vehicles	0	0	0	0	0	14	0	26	0	40	36	659	0	0	695	0	801	25	0	826	1561
% Vehicles	0	0	0	0	0	0	0	0	0	0	0	11	0	0	11	0	16	0	0	16	27
Trucks	0	0	0	0	0	0	0	0	0	0	0	1.6	0	0	1.6	0	2.0	0	0	1.9	1.7
% Trucks	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	2	0	0	2	4
Buses	0	0	0	0	0	0	0	0	0	0	0	0.3	0	0	0.3	0	0.2	0	0	0.2	0.3



LINEAR REGRESSION OF DAILY TRAFFIC

Agenda Item VII-2



EXISTING INTERSECTION ANALYSIS

Timings

1: E Cherokee Dr & Hickory Rd

1a. Existing 2022 AM

03/28/2023

											
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	317	413	141	225	145	80	297	228	149	331	300
Future Volume (vph)	317	413	141	225	145	80	297	228	149	331	300
Lane Group Flow (vph)	337	461	150	239	154	85	316	243	159	352	319
Turn Type	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4	3	8		5	2		1	6	
Permitted Phases	4		8		8	2		2	6		6
Detector Phase	7	4	3	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	6.0	5.0	6.0	6.0	5.0	15.0	15.0	5.0	15.0	15.0
Minimum Split (s)	15.0	27.5	15.0	32.5	32.5	15.0	30.5	30.5	15.0	29.5	29.5
Total Split (s)	28.0	48.2	16.0	36.2	36.2	15.0	40.8	40.8	15.0	40.8	40.8
Total Split (%)	23.3%	40.2%	13.3%	30.2%	30.2%	12.5%	34.0%	34.0%	12.5%	34.0%	34.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
Act Effct Green (s)	50.7	35.1	35.0	24.9	24.9	50.2	41.9	41.9	55.9	46.7	46.7
Actuated g/C Ratio	0.42	0.29	0.29	0.21	0.21	0.42	0.35	0.35	0.47	0.39	0.39
v/c Ratio	0.75	0.86	0.65	0.67	0.33	0.21	0.51	0.36	0.39	0.49	0.40
Control Delay	34.8	55.5	36.1	52.8	5.8	20.5	36.3	5.5	22.7	33.6	5.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	34.8	55.5	36.1	52.8	5.8	20.5	36.3	5.5	22.7	33.6	5.0
LOS	C	E	D	D	A	C	D	A	C	C	A
Approach Delay		46.8		34.8			22.6			20.5	
Approach LOS		D		C			C			C	
Queue Length 50th (ft)	180	334	71	172	0	35	199	0	69	214	0
Queue Length 95th (ft)	233	428	104	245	40	73	307	60	127	343	67
Internal Link Dist (ft)		439		329			536			559	
Turn Bay Length (ft)	330		300			170		170	95		450
Base Capacity (vph)	471	653	236	441	533	416	625	684	413	725	805
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.72	0.71	0.64	0.54	0.29	0.20	0.51	0.36	0.38	0.49	0.40
Intersection Summary											
Cycle Length: 120											
Actuated Cycle Length: 120											
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green											
Natural Cycle: 95											
Control Type: Actuated-Coordinated											
Maximum v/c Ratio: 0.86											
Intersection Signal Delay: 31.2						Intersection LOS: C					
Intersection Capacity Utilization 73.0%						ICU Level of Service D					
Analysis Period (min) 15											

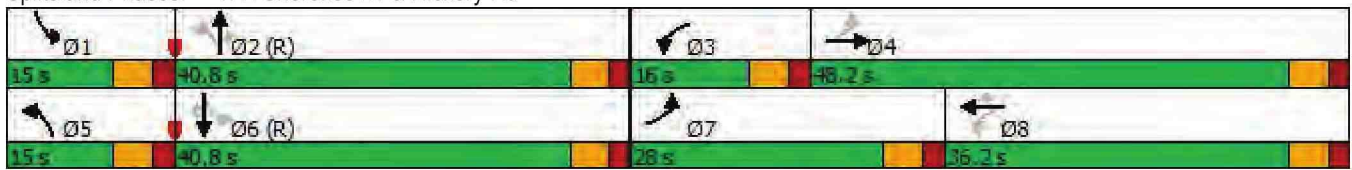
Timings

1: E Cherokee Dr & Hickory Rd

1a. Existing 2022 AM

03/28/2023

Splits and Phases: 1: E Cherokee Dr & Hickory Rd



HCM 6th Signalized Intersection Summary
1: E Cherokee Dr & Hickory Rd

1a. Existing 2022 AM

03/28/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	317	413	21	141	225	145	80	297	228	149	331	300
Future Volume (veh/h)	317	413	21	141	225	145	80	297	228	149	331	300
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1856	1870	1826	1752	1870	1841	1811	1796	1811	1870	1856
Adj Flow Rate, veh/h	337	439	0	150	239	0	85	316	243	159	352	319
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	3	2	5	10	2	4	6	7	6	2	3
Cap, veh/h	416	487		240	316		356	721	606	405	796	670
Arrive On Green	0.17	0.26	0.00	0.09	0.18	0.00	0.04	0.40	0.40	0.07	0.43	0.43
Sat Flow, veh/h	1781	1856	0	1739	1752	1585	1753	1811	1522	1725	1870	1572
Grp Volume(v), veh/h	337	439	0	150	239	0	85	316	243	159	352	319
Grp Sat Flow(s),veh/h/ln	1781	1856	0	1739	1752	1585	1753	1811	1522	1725	1870	1572
Q Serve(g_s), s	17.8	27.4	0.0	8.3	15.5	0.0	3.4	15.3	13.7	6.5	16.0	17.5
Cycle Q Clear(g_c), s	17.8	27.4	0.0	8.3	15.5	0.0	3.4	15.3	13.7	6.5	16.0	17.5
Prop In Lane	1.00		0.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	416	487		240	316		356	721	606	405	796	670
V/C Ratio(X)	0.81	0.90		0.62	0.76		0.24	0.44	0.40	0.39	0.44	0.48
Avail Cap(c_a), veh/h	452	660		244	448		420	721	606	420	796	670
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.7	42.7	0.0	36.9	46.6	0.0	20.5	26.3	25.9	19.9	24.4	24.8
Incr Delay (d2), s/veh	9.9	12.5	0.0	4.8	4.5	0.0	0.3	1.9	2.0	0.6	1.8	2.4
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	8.5	13.9	0.0	3.8	7.0	0.0	1.4	6.9	5.2	2.6	7.3	6.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	41.5	55.2	0.0	41.7	51.2	0.0	20.8	28.3	27.8	20.5	26.1	27.2
LnGrp LOS	D	E		D	D		C	C	C	C	C	C
Approach Vol, veh/h	776			389			644			830		
Approach Delay, s/veh	49.3			47.5			27.1			25.5		
Approach LOS	D			D			C			C		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.0	53.3	15.8	37.0	10.7	56.6	25.6	27.2				
Change Period (Y+Rc), s	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5				
Max Green Setting (Gmax), s	9.5	35.3	10.5	42.7	9.5	35.3	22.5	30.7				
Max Q Clear Time (g_c+I1), s	8.5	17.3	10.3	29.4	5.4	19.5	19.8	17.5				
Green Ext Time (p_c), s	0.0	4.9	0.0	2.1	0.1	5.6	0.3	1.0				
Intersection Summary												
HCM 6th Ctrl Delay	36.1											
HCM 6th LOS	D											

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

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑	↗	↘	
Traffic Vol, veh/h	1	638	764	10	0	2
Future Vol, veh/h	1	638	764	10	0	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	Free	-	None	-	None
Storage Length	-	-	-	280	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	3	4	2	2	2
Mvmt Flow	1	672	804	11	0	2
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	815	0	-	0	1478	804
Stage 1	-	-	-	-	804	-
Stage 2	-	-	-	-	674	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	812	-	-	-	139	383
Stage 1	-	-	-	-	440	-
Stage 2	-	-	-	-	506	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	812	-	-	-	139	383
Mov Cap-2 Maneuver	-	-	-	-	139	-
Stage 1	-	-	-	-	439	-
Stage 2	-	-	-	-	506	-
Approach	EB	WB		SB		
HCM Control Delay, s	0	0		14.5		
HCM LOS	B					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	812	-	-	-	383	
HCM Lane V/C Ratio	0.001	-	-	-	0.005	
HCM Control Delay (s)	9.4	-	-	-	14.5	
HCM Lane LOS	A	-	-	-	B	
HCM 95th %tile Q(veh)	0	-	-	-	0	

Intersection						
Int Delay, s/veh	1.8					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	140	621	646	123	17	68
Future Vol, veh/h	140	621	646	123	17	68
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	Yield	-	None
Storage Length	-	-	-	205	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	2	5	2	2	2
Mvmt Flow	151	668	695	132	18	73
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	695	0	-	0	1665	695
Stage 1	-	-	-	-	695	-
Stage 2	-	-	-	-	970	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	901	-	-	-	106	442
Stage 1	-	-	-	-	495	-
Stage 2	-	-	-	-	368	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	901	-	-	-	78	442
Mov Cap-2 Maneuver	-	-	-	-	202	-
Stage 1	-	-	-	-	363	-
Stage 2	-	-	-	-	368	-
Approach	EB	WB		SB		
HCM Control Delay, s	1.8	0		18.5		
HCM LOS	C					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	901	-	-	-	357	
HCM Lane V/C Ratio	0.167	-	-	-	0.256	
HCM Control Delay (s)	9.8	-	-	-	18.5	
HCM Lane LOS	A	-	-	-	C	
HCM 95th %tile Q(veh)	0.6	-	-	-	1	

Intersection						
Int Delay, s/veh	0.7					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	105	765	572	139	0	2
Future Vol, veh/h	105	765	572	139	0	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	60	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	6	2	2	2
Mvmt Flow	112	814	609	148	0	2
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	757	0	-	0	1721	683
Stage 1	-	-	-	-	683	-
Stage 2	-	-	-	-	1038	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	854	-	-	-	98	449
Stage 1	-	-	-	-	502	-
Stage 2	-	-	-	-	341	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	854	-	-	-	85	449
Mov Cap-2 Maneuver	-	-	-	-	213	-
Stage 1	-	-	-	-	436	-
Stage 2	-	-	-	-	341	-
Approach	EB	WB		SB		
HCM Control Delay, s	1.2	0		13.1		
HCM LOS	B					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	854	-	-	-	-	449
HCM Lane V/C Ratio	0.131	-	-	-	-	0.005
HCM Control Delay (s)	9.8	-	-	-	-	13.1
HCM Lane LOS	A	-	-	-	-	B
HCM 95th %tile Q(veh)	0.4	-	-	-	-	0

Intersection												
Int Delay, s/veh	33.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	208	762	8	26	376	166	11	1	42	74	1	46
Future Vol, veh/h	208	762	8	26	376	166	11	1	42	74	1	46
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	160	-	130	150	-	150	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	3	3	3	3	3	3	2	2	2	2	2	2
Mvmt Flow	219	802	8	27	396	175	12	1	44	78	1	48

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	571	0	0	810	0	0	1802	1865	802	1717	1698	396
Stage 1	-	-	-	-	-	-	1240	1240	-	450	450	-
Stage 2	-	-	-	-	-	-	562	625	-	1267	1248	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.227	-	-	2.227	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	997	-	-	811	-	-	62	73	384	~ 71	92	653
Stage 1	-	-	-	-	-	-	214	247	-	589	572	-
Stage 2	-	-	-	-	-	-	512	477	-	207	245	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	997	-	-	811	-	-	46	55	384	~ 50	69	653
Mov Cap-2 Maneuver	-	-	-	-	-	-	46	55	-	~ 50	69	-
Stage 1	-	-	-	-	-	-	167	193	-	459	553	-
Stage 2	-	-	-	-	-	-	457	461	-	142	191	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	2			0.4			44.2			\$ 436.6		
HCM LOS							E			F		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	147	997	-	-	811	-	-	77
HCM Lane V/C Ratio	0.387	0.22	-	-	0.034	-	-	1.654
HCM Control Delay (s)	44.2	9.6	-	-	9.6	-	-	\$ 436.6
HCM Lane LOS	E	A	-	-	A	-	-	F
HCM 95th %tile Q(veh)	1.6	0.8	-	-	0.1	-	-	10.7

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

Timings

1: E Cherokee Dr & Hickory Rd

1b. Existing 2022 PM

03/28/2023

											
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	228	396	239	585	128	35	313	220	93	349	223
Future Volume (vph)	228	396	239	585	128	35	313	220	93	349	223
Lane Group Flow (vph)	233	432	244	597	131	36	319	224	95	356	228
Turn Type	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4	3	8		5	2		1	6	
Permitted Phases	4		8		8	2		2	6		6
Detector Phase	7	4	3	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	6.0	5.0	6.0	6.0	5.0	15.0	15.0	5.0	15.0	15.0
Minimum Split (s)	15.0	27.5	15.0	32.5	32.5	15.0	30.5	30.5	15.0	29.5	29.5
Total Split (s)	18.0	49.0	20.0	51.0	51.0	15.0	36.0	36.0	15.0	36.0	36.0
Total Split (%)	15.0%	40.8%	16.7%	42.5%	42.5%	12.5%	30.0%	30.0%	12.5%	30.0%	30.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
Act Effct Green (s)	53.8	41.3	56.2	42.5	42.5	41.4	34.2	34.2	46.1	40.4	40.4
Actuated g/C Ratio	0.45	0.34	0.47	0.35	0.35	0.34	0.28	0.28	0.38	0.34	0.34
v/c Ratio	0.94	0.68	0.65	0.91	0.20	0.12	0.60	0.37	0.30	0.57	0.33
Control Delay	73.8	39.3	25.3	56.5	5.8	24.7	43.9	6.8	26.6	40.1	5.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	73.8	39.3	25.3	56.5	5.8	24.7	43.9	6.8	26.6	40.1	5.9
LOS	E	D	C	E	A	C	D	A	C	D	A
Approach Delay		51.4		41.8			28.4			26.7	
Approach LOS		D		D			C			C	
Queue Length 50th (ft)	124	274	99	420	4	18	223	2	48	249	0
Queue Length 95th (ft)	#280	389	151	#621	44	41	326	64	87	366	62
Internal Link Dist (ft)		439		329			536			559	
Turn Bay Length (ft)	330		300			170		170	95		450
Base Capacity (vph)	249	669	388	699	676	327	531	604	319	621	684
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.94	0.65	0.63	0.85	0.19	0.11	0.60	0.37	0.30	0.57	0.33
Intersection Summary											
Cycle Length: 120											
Actuated Cycle Length: 120											
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green											
Natural Cycle: 95											
Control Type: Actuated-Coordinated											
Maximum v/c Ratio: 0.94											
Intersection Signal Delay: 37.8						Intersection LOS: D					
Intersection Capacity Utilization 84.3%						ICU Level of Service E					
Analysis Period (min) 15											

Timings

1: E Cherokee Dr & Hickory Rd

1b. Existing 2022 PM

03/28/2023

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

Queue shown is maximum after two cycles.

Splits and Phases: 1: E Cherokee Dr & Hickory Rd



HCM 6th Signalized Intersection Summary
1: E Cherokee Dr & Hickory Rd

1b. Existing 2022 PM

03/28/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	228	396	27	239	585	128	35	313	220	93	349	223
Future Volume (veh/h)	228	396	27	239	585	128	35	313	220	93	349	223
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1841	1870	1856	1870	1811	1870	1856	1870	1856	1870
Adj Flow Rate, veh/h	233	404	0	244	597	0	36	319	224	95	356	228
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	4	2	3	2	6	2	3	2	3	2
Cap, veh/h	267	634		403	638		260	601	506	307	636	543
Arrive On Green	0.10	0.34	0.00	0.11	0.34	0.00	0.03	0.32	0.32	0.05	0.34	0.34
Sat Flow, veh/h	1781	1870	0	1781	1856	1585	1725	1870	1572	1781	1856	1585
Grp Volume(v), veh/h	233	404	0	244	597	0	36	319	224	95	356	228
Grp Sat Flow(s),veh/h/ln	1781	1870	0	1781	1856	1585	1725	1870	1572	1781	1856	1585
Q Serve(g_s), s	10.1	21.9	0.0	10.6	37.4	0.0	1.7	16.7	13.5	4.2	18.7	13.3
Cycle Q Clear(g_c), s	10.1	21.9	0.0	10.6	37.4	0.0	1.7	16.7	13.5	4.2	18.7	13.3
Prop In Lane	1.00		0.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	267	634		403	638		260	601	506	307	636	543
V/C Ratio(X)	0.87	0.64		0.61	0.94		0.14	0.53	0.44	0.31	0.56	0.42
Avail Cap(c_a), veh/h	272	678		429	704		347	601	506	358	636	543
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.3	33.4	0.0	24.1	38.1	0.0	27.0	33.3	32.2	26.3	32.1	30.3
Incr Delay (d2), s/veh	25.0	1.8	0.0	2.2	18.9	0.0	0.2	3.3	2.8	0.6	3.5	2.4
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	6.0	9.9	0.0	4.5	19.7	0.0	0.7	8.1	5.4	1.8	8.9	5.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.3	35.2	0.0	26.3	57.0	0.0	27.2	36.6	35.0	26.9	35.6	32.7
LnGrp LOS	D	D		C	E		C	D	D	C	D	C
Approach Vol, veh/h	637			841			579			679		
Approach Delay, s/veh	41.9			48.1			35.4			33.4		
Approach LOS	D			D			D			C		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.5	44.1	18.2	46.2	9.0	46.6	17.6	46.8				
Change Period (Y+Rc), s	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5				
Max Green Setting (Gmax), s	9.5	30.5	14.5	43.5	9.5	30.5	12.5	45.5				
Max Q Clear Time (g_c+l1), s	6.2	18.7	12.6	23.9	3.7	20.7	12.1	39.4				
Green Ext Time (p_c), s	0.1	3.8	0.1	2.2	0.0	3.6	0.0	1.9				
Intersection Summary												
HCM 6th Ctrl Delay			40.3									
HCM 6th LOS			D									
Notes												

Intersection						
Int Delay, s/veh	0.2					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	18	666	830	17	1	4
Future Vol, veh/h	18	666	830	17	1	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	Free	-	None	-	None
Storage Length	-	-	-	280	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	2	3	2	2	2
Mvmt Flow	19	716	892	18	1	4
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	910	0	-	0	1646	892
Stage 1	-	-	-	-	892	-
Stage 2	-	-	-	-	754	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	748	-	-	-	109	341
Stage 1	-	-	-	-	400	-
Stage 2	-	-	-	-	465	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	748	-	-	-	104	341
Mov Cap-2 Maneuver	-	-	-	-	104	-
Stage 1	-	-	-	-	383	-
Stage 2	-	-	-	-	465	-
Approach	EB	WB		SB		
HCM Control Delay, s	0.3	0		20.7		
HCM LOS				C		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	748	-	-	-	-	234
HCM Lane V/C Ratio	0.026	-	-	-	-	0.023
HCM Control Delay (s)	9.9	-	-	-	-	20.7
HCM Lane LOS	A	-	-	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	-	0.1

Intersection						
Int Delay, s/veh	0.2					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑	↑	↑	
Traffic Vol, veh/h	5	684	829	5	2	12
Future Vol, veh/h	5	684	829	5	2	12
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	Yield	-	None
Storage Length	-	-	-	205	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	735	891	5	2	13
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	891	0	-	0	1636	891
Stage 1	-	-	-	-	891	-
Stage 2	-	-	-	-	745	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	761	-	-	-	111	341
Stage 1	-	-	-	-	401	-
Stage 2	-	-	-	-	469	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	761	-	-	-	110	341
Mov Cap-2 Maneuver	-	-	-	-	246	-
Stage 1	-	-	-	-	397	-
Stage 2	-	-	-	-	469	-
Approach	EB	WB		SB		
HCM Control Delay, s	0.1	0		16.7		
HCM LOS				C		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	761	-	-	-	323	
HCM Lane V/C Ratio	0.007	-	-	-	0.047	
HCM Control Delay (s)	9.8	-	-	-	16.7	
HCM Lane LOS	A	-	-	-	C	
HCM 95th %tile Q(veh)	0	-	-	-	0.1	

Intersection						
Int Delay, s/veh	0.7					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	36	672	819	25	14	26
Future Vol, veh/h	36	672	819	25	14	26
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	60	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	3	2	2	2
Mvmt Flow	39	730	890	27	15	28
Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	917	0	-	0	1712	904
Stage 1	-	-	-	-	904	-
Stage 2	-	-	-	-	808	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	744	-	-	-	100	335
Stage 1	-	-	-	-	395	-
Stage 2	-	-	-	-	438	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	744	-	-	-	95	335
Mov Cap-2 Maneuver	-	-	-	-	227	-
Stage 1	-	-	-	-	374	-
Stage 2	-	-	-	-	438	-
Approach	EB	WB		SB		
HCM Control Delay, s	0.5	0		19.8		
HCM LOS				C		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	744	-	-	-	287	
HCM Lane V/C Ratio	0.053	-	-	-	0.151	
HCM Control Delay (s)	10.1	-	-	-	19.8	
HCM Lane LOS	B	-	-	-	C	
HCM 95th %tile Q(veh)	0.2	-	-	-	0.5	

Intersection												
Int Delay, s/veh	2.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	52	672	10	16	785	31	16	3	22	15	1	26
Future Vol, veh/h	52	672	10	16	785	31	16	3	22	15	1	26
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	160	-	130	150	-	150	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	55	707	11	17	826	33	17	3	23	16	1	27

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	859	0	0	718	0	0	1708	1710	707	1696	1688	826
Stage 1	-	-	-	-	-	-	817	817	-	860	860	-
Stage 2	-	-	-	-	-	-	891	893	-	836	828	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	782	-	-	883	-	-	72	91	435	73	94	372
Stage 1	-	-	-	-	-	-	370	390	-	351	373	-
Stage 2	-	-	-	-	-	-	337	360	-	362	386	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	782	-	-	883	-	-	62	83	435	63	86	372
Mov Cap-2 Maneuver	-	-	-	-	-	-	62	83	-	63	86	-
Stage 1	-	-	-	-	-	-	344	363	-	326	366	-
Stage 2	-	-	-	-	-	-	305	353	-	316	359	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.7			0.2			51.5			45.9		
HCM LOS							F			E		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	119	782	-	-	883	-	-	131
HCM Lane V/C Ratio	0.363	0.07	-	-	0.019	-	-	0.337
HCM Control Delay (s)	51.5	9.9	-	-	9.2	-	-	45.9
HCM Lane LOS	F	A	-	-	A	-	-	E
HCM 95th %tile Q(veh)	1.5	0.2	-	-	0.1	-	-	1.4

Timings

1: E Cherokee Dr & Hickory Rd

1c. Existing 2022 Dismissal

03/28/2023

											
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	213	364	227	398	126	24	257	198	91	251	172
Future Volume (vph)	213	364	227	398	126	24	257	198	91	251	172
Lane Group Flow (vph)	227	447	241	423	134	26	273	211	97	267	183
Turn Type	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4	3	8		5	2		1	6	
Permitted Phases	4		8		8	2		2	6		6
Detector Phase	7	4	3	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	6.0	5.0	6.0	6.0	5.0	15.0	15.0	5.0	15.0	15.0
Minimum Split (s)	15.0	27.5	15.0	32.5	32.5	15.0	30.5	30.5	15.0	29.5	29.5
Total Split (s)	20.0	48.0	21.0	49.0	49.0	15.0	36.0	36.0	15.0	36.0	36.0
Total Split (%)	16.7%	40.0%	17.5%	40.8%	40.8%	12.5%	30.0%	30.0%	12.5%	30.0%	30.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
Act Effct Green (s)	48.0	34.4	50.4	35.6	35.6	46.3	39.6	39.6	52.7	46.6	46.6
Actuated g/C Ratio	0.40	0.29	0.42	0.30	0.30	0.39	0.33	0.33	0.44	0.39	0.39
v/c Ratio	0.71	0.85	0.80	0.83	0.24	0.06	0.46	0.33	0.24	0.37	0.25
Control Delay	32.2	55.2	43.1	52.8	5.5	22.2	37.4	6.2	23.1	31.9	5.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.2	55.2	43.1	52.8	5.5	22.2	37.4	6.2	23.1	31.9	5.7
LOS	C	E	D	D	A	C	D	A	C	C	A
Approach Delay		47.4		41.9			23.7			21.6	
Approach LOS		D		D			C			C	
Queue Length 50th (ft)	105	320	113	304	0	11	171	0	44	158	0
Queue Length 95th (ft)	141	411	#197	392	41	32	280	60	88	266	56
Internal Link Dist (ft)		439		329			536			559	
Turn Bay Length (ft)	330		300			170		170	95		450
Base Capacity (vph)	335	645	310	626	659	470	591	639	402	723	720
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.68	0.69	0.78	0.68	0.20	0.06	0.46	0.33	0.24	0.37	0.25
Intersection Summary											
Cycle Length: 120											
Actuated Cycle Length: 120											
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green											
Natural Cycle: 95											
Control Type: Actuated-Coordinated											
Maximum v/c Ratio: 0.85											
Intersection Signal Delay: 35.3						Intersection LOS: D					
Intersection Capacity Utilization 72.0%						ICU Level of Service C					
Analysis Period (min) 15											

Timings

1: E Cherokee Dr & Hickory Rd

1c. Existing 2022 Dismissal

03/28/2023

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

Queue shown is maximum after two cycles.

Splits and Phases: 1: E Cherokee Dr & Hickory Rd



HCM 6th Signalized Intersection Summary

1c. Existing 2022 Dismissal

03/28/2023

1: E Cherokee Dr & Hickory Rd

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	213	364	56	227	398	126	24	257	198	91	251	172
Future Volume (veh/h)	213	364	56	227	398	126	24	257	198	91	251	172
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1856	1870	1826	1752	1870	1841	1811	1796	1811	1870	1856
Adj Flow Rate, veh/h	227	387	0	241	423	0	26	273	211	97	267	183
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	3	2	5	10	2	4	6	7	6	2	3
Cap, veh/h	288	480		326	467		397	709	596	394	778	654
Arrive On Green	0.11	0.26	0.00	0.12	0.27	0.00	0.02	0.39	0.39	0.05	0.42	0.42
Sat Flow, veh/h	1781	1856	0	1739	1752	1585	1753	1811	1522	1725	1870	1572
Grp Volume(v), veh/h	227	387	0	241	423	0	26	273	211	97	267	183
Grp Sat Flow(s),veh/h/ln	1781	1856	0	1739	1752	1585	1753	1811	1522	1725	1870	1572
Q Serve(g_s), s	11.1	23.4	0.0	12.0	28.0	0.0	1.1	13.0	11.7	4.0	11.7	9.2
Cycle Q Clear(g_c), s	11.1	23.4	0.0	12.0	28.0	0.0	1.1	13.0	11.7	4.0	11.7	9.2
Prop In Lane	1.00		0.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	288	480		326	467		397	709	596	394	778	654
V/C Ratio(X)	0.79	0.81		0.74	0.90		0.07	0.38	0.35	0.25	0.34	0.28
Avail Cap(c_a), veh/h	308	657		346	635		494	709	596	447	778	654
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.2	41.7	0.0	30.1	42.5	0.0	21.1	26.1	25.8	20.7	23.9	23.2
Incr Delay (d2), s/veh	12.2	5.2	0.0	7.6	13.3	0.0	0.1	1.6	1.6	0.3	1.2	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.6	11.1	0.0	5.6	13.5	0.0	0.4	5.8	4.4	1.6	5.4	3.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.4	46.9	0.0	37.8	55.8	0.0	21.2	27.7	27.4	21.0	25.1	24.2
LnGrp LOS	D	D		D	E		C	C	C	C	C	C
Approach Vol, veh/h		614			664			510			547	
Approach Delay, s/veh		45.6			49.3			27.3			24.1	
Approach LOS		D			D			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.3	52.5	19.6	36.5	8.4	55.4	18.7	37.5				
Change Period (Y+Rc), s	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5				
Max Green Setting (Gmax), s	9.5	30.5	15.5	42.5	9.5	30.5	14.5	43.5				
Max Q Clear Time (g_c+I1), s	6.0	15.0	14.0	25.4	3.1	13.7	13.1	30.0				
Green Ext Time (p_c), s	0.1	3.9	0.1	2.0	0.0	3.8	0.1	2.0				
Intersection Summary												
HCM 6th Ctrl Delay				37.6								
HCM 6th LOS				D								
Notes												
Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.												

Intersection						
Int Delay, s/veh	0.4					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑	↑	↑	
Traffic Vol, veh/h	1	622	579	1	14	7
Future Vol, veh/h	1	622	579	1	14	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	Free	-	None	-	None
Storage Length	-	-	-	280	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	2	3	4	2	2	2
Mvmt Flow	1	641	597	1	14	7
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	598	0	-	0	1240	597
Stage 1	-	-	-	-	597	-
Stage 2	-	-	-	-	643	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	979	-	-	-	193	503
Stage 1	-	-	-	-	550	-
Stage 2	-	-	-	-	523	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	979	-	-	-	193	503
Mov Cap-2 Maneuver	-	-	-	-	193	-
Stage 1	-	-	-	-	549	-
Stage 2	-	-	-	-	523	-
Approach	EB	WB		SB		
HCM Control Delay, s	0	0		21.3		
HCM LOS	C					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	979	-	-	-	243	
HCM Lane V/C Ratio	0.001	-	-	-	0.089	
HCM Control Delay (s)	8.7	-	-	-	21.3	
HCM Lane LOS	A	-	-	-	C	
HCM 95th %tile Q(veh)	0	-	-	-	0.3	

Intersection						
Int Delay, s/veh	0.9					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	32	603	559	24	19	45
Future Vol, veh/h	32	603	559	24	19	45
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	Yield	-	None
Storage Length	-	-	-	205	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	2	2	5	2	2	2
Mvmt Flow	33	622	576	25	20	46
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	576	0	-	0	1264	576
Stage 1	-	-	-	-	576	-
Stage 2	-	-	-	-	688	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	997	-	-	-	187	517
Stage 1	-	-	-	-	562	-
Stage 2	-	-	-	-	499	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	997	-	-	-	177	517
Mov Cap-2 Maneuver	-	-	-	-	316	-
Stage 1	-	-	-	-	533	-
Stage 2	-	-	-	-	499	-
Approach	EB	WB		SB		
HCM Control Delay, s	0.4	0		14.8		
HCM LOS	B					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	997	-	-	-	435	
HCM Lane V/C Ratio	0.033	-	-	-	0.152	
HCM Control Delay (s)	8.7	-	-	-	14.8	
HCM Lane LOS	A	-	-	-	B	
HCM 95th %tile Q(veh)	0.1	-	-	-	0.5	

Intersection						
Int Delay, s/veh	2.5					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	2	557	594	12	79	77
Future Vol, veh/h	2	557	594	12	79	77
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	60	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	6	2	2	2
Mvmt Flow	2	593	632	13	84	82
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	645	0	-	0	1236	639
Stage 1	-	-	-	-	639	-
Stage 2	-	-	-	-	597	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	940	-	-	-	195	476
Stage 1	-	-	-	-	526	-
Stage 2	-	-	-	-	550	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	940	-	-	-	195	476
Mov Cap-2 Maneuver	-	-	-	-	334	-
Stage 1	-	-	-	-	525	-
Stage 2	-	-	-	-	550	-
Approach	EB	WB		SB		
HCM Control Delay, s	0	0		20.8		
HCM LOS	C					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	940	-	-	-	392	
HCM Lane V/C Ratio	0.002	-	-	-	0.423	
HCM Control Delay (s)	8.8	-	-	-	20.8	
HCM Lane LOS	A	-	-	-	C	
HCM 95th %tile Q(veh)	0	-	-	-	2.1	

Intersection												
Int Delay, s/veh	6.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	30	469	16	19	627	26	8	0	17	70	1	76
Future Vol, veh/h	30	469	16	19	627	26	8	0	17	70	1	76
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	160	-	130	150	-	150	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	3	3	3	3	3	2	2	2	2	2	2	2
Mvmt Flow	32	494	17	20	660	27	8	0	18	74	1	80

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	687	0	0	511	0	0	1312	1285	494	1276	1275	660
Stage 1	-	-	-	-	-	-	558	558	-	700	700	-
Stage 2	-	-	-	-	-	-	754	727	-	576	575	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.227	-	-	2.227	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	902	-	-	1049	-	-	136	165	575	144	167	463
Stage 1	-	-	-	-	-	-	514	512	-	430	441	-
Stage 2	-	-	-	-	-	-	401	429	-	503	503	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	902	-	-	1049	-	-	107	156	575	134	158	463
Mov Cap-2 Maneuver	-	-	-	-	-	-	107	156	-	134	158	-
Stage 1	-	-	-	-	-	-	496	494	-	415	433	-
Stage 2	-	-	-	-	-	-	325	421	-	470	485	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.5			0.2			21.8			57.5		
HCM LOS							C			F		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	240	902	-	-	1049	-	-	212
HCM Lane V/C Ratio	0.11	0.035	-	-	0.019	-	-	0.73
HCM Control Delay (s)	21.8	9.1	-	-	8.5	-	-	57.5
HCM Lane LOS	C	A	-	-	A	-	-	F
HCM 95th %tile Q(veh)	0.4	0.1	-	-	0.1	-	-	4.8

FUTURE “NO-BUILD” INTERSECTION ANALYSIS

Timings

1: E Cherokee Dr & Hickory Rd

2a. No Build 2024 AM

03/28/2023

											
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	323	421	144	230	148	82	303	233	152	338	306
Future Volume (vph)	323	421	144	230	148	82	303	233	152	338	306
Lane Group Flow (vph)	344	470	153	245	157	87	322	248	162	360	326
Turn Type	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4	3	8		5	2		1	6	
Permitted Phases	4		8		8	2		2	6		6
Detector Phase	7	4	3	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	6.0	5.0	6.0	6.0	5.0	15.0	15.0	5.0	15.0	15.0
Minimum Split (s)	15.0	27.5	15.0	32.5	32.5	15.0	30.5	30.5	15.0	29.5	29.5
Total Split (s)	29.0	48.0	15.0	34.0	34.0	15.0	42.0	42.0	15.0	42.0	42.0
Total Split (%)	24.2%	40.0%	12.5%	28.3%	28.3%	12.5%	35.0%	35.0%	12.5%	35.0%	35.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
Act Effct Green (s)	50.4	35.6	33.3	23.9	23.9	50.7	42.4	42.4	55.4	44.7	44.7
Actuated g/C Ratio	0.42	0.30	0.28	0.20	0.20	0.42	0.35	0.35	0.46	0.37	0.37
v/c Ratio	0.77	0.86	0.71	0.71	0.35	0.23	0.51	0.36	0.39	0.52	0.41
Control Delay	36.7	55.7	41.6	56.5	6.4	20.3	35.9	5.4	22.5	34.6	5.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.7	55.7	41.6	56.5	6.4	20.3	35.9	5.4	22.5	34.6	5.1
LOS	D	E	D	E	A	C	D	A	C	C	A
Approach Delay		47.7		38.2			22.3			20.9	
Approach LOS		D		D			C			C	
Queue Length 50th (ft)	186	340	73	179	0	36	203	0	70	218	0
Queue Length 95th (ft)	244	440	#110	258	44	73	310	60	127	346	67
Internal Link Dist (ft)		439		329			536			559	
Turn Bay Length (ft)	330		300			170		170	95		450
Base Capacity (vph)	470	650	219	410	507	399	632	693	415	693	788
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.73	0.72	0.70	0.60	0.31	0.22	0.51	0.36	0.39	0.52	0.41
Intersection Summary											
Cycle Length: 120											
Actuated Cycle Length: 120											
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green											
Natural Cycle: 95											
Control Type: Actuated-Coordinated											
Maximum v/c Ratio: 0.86											
Intersection Signal Delay: 32.1						Intersection LOS: C					
Intersection Capacity Utilization 74.1%						ICU Level of Service D					
Analysis Period (min) 15											

Timings

1: E Cherokee Dr & Hickory Rd

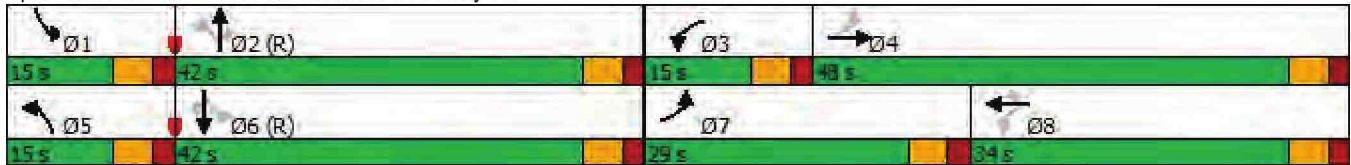
2a. No Build 2024 AM

03/28/2023

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

Queue shown is maximum after two cycles.

Splits and Phases: 1: E Cherokee Dr & Hickory Rd



HCM 6th Signalized Intersection Summary

2a. No Build 2024 AM

1: E Cherokee Dr & Hickory Rd

03/28/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	323	421	21	144	230	148	82	303	233	152	338	306
Future Volume (veh/h)	323	421	21	144	230	148	82	303	233	152	338	306
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1856	1870	1826	1752	1870	1841	1811	1796	1811	1870	1856
Adj Flow Rate, veh/h	344	448	0	153	245	0	87	322	248	162	360	326
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	3	2	5	10	2	4	6	7	6	2	3
Cap, veh/h	412	496		229	305		352	722	607	403	798	671
Arrive On Green	0.17	0.27	0.00	0.08	0.17	0.00	0.04	0.40	0.40	0.07	0.43	0.43
Sat Flow, veh/h	1781	1856	0	1739	1752	1585	1753	1811	1522	1725	1870	1572
Grp Volume(v), veh/h	344	448	0	153	245	0	87	322	248	162	360	326
Grp Sat Flow(s),veh/h/ln	1781	1856	0	1739	1752	1585	1753	1811	1522	1725	1870	1572
Q Serve(g_s), s	18.3	28.0	0.0	8.6	16.1	0.0	3.5	15.6	14.0	6.6	16.4	18.0
Cycle Q Clear(g_c), s	18.3	28.0	0.0	8.6	16.1	0.0	3.5	15.6	14.0	6.6	16.4	18.0
Prop In Lane	1.00		0.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	412	496		229	305		352	722	607	403	798	671
V/C Ratio(X)	0.84	0.90		0.67	0.80		0.25	0.45	0.41	0.40	0.45	0.49
Avail Cap(c_a), veh/h	454	657		229	416		415	722	607	416	798	671
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.0	42.5	0.0	38.1	47.6	0.0	20.4	26.4	25.9	19.8	24.4	24.9
Incr Delay (d2), s/veh	11.8	13.1	0.0	7.3	7.8	0.0	0.4	2.0	2.0	0.6	1.8	2.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.0	14.3	0.0	4.1	7.5	0.0	1.4	7.0	5.3	2.7	7.5	7.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.9	55.6	0.0	45.3	55.4	0.0	20.8	28.4	27.9	20.5	26.3	27.4
LnGrp LOS	D	E		D	E		C	C	C	C	C	C
Approach Vol, veh/h	792			398			657			848		
Approach Delay, s/veh	50.5			51.5			27.2			25.6		
Approach LOS	D			D			C			C		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.1	53.4	15.0	37.6	10.7	56.7	26.1	26.4				
Change Period (Y+Rc), s	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5				
Max Green Setting (Gmax), s	9.5	36.5	9.5	42.5	9.5	36.5	23.5	28.5				
Max Q Clear Time (g_c+I1), s	8.6	17.6	10.6	30.0	5.5	20.0	20.3	18.1				
Green Ext Time (p_c), s	0.0	5.2	0.0	2.1	0.1	5.8	0.3	0.9				
Intersection Summary												
HCM 6th Ctrl Delay	37.1											
HCM 6th LOS	D											

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑	↑	↑	
Traffic Vol, veh/h	1	651	779	10	0	2
Future Vol, veh/h	1	651	779	10	0	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	Free	-	None	-	None
Storage Length	-	-	-	280	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	3	4	2	2	2
Mvmt Flow	1	685	820	11	0	2
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	831	0	-	0	1507	820
Stage 1	-	-	-	-	820	-
Stage 2	-	-	-	-	687	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	801	-	-	-	133	375
Stage 1	-	-	-	-	433	-
Stage 2	-	-	-	-	499	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	801	-	-	-	133	375
Mov Cap-2 Maneuver	-	-	-	-	133	-
Stage 1	-	-	-	-	432	-
Stage 2	-	-	-	-	499	-
Approach	EB	WB		SB		
HCM Control Delay, s	0	0		14.7		
HCM LOS	B					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	801	-	-	-	-	375
HCM Lane V/C Ratio	0.001	-	-	-	-	0.006
HCM Control Delay (s)	9.5	-	-	-	-	14.7
HCM Lane LOS	A	-	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	-	0

Intersection						
Int Delay, s/veh	1.8					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	143	633	659	125	17	69
Future Vol, veh/h	143	633	659	125	17	69
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	Yield	-	None
Storage Length	-	-	-	205	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	2	5	2	2	2
Mvmt Flow	154	681	709	134	18	74
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	709	0	-	0	1698	709
Stage 1	-	-	-	-	709	-
Stage 2	-	-	-	-	989	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	890	-	-	-	102	434
Stage 1	-	-	-	-	488	-
Stage 2	-	-	-	-	360	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	890	-	-	-	74	434
Mov Cap-2 Maneuver	-	-	-	-	196	-
Stage 1	-	-	-	-	352	-
Stage 2	-	-	-	-	360	-
Approach	EB	WB		SB		
HCM Control Delay, s	1.8	0		18.9		
HCM LOS	C					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	890	-	-	-	350	
HCM Lane V/C Ratio	0.173	-	-	-	0.264	
HCM Control Delay (s)	9.9	-	-	-	18.9	
HCM Lane LOS	A	-	-	-	C	
HCM 95th %tile Q(veh)	0.6	-	-	-	1	

Intersection						
Int Delay, s/veh	0.7					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	107	780	583	142	0	2
Future Vol, veh/h	107	780	583	142	0	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	60	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	6	2	2	2
Mvmt Flow	114	830	620	151	0	2
Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	771	0	-	0	1754	696
Stage 1	-	-	-	-	696	-
Stage 2	-	-	-	-	1058	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	844	-	-	-	94	442
Stage 1	-	-	-	-	495	-
Stage 2	-	-	-	-	334	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	844	-	-	-	81	442
Mov Cap-2 Maneuver	-	-	-	-	207	-
Stage 1	-	-	-	-	428	-
Stage 2	-	-	-	-	334	-
Approach	EB		WB		SB	
HCM Control Delay, s	1.2		0		13.2	
HCM LOS	B					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	844	-	-	-	442	
HCM Lane V/C Ratio	0.135	-	-	-	0.005	
HCM Control Delay (s)	9.9	-	-	-	13.2	
HCM Lane LOS	A	-	-	-	B	
HCM 95th %tile Q(veh)	0.5	-	-	-	0	

Intersection												
Int Delay, s/veh	37.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	212	777	8	27	384	169	11	1	43	75	1	47
Future Vol, veh/h	212	777	8	27	384	169	11	1	43	75	1	47
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	160	-	130	150	-	150	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	3	3	3	3	3	3	2	2	2	2	2	2
Mvmt Flow	223	818	8	28	404	178	12	1	45	79	1	49

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	582	0	0	826	0	0	1838	1902	818	1751	1732	404
Stage 1	-	-	-	-	-	-	1264	1264	-	460	460	-
Stage 2	-	-	-	-	-	-	574	638	-	1291	1272	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.227	-	-	2.227	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	987	-	-	800	-	-	58	69	376	~ 67	88	647
Stage 1	-	-	-	-	-	-	208	241	-	581	566	-
Stage 2	-	-	-	-	-	-	504	471	-	201	239	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	987	-	-	800	-	-	43	52	376	~ 47	66	647
Mov Cap-2 Maneuver	-	-	-	-	-	-	43	52	-	~ 47	66	-
Stage 1	-	-	-	-	-	-	161	187	-	450	546	-
Stage 2	-	-	-	-	-	-	448	455	-	136	185	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	2.1			0.4			47.3			\$ 492.3		
HCM LOS							E			F		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	141	987	-	-	800	-	-	73
HCM Lane V/C Ratio	0.411	0.226	-	-	0.036	-	-	1.774
HCM Control Delay (s)	47.3	9.7	-	-	9.7	-	-	\$ 492.3
HCM Lane LOS	E	A	-	-	A	-	-	F
HCM 95th %tile Q(veh)	1.8	0.9	-	-	0.1	-	-	11.3

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

Timings

1: E Cherokee Dr & Hickory Rd

2b. No Build 2024 PM

03/28/2023

											
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	233	404	244	597	131	36	319	224	95	356	227
Future Volume (vph)	233	404	244	597	131	36	319	224	95	356	227
Lane Group Flow (vph)	238	441	249	609	134	37	326	229	97	363	232
Turn Type	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4	3	8		5	2		1	6	
Permitted Phases	4		8		8	2		2	6		6
Detector Phase	7	4	3	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	6.0	5.0	6.0	6.0	5.0	15.0	15.0	5.0	15.0	15.0
Minimum Split (s)	15.0	27.5	15.0	32.5	32.5	15.0	30.5	30.5	15.0	29.5	29.5
Total Split (s)	16.0	50.0	20.0	54.0	54.0	15.0	35.0	35.0	15.0	35.0	35.0
Total Split (%)	13.3%	41.7%	16.7%	45.0%	45.0%	12.5%	29.2%	29.2%	12.5%	29.2%	29.2%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
Act Effct Green (s)	51.2	40.7	58.2	44.2	44.2	41.7	34.5	34.5	46.5	40.7	40.7
Actuated g/C Ratio	0.43	0.34	0.48	0.37	0.37	0.35	0.29	0.29	0.39	0.34	0.34
v/c Ratio	1.04	0.71	0.70	0.90	0.20	0.13	0.63	0.38	0.32	0.58	0.34
Control Delay	100.0	40.9	27.8	52.6	5.6	25.1	45.5	7.6	27.2	40.5	6.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	100.0	40.9	27.8	52.6	5.6	25.1	45.5	7.6	27.2	40.5	6.0
LOS	F	D	C	D	A	C	D	A	C	D	A
Approach Delay		61.6		40.0			29.6			27.1	
Approach LOS		E		D			C			C	
Queue Length 50th (ft)	~132	286	104	426	5	18	230	6	48	252	0
Queue Length 95th (ft)	#292	395	152	#576	44	42	342	71	89	#408	62
Internal Link Dist (ft)		439		329			536			559	
Turn Bay Length (ft)	330		300			170		170	95		450
Base Capacity (vph)	228	678	364	745	713	325	514	605	306	625	684
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.04	0.65	0.68	0.82	0.19	0.11	0.63	0.38	0.32	0.58	0.34
Intersection Summary											
Cycle Length: 120											
Actuated Cycle Length: 120											
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green											
Natural Cycle: 95											
Control Type: Actuated-Coordinated											
Maximum v/c Ratio: 1.04											
Intersection Signal Delay: 39.9						Intersection LOS: D					
Intersection Capacity Utilization 85.6%						ICU Level of Service E					
Analysis Period (min) 15											

Timings

1: E Cherokee Dr & Hickory Rd

2b. No Build 2024 PM

03/28/2023

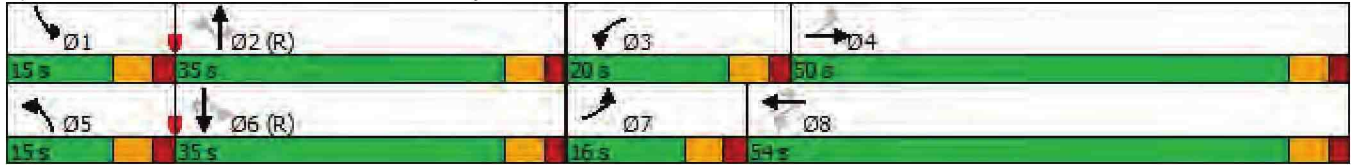
~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

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

Queue shown is maximum after two cycles.

Splits and Phases: 1: E Cherokee Dr & Hickory Rd



HCM 6th Signalized Intersection Summary

1: E Cherokee Dr & Hickory Rd

2b. No Build 2024 PM

03/28/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	233	404	28	244	597	131	36	319	224	95	356	227
Future Volume (veh/h)	233	404	28	244	597	131	36	319	224	95	356	227
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1856	1841	1826	1856	1870	1811	1811	1856	1811	1856	1856
Adj Flow Rate, veh/h	238	412	0	249	609	0	37	326	229	97	363	232
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	3	4	5	3	2	6	6	3	6	3	3
Cap, veh/h	246	612		384	655		260	587	509	295	643	545
Arrive On Green	0.09	0.33	0.00	0.11	0.35	0.00	0.03	0.32	0.32	0.05	0.35	0.35
Sat Flow, veh/h	1781	1856	0	1739	1856	1585	1725	1811	1572	1725	1856	1572
Grp Volume(v), veh/h	238	412	0	249	609	0	37	326	229	97	363	232
Grp Sat Flow(s),veh/h/ln	1781	1856	0	1739	1856	1585	1725	1811	1572	1725	1856	1572
Q Serve(g_s), s	10.5	23.0	0.0	11.2	37.9	0.0	1.7	17.8	13.8	4.5	19.1	13.6
Cycle Q Clear(g_c), s	10.5	23.0	0.0	11.2	37.9	0.0	1.7	17.8	13.8	4.5	19.1	13.6
Prop In Lane	1.00		0.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	246	612		384	655		260	587	509	295	643	545
V/C Ratio(X)	0.97	0.67		0.65	0.93		0.14	0.56	0.45	0.33	0.56	0.43
Avail Cap(c_a), veh/h	246	688		402	750		346	587	509	342	643	545
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.4	34.7	0.0	24.9	37.4	0.0	26.8	33.4	32.1	26.2	31.9	30.1
Incr Delay (d2), s/veh	48.2	2.2	0.0	3.4	16.7	0.0	0.2	3.8	2.9	0.6	3.6	2.4
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	7.7	10.4	0.0	4.8	19.6	0.0	0.7	8.3	5.5	1.9	9.1	5.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	78.5	36.9	0.0	28.3	54.1	0.0	27.1	37.2	35.0	26.9	35.4	32.5
LnGrp LOS	E	D		C	D		C	D	C	C	D	C
Approach Vol, veh/h	650				858				592			
Approach Delay, s/veh	52.1				46.6				35.7			
Approach LOS	D				D				D			
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.8	44.4	18.8	45.1	9.0	47.1	16.0	47.9				
Change Period (Y+Rc), s	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5				
Max Green Setting (Gmax), s	9.5	29.5	14.5	44.5	9.5	29.5	10.5	48.5				
Max Q Clear Time (g_c+I1), s	6.5	19.8	13.2	25.0	3.7	21.1	12.5	39.9				
Green Ext Time (p_c), s	0.1	3.4	0.1	2.2	0.0	3.3	0.0	2.5				
Intersection Summary												
HCM 6th Ctrl Delay	42.3											
HCM 6th LOS	D											

Intersection						
Int Delay, s/veh	0.2					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	18	679	847	17	1	4
Future Vol, veh/h	18	679	847	17	1	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	Free	-	None	-	None
Storage Length	-	-	-	280	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	3	3	2	2	2
Mvmt Flow	19	715	892	18	1	4
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	910	0	-	0	1645	892
Stage 1	-	-	-	-	892	-
Stage 2	-	-	-	-	753	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	748	-	-	-	109	341
Stage 1	-	-	-	-	400	-
Stage 2	-	-	-	-	465	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	748	-	-	-	104	341
Mov Cap-2 Maneuver	-	-	-	-	104	-
Stage 1	-	-	-	-	383	-
Stage 2	-	-	-	-	465	-
Approach	EB	WB		SB		
HCM Control Delay, s	0.3	0		20.7		
HCM LOS				C		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	748	-	-	-	234	
HCM Lane V/C Ratio	0.025	-	-	-	0.022	
HCM Control Delay (s)	9.9	-	-	-	20.7	
HCM Lane LOS	A	-	-	-	C	
HCM 95th %tile Q(veh)	0.1	-	-	-	0.1	

Intersection						
Int Delay, s/veh	0.2					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	5	698	846	5	2	12
Future Vol, veh/h	5	698	846	5	2	12
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	Yield	-	None
Storage Length	-	-	-	205	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	2	5	2	2	2
Mvmt Flow	5	751	910	5	2	13
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	910	0	-	0	1671	910
Stage 1	-	-	-	-	910	-
Stage 2	-	-	-	-	761	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	748	-	-	-	105	333
Stage 1	-	-	-	-	393	-
Stage 2	-	-	-	-	461	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	748	-	-	-	104	333
Mov Cap-2 Maneuver	-	-	-	-	240	-
Stage 1	-	-	-	-	389	-
Stage 2	-	-	-	-	461	-
Approach	EB	WB		SB		
HCM Control Delay, s	0.1	0		17		
HCM LOS				C		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	748	-	-	-	316	
HCM Lane V/C Ratio	0.007	-	-	-	0.048	
HCM Control Delay (s)	9.8	-	-	-	17	
HCM Lane LOS	A	-	-	-	C	
HCM 95th %tile Q(veh)	0	-	-	-	0.1	

Intersection						
Int Delay, s/veh	0.7					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	37	685	835	26	14	27
Future Vol, veh/h	37	685	835	26	14	27
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	60	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	3	2	2	2
Mvmt Flow	39	729	888	28	15	29
Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	916	0	-	0	1709	902
Stage 1	-	-	-	-	902	-
Stage 2	-	-	-	-	807	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	745	-	-	-	100	336
Stage 1	-	-	-	-	396	-
Stage 2	-	-	-	-	439	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	745	-	-	-	95	336
Mov Cap-2 Maneuver	-	-	-	-	228	-
Stage 1	-	-	-	-	375	-
Stage 2	-	-	-	-	439	-
Approach	EB	WB		SB		
HCM Control Delay, s	0.5	0		19.7		
HCM LOS				C		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	745	-	-	-	-	289
HCM Lane V/C Ratio	0.053	-	-	-	-	0.151
HCM Control Delay (s)	10.1	-	-	-	-	19.7
HCM Lane LOS	B	-	-	-	-	C
HCM 95th %tile Q(veh)	0.2	-	-	-	-	0.5

Intersection												
Int Delay, s/veh	3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	53	685	10	16	801	32	16	3	22	15	1	27
Future Vol, veh/h	53	685	10	16	801	32	16	3	22	15	1	27
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	160	-	130	150	-	150	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	3	3	3	3	3	3	2	2	2	2	2	2
Mvmt Flow	56	721	11	17	843	34	17	3	23	16	1	28

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	877	0	0	732	0	0	1742	1744	721	1729	1721	843
Stage 1	-	-	-	-	-	-	833	833	-	877	877	-
Stage 2	-	-	-	-	-	-	909	911	-	852	844	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.227	-	-	2.227	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	766	-	-	868	-	-	68	86	427	69	89	364
Stage 1	-	-	-	-	-	-	363	384	-	343	366	-
Stage 2	-	-	-	-	-	-	329	353	-	354	379	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	766	-	-	868	-	-	58	78	427	59	81	364
Mov Cap-2 Maneuver	-	-	-	-	-	-	58	78	-	59	81	-
Stage 1	-	-	-	-	-	-	337	356	-	318	359	-
Stage 2	-	-	-	-	-	-	296	346	-	308	351	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.7			0.2			56			48.8		
HCM LOS							F			E		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	112	766	-	-	868	-	-	126
HCM Lane V/C Ratio	0.385	0.073	-	-	0.019	-	-	0.359
HCM Control Delay (s)	56	10.1	-	-	9.2	-	-	48.8
HCM Lane LOS	F	B	-	-	A	-	-	E
HCM 95th %tile Q(veh)	1.6	0.2	-	-	0.1	-	-	1.5

Timings

1: E Cherokee Dr & Hickory Rd

2c. No Build 2024 Dismissal

03/28/2023

											
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	217	371	232	406	129	24	262	202	93	256	175
Future Volume (vph)	217	371	232	406	129	24	262	202	93	256	175
Lane Group Flow (vph)	231	456	247	432	137	26	279	215	99	272	186
Turn Type	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4	3	8		5	2		1	6	
Permitted Phases	4		8		8	2		2	6		6
Detector Phase	7	4	3	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	6.0	5.0	6.0	6.0	5.0	15.0	15.0	5.0	15.0	15.0
Minimum Split (s)	15.0	27.5	15.0	32.5	32.5	15.0	30.5	30.5	15.0	29.5	29.5
Total Split (s)	15.0	43.0	21.0	49.0	49.0	20.0	41.0	41.0	15.0	36.0	36.0
Total Split (%)	12.5%	35.8%	17.5%	40.8%	40.8%	16.7%	34.2%	34.2%	12.5%	30.0%	30.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
Act Effct Green (s)	43.1	33.6	53.6	39.0	39.0	47.1	40.5	40.5	53.2	47.3	47.3
Actuated g/C Ratio	0.36	0.28	0.45	0.32	0.32	0.39	0.34	0.34	0.44	0.39	0.39
v/c Ratio	0.80	0.89	0.86	0.77	0.23	0.06	0.46	0.33	0.25	0.37	0.25
Control Delay	44.1	60.9	54.0	45.8	5.2	20.7	35.9	5.7	22.1	30.6	5.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	44.1	60.9	54.0	45.8	5.2	20.7	35.9	5.7	22.1	30.6	5.2
LOS	D	E	D	D	A	C	D	A	C	C	A
Approach Delay		55.3		41.5			22.6			20.6	
Approach LOS		E		D			C			C	
Queue Length 50th (ft)	106	327	122	290	0	11	177	0	45	163	0
Queue Length 95th (ft)	#179	#476	#254	403	42	30	268	57	83	254	52
Internal Link Dist (ft)		439		329			536			559	
Turn Bay Length (ft)	330		300			170		170	95		450
Base Capacity (vph)	290	570	294	626	661	542	605	652	403	735	731
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.80	0.80	0.84	0.69	0.21	0.05	0.46	0.33	0.25	0.37	0.25
Intersection Summary											
Cycle Length: 120											
Actuated Cycle Length: 120											
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green											
Natural Cycle: 95											
Control Type: Actuated-Coordinated											
Maximum v/c Ratio: 0.89											
Intersection Signal Delay: 36.9						Intersection LOS: D					
Intersection Capacity Utilization 73.1%						ICU Level of Service D					
Analysis Period (min) 15											

Timings

1: E Cherokee Dr & Hickory Rd

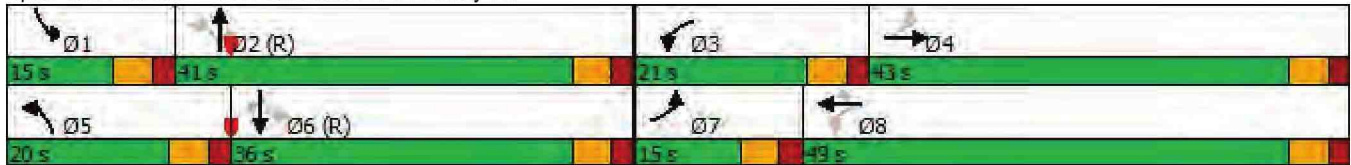
2c. No Build 2024 Dismissal

03/28/2023

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

Queue shown is maximum after two cycles.

Splits and Phases: 1: E Cherokee Dr & Hickory Rd



HCM 6th Signalized Intersection Summary

2c. No Build 2024 Dismissal

1: E Cherokee Dr & Hickory Rd

03/28/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	217	371	57	232	406	129	24	262	202	93	256	175
Future Volume (veh/h)	217	371	57	232	406	129	24	262	202	93	256	175
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1856	1870	1826	1752	1870	1841	1811	1796	1811	1870	1856
Adj Flow Rate, veh/h	231	395	0	247	432	0	26	279	215	99	272	186
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	3	2	5	10	2	4	6	7	6	2	3
Cap, veh/h	242	439		300	489		413	743	625	408	813	683
Arrive On Green	0.08	0.24	0.00	0.12	0.28	0.00	0.02	0.41	0.41	0.05	0.43	0.43
Sat Flow, veh/h	1781	1856	0	1739	1752	1585	1753	1811	1522	1725	1870	1572
Grp Volume(v), veh/h	231	395	0	247	432	0	26	279	215	99	272	186
Grp Sat Flow(s),veh/h/ln	1781	1856	0	1739	1752	1585	1753	1811	1522	1725	1870	1572
Q Serve(g_s), s	9.5	24.8	0.0	12.5	28.3	0.0	1.0	12.9	11.6	4.0	11.5	9.1
Cycle Q Clear(g_c), s	9.5	24.8	0.0	12.5	28.3	0.0	1.0	12.9	11.6	4.0	11.5	9.1
Prop In Lane	1.00		0.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	242	439		300	489		413	743	625	408	813	683
V/C Ratio(X)	0.95	0.90		0.82	0.88		0.06	0.38	0.34	0.24	0.33	0.27
Avail Cap(c_a), veh/h	242	580		314	635		583	743	625	461	813	683
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.3	44.4	0.0	31.2	41.4	0.0	19.8	24.7	24.3	19.4	22.5	21.8
Incr Delay (d2), s/veh	45.2	14.0	0.0	15.5	11.5	0.0	0.1	1.4	1.5	0.3	1.1	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.3	12.8	0.0	6.4	13.4	0.0	0.4	5.8	4.3	1.6	5.3	3.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	84.5	58.4	0.0	46.7	52.9	0.0	19.9	26.1	25.8	19.7	23.6	22.7
LnGrp LOS	F	E		D	D		B	C	C	B	C	C
Approach Vol, veh/h		626			679			520			557	
Approach Delay, s/veh		68.0			50.6			25.7			22.6	
Approach LOS		E			D			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.3	54.7	20.1	33.9	8.4	57.6	15.0	39.0				
Change Period (Y+Rc), s	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5				
Max Green Setting (Gmax), s	9.5	35.5	15.5	37.5	14.5	30.5	9.5	43.5				
Max Q Clear Time (g_c+I1), s	6.0	14.9	14.5	26.8	3.0	13.5	11.5	30.3				
Green Ext Time (p_c), s	0.1	4.6	0.1	1.6	0.0	3.9	0.0	2.0				
Intersection Summary												
HCM 6th Ctrl Delay			43.2									
HCM 6th LOS			D									
Notes												
Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.												

Intersection						
Int Delay, s/veh	0.4					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	1	634	591	1	14	7
Future Vol, veh/h	1	634	591	1	14	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	Free	-	None	-	None
Storage Length	-	-	-	280	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	2	3	4	2	2	2
Mvmt Flow	1	654	609	1	14	7
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	610	0	-	0	1265	609
Stage 1	-	-	-	-	609	-
Stage 2	-	-	-	-	656	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	969	-	-	-	187	495
Stage 1	-	-	-	-	543	-
Stage 2	-	-	-	-	516	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	969	-	-	-	187	495
Mov Cap-2 Maneuver	-	-	-	-	187	-
Stage 1	-	-	-	-	542	-
Stage 2	-	-	-	-	516	-
Approach	EB	WB		SB		
HCM Control Delay, s	0	0		21.8		
HCM LOS	C					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	969	-	-	-	236	
HCM Lane V/C Ratio	0.001	-	-	-	0.092	
HCM Control Delay (s)	8.7	-	-	-	21.8	
HCM Lane LOS	A	-	-	-	C	
HCM 95th %tile Q(veh)	0	-	-	-	0.3	

Intersection						
Int Delay, s/veh	0.9					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	33	615	570	24	19	46
Future Vol, veh/h	33	615	570	24	19	46
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	Yield	-	None
Storage Length	-	-	-	205	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	2	2	5	2	2	2
Mvmt Flow	34	634	588	25	20	47
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	588	0	-	0	1290	588
Stage 1	-	-	-	-	588	-
Stage 2	-	-	-	-	702	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	987	-	-	-	180	509
Stage 1	-	-	-	-	555	-
Stage 2	-	-	-	-	491	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	987	-	-	-	170	509
Mov Cap-2 Maneuver	-	-	-	-	309	-
Stage 1	-	-	-	-	526	-
Stage 2	-	-	-	-	491	-
Approach	EB	WB		SB		
HCM Control Delay, s	0.4	0		15		
HCM LOS				C		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	987	-	-	-	-	428
HCM Lane V/C Ratio	0.034	-	-	-	-	0.157
HCM Control Delay (s)	8.8	-	-	-	-	15
HCM Lane LOS	A	-	-	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	-	0.6

Intersection						
Int Delay, s/veh	2.6					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	2	568	606	12	81	79
Future Vol, veh/h	2	568	606	12	81	79
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	60	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	6	2	2	2
Mvmt Flow	2	604	645	13	86	84
Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	658	0	-	0	1260	652
Stage 1	-	-	-	-	652	-
Stage 2	-	-	-	-	608	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	930	-	-	-	188	468
Stage 1	-	-	-	-	518	-
Stage 2	-	-	-	-	543	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	930	-	-	-	188	468
Mov Cap-2 Maneuver	-	-	-	-	327	-
Stage 1	-	-	-	-	517	-
Stage 2	-	-	-	-	543	-
Approach	EB	WB		SB		
HCM Control Delay, s	0	0		21.6		
HCM LOS				C		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	930	-	-	-	384	
HCM Lane V/C Ratio	0.002	-	-	-	0.443	
HCM Control Delay (s)	8.9	-	-	-	21.6	
HCM Lane LOS	A	-	-	-	C	
HCM 95th %tile Q(veh)	0	-	-	-	2.2	

Intersection												
Int Delay, s/veh	7.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	31	478	16	19	640	27	8	0	17	71	1	78
Future Vol, veh/h	31	478	16	19	640	27	8	0	17	71	1	78
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	160	-	130	150	-	150	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	8	8	2	10	2	2	2	2	2
Mvmt Flow	33	503	17	20	674	28	8	0	18	75	1	82

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	702	0	0	520	0	0	1339	1311	503	1301	1300	674
Stage 1	-	-	-	-	-	-	569	569	-	714	714	-
Stage 2	-	-	-	-	-	-	770	742	-	587	586	-
Critical Hdwy	4.12	-	-	4.18	-	-	7.2	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.2	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.2	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.272	-	-	3.59	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	895	-	-	1016	-	-	125	159	569	138	161	455
Stage 1	-	-	-	-	-	-	493	506	-	422	435	-
Stage 2	-	-	-	-	-	-	381	422	-	496	497	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	895	-	-	1016	-	-	98	150	569	128	152	455
Mov Cap-2 Maneuver	-	-	-	-	-	-	98	150	-	128	152	-
Stage 1	-	-	-	-	-	-	475	487	-	406	426	-
Stage 2	-	-	-	-	-	-	305	414	-	463	479	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.5			0.2			23.2			64.5		
HCM LOS							C			F		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	224	895	-	-	1016	-	-	205
HCM Lane V/C Ratio	0.117	0.036	-	-	0.02	-	-	0.77
HCM Control Delay (s)	23.2	9.2	-	-	8.6	-	-	64.5
HCM Lane LOS	C	A	-	-	A	-	-	F
HCM 95th %tile Q(veh)	0.4	0.1	-	-	0.1	-	-	5.3

FUTURE “BUILD” INTERSECTION ANALYSIS

Timings

1: E Cherokee Dr & Hickory Rd

3a.Future 2024 AM

03/28/2023

											
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	324	422	146	230	148	66	305	237	152	339	306
Future Volume (vph)	324	422	146	230	148	66	305	237	152	339	306
Lane Group Flow (vph)	345	467	155	245	157	70	324	252	162	361	326
Turn Type	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4	3	8		5	2		1	6	
Permitted Phases	4		8		8	2		2	6		6
Detector Phase	7	4	3	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	6.0	5.0	6.0	6.0	5.0	15.0	15.0	5.0	15.0	15.0
Minimum Split (s)	15.0	27.5	15.0	32.5	32.5	15.0	30.5	30.5	15.0	29.5	29.5
Total Split (s)	28.0	47.0	15.0	34.0	34.0	15.0	43.0	43.0	15.0	43.0	43.0
Total Split (%)	23.3%	39.2%	12.5%	28.3%	28.3%	12.5%	35.8%	35.8%	12.5%	35.8%	35.8%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
Act Effct Green (s)	50.0	35.1	33.2	23.8	23.8	50.8	42.9	42.9	56.7	47.8	47.8
Actuated g/C Ratio	0.42	0.29	0.28	0.20	0.20	0.42	0.36	0.36	0.47	0.40	0.40
v/c Ratio	0.79	0.87	0.72	0.72	0.35	0.18	0.51	0.36	0.39	0.49	0.40
Control Delay	38.1	56.7	43.4	56.7	6.4	19.5	35.3	5.2	22.1	32.6	4.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	38.1	56.7	43.4	56.7	6.4	19.5	35.3	5.2	22.1	32.6	4.8
LOS	D	E	D	E	A	B	D	A	C	C	A
Approach Delay		48.8		38.8			21.9			19.9	
Approach LOS		D		D			C			B	
Queue Length 50th (ft)	188	339	75	180	0	28	204	0	70	216	0
Queue Length 95th (ft)	249	443	#118	258	44	61	307	59	125	342	65
Internal Link Dist (ft)		439		329			418			559	
Turn Bay Length (ft)	330		300			170		170	95		450
Base Capacity (vph)	457	635	217	410	507	418	640	700	413	742	821
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.75	0.74	0.71	0.60	0.31	0.17	0.51	0.36	0.39	0.49	0.40
Intersection Summary											
Cycle Length: 120											
Actuated Cycle Length: 120											
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green											
Natural Cycle: 95											
Control Type: Actuated-Coordinated											
Maximum v/c Ratio: 0.87											
Intersection Signal Delay: 32.2						Intersection LOS: C					
Intersection Capacity Utilization 74.1%						ICU Level of Service D					
Analysis Period (min) 15											

Timings

1: E Cherokee Dr & Hickory Rd

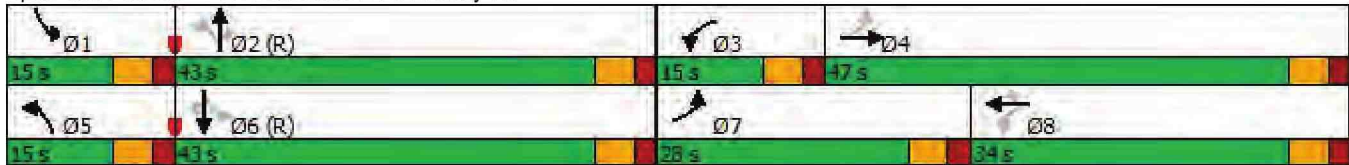
3a.Future 2024 AM

03/28/2023

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

Queue shown is maximum after two cycles.

Splits and Phases: 1: E Cherokee Dr & Hickory Rd



HCM 6th Signalized Intersection Summary

1: E Cherokee Dr & Hickory Rd

3a.Future 2024 AM

03/28/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	324	422	17	146	230	148	66	305	237	152	339	306
Future Volume (veh/h)	324	422	17	146	230	148	66	305	237	152	339	306
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1856	1870	1826	1752	1870	1841	1811	1796	1811	1870	1856
Adj Flow Rate, veh/h	345	449	0	155	245	0	70	324	252	162	361	326
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	3	2	5	10	2	4	6	7	6	2	3
Cap, veh/h	412	496		228	306		347	723	608	400	809	680
Arrive On Green	0.17	0.27	0.00	0.08	0.17	0.00	0.04	0.40	0.40	0.07	0.43	0.43
Sat Flow, veh/h	1781	1856	0	1739	1752	1585	1753	1811	1522	1725	1870	1572
Grp Volume(v), veh/h	345	449	0	155	245	0	70	324	252	162	361	326
Grp Sat Flow(s),veh/h/ln	1781	1856	0	1739	1752	1585	1753	1811	1522	1725	1870	1572
Q Serve(g_s), s	18.4	28.1	0.0	8.8	16.1	0.0	2.8	15.7	14.3	6.5	16.3	17.8
Cycle Q Clear(g_c), s	18.4	28.1	0.0	8.8	16.1	0.0	2.8	15.7	14.3	6.5	16.3	17.8
Prop In Lane	1.00		0.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	412	496		228	306		347	723	608	400	809	680
V/C Ratio(X)	0.84	0.91		0.68	0.80		0.20	0.45	0.41	0.40	0.45	0.48
Avail Cap(c_a), veh/h	440	642		228	416		420	723	608	414	809	680
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.1	42.5	0.0	38.1	47.5	0.0	20.5	26.4	25.9	19.6	23.9	24.4
Incr Delay (d2), s/veh	12.7	13.9	0.0	7.9	7.8	0.0	0.3	2.0	2.1	0.7	1.8	2.4
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	9.1	14.4	0.0	4.2	7.5	0.0	1.2	7.1	5.4	2.6	7.5	6.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	44.8	56.4	0.0	46.0	55.3	0.0	20.8	28.4	28.0	20.3	25.7	26.8
LnGrp LOS	D	E		D	E		C	C	C	C	C	C
Approach Vol, veh/h		794			400			646			849	
Approach Delay, s/veh		51.4			51.7			27.4			25.1	
Approach LOS		D			D			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.0	53.4	15.0	37.6	10.0	57.4	26.1	26.4				
Change Period (Y+Rc), s	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5				
Max Green Setting (Gmax), s	9.5	37.5	9.5	41.5	9.5	37.5	22.5	28.5				
Max Q Clear Time (g_c+l1), s	8.5	17.7	10.8	30.1	4.8	19.8	20.4	18.1				
Green Ext Time (p_c), s	0.0	5.3	0.0	2.0	0.0	6.1	0.2	0.9				

Intersection Summary

HCM 6th Ctrl Delay 37.4

HCM 6th LOS D

Notes

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

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	1	649	764	10	0	2
Future Vol, veh/h	1	649	764	10	0	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	Free	-	None	-	None
Storage Length	-	-	-	280	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	3	4	2	2	2
Mvmt Flow	1	683	804	11	0	2
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	815	0	-	0	1489	804
Stage 1	-	-	-	-	804	-
Stage 2	-	-	-	-	685	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	812	-	-	-	136	383
Stage 1	-	-	-	-	440	-
Stage 2	-	-	-	-	500	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	812	-	-	-	136	383
Mov Cap-2 Maneuver	-	-	-	-	275	-
Stage 1	-	-	-	-	439	-
Stage 2	-	-	-	-	500	-
Approach	EB	WB		SB		
HCM Control Delay, s	0	0		14.5		
HCM LOS	B					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	812	-	-	-	-	383
HCM Lane V/C Ratio	0.001	-	-	-	-	0.005
HCM Control Delay (s)	9.4	-	-	-	-	14.5
HCM Lane LOS	A	-	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	-	0

Intersection												
Int Delay, s/veh	4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↱			↱	↱		↱			↱	
Traffic Vol, veh/h	143	629	7	1	643	125	21	0	2	17	0	69
Future Vol, veh/h	143	629	7	1	643	125	21	0	2	17	0	69
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	Yield	-	-	None	-	-	None
Storage Length	-	-	-	-	-	205	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	5	2	2	2	2	2	2	2
Mvmt Flow	147	648	7	1	663	129	22	0	2	18	0	71
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	663	0	0	655	0	0	1647	1611	652	1612	1614	663
Stage 1	-	-	-	-	-	-	946	946	-	665	665	-
Stage 2	-	-	-	-	-	-	701	665	-	947	949	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	926	-	-	932	-	-	79	104	468	84	104	461
Stage 1	-	-	-	-	-	-	314	340	-	449	458	-
Stage 2	-	-	-	-	-	-	429	458	-	314	339	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	926	-	-	932	-	-	54	78	468	67	78	461
Mov Cap-2 Maneuver	-	-	-	-	-	-	54	78	-	67	78	-
Stage 1	-	-	-	-	-	-	236	255	-	337	457	-
Stage 2	-	-	-	-	-	-	362	457	-	234	254	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	1.8			0			102.2			33.4		
HCM LOS							F			D		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	59	926	-	-	932	-	-	213				
HCM Lane V/C Ratio	0.402	0.159	-	-	0.001	-	-	0.416				
HCM Control Delay (s)	102.2	9.6	-	-	8.9	-	-	33.4				
HCM Lane LOS	F	A	-	-	A	-	-	D				
HCM 95th %tile Q(veh)	1.5	0.6	-	-	0	-	-	1.9				

Intersection						
Int Delay, s/veh	0.7					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	107	782	588	142	0	2
Future Vol, veh/h	107	782	588	142	0	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	60	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	6	2	2	2
Mvmt Flow	114	832	626	151	0	2
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	777	0	-	0	1762	702
Stage 1	-	-	-	-	702	-
Stage 2	-	-	-	-	1060	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	839	-	-	-	93	438
Stage 1	-	-	-	-	491	-
Stage 2	-	-	-	-	333	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	839	-	-	-	80	438
Mov Cap-2 Maneuver	-	-	-	-	206	-
Stage 1	-	-	-	-	424	-
Stage 2	-	-	-	-	333	-
Approach	EB	WB		SB		
HCM Control Delay, s	1.2	0		13.3		
HCM LOS	B					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	839	-	-	-	-	438
HCM Lane V/C Ratio	0.136	-	-	-	-	0.005
HCM Control Delay (s)	10	-	-	-	-	13.3
HCM Lane LOS	A	-	-	-	-	B
HCM 95th %tile Q(veh)	0.5	-	-	-	-	0

Intersection												
Int Delay, s/veh	38											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	212	779	8	27	389	169	11	1	43	75	1	47
Future Vol, veh/h	212	779	8	27	389	169	11	1	43	75	1	47
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	160	-	130	150	-	150	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	3	3	3	3	3	3	2	2	2	2	2	2
Mvmt Flow	223	820	8	28	409	178	12	1	45	79	1	49
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	587	0	0	828	0	0	1845	1909	820	1758	1739	409
Stage 1	-	-	-	-	-	-	1266	1266	-	465	465	-
Stage 2	-	-	-	-	-	-	579	643	-	1293	1274	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.227	-	-	2.227	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	983	-	-	799	-	-	57	68	375	~ 66	87	642
Stage 1	-	-	-	-	-	-	207	240	-	578	563	-
Stage 2	-	-	-	-	-	-	501	468	-	200	238	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	983	-	-	799	-	-	42	51	375	~ 46	65	642
Mov Cap-2 Maneuver	-	-	-	-	-	-	42	51	-	~ 46	65	-
Stage 1	-	-	-	-	-	-	160	186	-	447	543	-
Stage 2	-	-	-	-	-	-	445	452	-	135	184	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	2.1			0.4			48.2			\$ 504.3		
HCM LOS							E			F		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	139	983	-	-	799	-	-	72				
HCM Lane V/C Ratio	0.417	0.227	-	-	0.036	-	-	1.798				
HCM Control Delay (s)	48.2	9.7	-	-	9.7	-	-	\$ 504.3				
HCM Lane LOS	E	A	-	-	A	-	-	F				
HCM 95th %tile Q(veh)	1.8	0.9	-	-	0.1	-	-	11.4				
Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s				+: Computation Not Defined				*: All major volume in platoon		

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	1	0	607	502	1
Future Vol, veh/h	0	1	0	607	502	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Free	-	None	-	Yield
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	1	0	660	546	1
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	-	-	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	-
Pot Cap-1 Maneuver	0	0	0	-	-	-
Stage 1	0	0	0	-	-	-
Stage 2	0	0	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	-	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	0	0		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBT EBLn1		SBT	SBR		
Capacity (veh/h)	-		-	-		
HCM Lane V/C Ratio	-		-	-		
HCM Control Delay (s)	-		0	-		
HCM Lane LOS	-		A	-		
HCM 95th %tile Q(veh)	-		-	-		

Intersection						
Int Delay, s/veh	0.2					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	3	5	17	603	501	2
Future Vol, veh/h	3	5	17	603	501	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	5	18	655	545	2
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	1237	546	547	0	-	0
Stage 1	546	-	-	-	-	-
Stage 2	691	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	194	538	1022	-	-	-
Stage 1	580	-	-	-	-	-
Stage 2	497	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	189	538	1022	-	-	-
Mov Cap-2 Maneuver	189	-	-	-	-	-
Stage 1	564	-	-	-	-	-
Stage 2	497	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	16.6	0.2		0		
HCM LOS	C					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1022	-	318	-	-	
HCM Lane V/C Ratio	0.018	-	0.027	-	-	
HCM Control Delay (s)	8.6	0	16.6	-	-	
HCM Lane LOS	A	A	C	-	-	
HCM 95th %tile Q(veh)	0.1	-	0.1	-	-	

Intersection						
Int Delay, s/veh	0.1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	2	1	1	618	505	1
Future Vol, veh/h	2	1	1	618	505	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	1	1	672	549	1
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	1224	550	550	0	-	0
Stage 1	550	-	-	-	-	-
Stage 2	674	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	198	535	1020	-	-	-
Stage 1	578	-	-	-	-	-
Stage 2	506	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	198	535	1020	-	-	-
Mov Cap-2 Maneuver	198	-	-	-	-	-
Stage 1	577	-	-	-	-	-
Stage 2	506	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	19.5	0		0		
HCM LOS	C					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1020	-	251	-	-	
HCM Lane V/C Ratio	0.001	-	0.013	-	-	
HCM Control Delay (s)	8.5	0	19.5	-	-	
HCM Lane LOS	A	A	C	-	-	
HCM 95th %tile Q(veh)	0	-	0	-	-	

Timings

3b.Future 2024 PM

1: E Cherokee Dr & Hickory Rd

03/28/2023



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	234	405	248	598	131	29	321	227	95	358	228
Future Volume (vph)	234	405	248	598	131	29	321	227	95	358	228
Lane Group Flow (vph)	239	435	253	610	134	30	328	232	97	365	233
Turn Type	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4	3	8		5	2		1	6	
Permitted Phases	4		8		8	2		2	6		6
Detector Phase	7	4	3	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	6.0	5.0	6.0	6.0	5.0	15.0	15.0	5.0	15.0	15.0
Minimum Split (s)	15.0	27.5	15.0	32.5	32.5	15.0	30.5	30.5	15.0	29.5	29.5
Total Split (s)	16.0	50.0	19.0	53.0	53.0	15.0	36.0	36.0	15.0	36.0	36.0
Total Split (%)	13.3%	41.7%	15.8%	44.2%	44.2%	12.5%	30.0%	30.0%	12.5%	30.0%	30.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
Act Effct Green (s)	51.7	41.2	57.0	43.8	43.8	41.7	34.9	34.9	47.0	41.3	41.3
Actuated g/C Ratio	0.43	0.34	0.48	0.36	0.36	0.35	0.29	0.29	0.39	0.34	0.34
v/c Ratio	1.07	0.69	0.69	0.91	0.20	0.10	0.61	0.38	0.31	0.57	0.33
Control Delay	108.0	39.4	27.8	54.1	5.8	24.3	43.8	7.4	26.5	39.6	5.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	108.0	39.4	27.8	54.1	5.8	24.3	43.8	7.4	26.5	39.6	5.8
LOS	F	D	C	D	A	C	D	A	C	D	A
Approach Delay		63.7		40.9			28.5			26.4	
Approach LOS		E		D			C			C	
Queue Length 50th (ft)	~140	276	105	427	5	14	229	6	48	252	0
Queue Length 95th (ft)	#303	387	156	#620	45	35	336	69	88	375	62
Internal Link Dist (ft)		439		329			418			559	
Turn Bay Length (ft)	330		300			170		170	95		450
Base Capacity (vph)	224	686	370	730	700	329	541	613	319	635	697
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.07	0.63	0.68	0.84	0.19	0.09	0.61	0.38	0.30	0.57	0.33

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

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

Natural Cycle: 95

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.07

Intersection Signal Delay: 40.2

Intersection LOS: D

Intersection Capacity Utilization 85.8%

ICU Level of Service E

Analysis Period (min) 15

Timings

1: E Cherokee Dr & Hickory Rd

3b.Future 2024 PM

03/28/2023

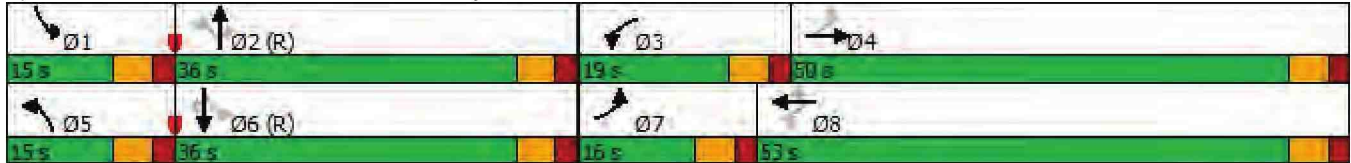
~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

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

Queue shown is maximum after two cycles.

Splits and Phases: 1: E Cherokee Dr & Hickory Rd



HCM 6th Signalized Intersection Summary

1: E Cherokee Dr & Hickory Rd

3b.Future 2024 PM

03/28/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	234	405	22	248	598	131	29	321	227	95	358	228
Future Volume (veh/h)	234	405	22	248	598	131	29	321	227	95	358	228
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1841	1870	1856	1870	1811	1870	1856	1870	1856	1870
Adj Flow Rate, veh/h	239	413	0	253	610	0	30	328	232	97	365	233
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	4	2	3	2	6	2	3	2	3	2
Cap, veh/h	245	618		392	654		257	609	512	306	650	555
Arrive On Green	0.09	0.33	0.00	0.11	0.35	0.00	0.03	0.33	0.33	0.05	0.35	0.35
Sat Flow, veh/h	1781	1870	0	1781	1856	1585	1725	1870	1572	1781	1856	1585
Grp Volume(v), veh/h	239	413	0	253	610	0	30	328	232	97	365	233
Grp Sat Flow(s),veh/h/ln	1781	1870	0	1781	1856	1585	1725	1870	1572	1781	1856	1585
Q Serve(g_s), s	10.5	22.8	0.0	11.1	38.1	0.0	1.4	17.2	14.0	4.3	19.1	13.4
Cycle Q Clear(g_c), s	10.5	22.8	0.0	11.1	38.1	0.0	1.4	17.2	14.0	4.3	19.1	13.4
Prop In Lane	1.00		0.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	245	618		392	654		257	609	512	306	650	555
V/C Ratio(X)	0.98	0.67		0.65	0.93		0.12	0.54	0.45	0.32	0.56	0.42
Avail Cap(c_a), veh/h	245	694		397	734		348	609	512	356	650	555
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.5	34.5	0.0	24.9	37.5	0.0	26.8	33.1	32.0	26.0	31.5	29.7
Incr Delay (d2), s/veh	51.0	2.1	0.0	3.5	17.7	0.0	0.2	3.4	2.9	0.6	3.5	2.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.9	10.4	0.0	4.9	19.8	0.0	0.6	8.3	5.6	1.9	9.1	5.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	81.5	36.6	0.0	28.4	55.2	0.0	27.0	36.5	34.9	26.6	35.0	32.0
LnGrp LOS	F	D		C	E		C	D	C	C	D	C
Approach Vol, veh/h	652			863			590			695		
Approach Delay, s/veh	53.1			47.3			35.4			32.8		
Approach LOS	D			D			D			C		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.6	44.6	18.7	45.1	8.7	47.5	16.0	47.8				
Change Period (Y+Rc), s	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5				
Max Green Setting (Gmax), s	9.5	30.5	13.5	44.5	9.5	30.5	10.5	47.5				
Max Q Clear Time (g_c+I1), s	6.3	19.2	13.1	24.8	3.4	21.1	12.5	40.1				
Green Ext Time (p_c), s	0.1	3.8	0.0	2.3	0.0	3.6	0.0	2.2				
Intersection Summary												
HCM 6th Ctrl Delay	42.5											
HCM 6th LOS	D											

Intersection						
Int Delay, s/veh	0.2					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	18	674	842	17	1	4
Future Vol, veh/h	18	674	842	17	1	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	Free	-	None	-	None
Storage Length	-	-	-	280	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	2	3	2	2	2
Mvmt Flow	19	725	905	18	1	4
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	923	0	-	0	1668	905
Stage 1	-	-	-	-	905	-
Stage 2	-	-	-	-	763	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	740	-	-	-	106	335
Stage 1	-	-	-	-	395	-
Stage 2	-	-	-	-	460	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	740	-	-	-	101	335
Mov Cap-2 Maneuver	-	-	-	-	235	-
Stage 1	-	-	-	-	378	-
Stage 2	-	-	-	-	460	-
Approach	EB	WB		SB		
HCM Control Delay, s	0.3	0		16.9		
HCM LOS				C		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	740	-	-	-	309	
HCM Lane V/C Ratio	0.026	-	-	-	0.017	
HCM Control Delay (s)	10	-	-	-	16.9	
HCM Lane LOS	A	-	-	-	C	
HCM 95th %tile Q(veh)	0.1	-	-	-	0.1	

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	5	692	11	2	839	5	11	0	1	2	0	12
Future Vol, veh/h	5	692	11	2	839	5	11	0	1	2	0	12
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	Yield	-	-	None	-	-	None
Storage Length	-	-	-	-	-	205	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	713	11	2	865	5	11	0	1	2	0	12

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	865	0	0	724	0	0	1604	1598	719	1598	1603	865
Stage 1	-	-	-	-	-	-	729	729	-	869	869	-
Stage 2	-	-	-	-	-	-	875	869	-	729	734	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	778	-	-	879	-	-	85	106	428	86	106	353
Stage 1	-	-	-	-	-	-	414	428	-	347	369	-
Stage 2	-	-	-	-	-	-	344	369	-	414	426	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	778	-	-	879	-	-	81	104	428	85	104	353
Mov Cap-2 Maneuver	-	-	-	-	-	-	81	104	-	85	104	-
Stage 1	-	-	-	-	-	-	409	423	-	343	368	-
Stage 2	-	-	-	-	-	-	331	368	-	408	421	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			0			53.1			20.7		
HCM LOS							F			C		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	87	778	-	-	879	-	-	243
HCM Lane V/C Ratio	0.142	0.007	-	-	0.002	-	-	0.059
HCM Control Delay (s)	53.1	9.7	-	-	9.1	-	-	20.7
HCM Lane LOS	F	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	0.5	0	-	-	0	-	-	0.2

Intersection						
Int Delay, s/veh	0.7					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	37	690	839	26	14	27
Future Vol, veh/h	37	690	839	26	14	27
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	60	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	3	2	2	2
Mvmt Flow	40	750	912	28	15	29
Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	940	0	-	0	1756	926
Stage 1	-	-	-	-	926	-
Stage 2	-	-	-	-	830	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	729	-	-	-	93	326
Stage 1	-	-	-	-	386	-
Stage 2	-	-	-	-	428	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	729	-	-	-	88	326
Mov Cap-2 Maneuver	-	-	-	-	220	-
Stage 1	-	-	-	-	365	-
Stage 2	-	-	-	-	428	-
Approach	EB	WB		SB		
HCM Control Delay, s	0.5	0		20.3		
HCM LOS				C		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	729	-	-	-	280	
HCM Lane V/C Ratio	0.055	-	-	-	0.159	
HCM Control Delay (s)	10.2	-	-	-	20.3	
HCM Lane LOS	B	-	-	-	C	
HCM 95th %tile Q(veh)	0.2	-	-	-	0.6	

Intersection												
Int Delay, s/veh	3.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	53	690	10	16	805	32	16	3	22	15	1	27
Future Vol, veh/h	53	690	10	16	805	32	16	3	22	15	1	27
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	160	-	130	150	-	150	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	56	726	11	17	847	34	17	3	23	16	1	28

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	881	0	0	737	0	0	1751	1753	726	1738	1730	847
Stage 1	-	-	-	-	-	-	838	838	-	881	881	-
Stage 2	-	-	-	-	-	-	913	915	-	857	849	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	767	-	-	869	-	-	67	85	425	68	88	362
Stage 1	-	-	-	-	-	-	361	382	-	341	365	-
Stage 2	-	-	-	-	-	-	328	352	-	352	377	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	767	-	-	869	-	-	57	77	425	58	80	362
Mov Cap-2 Maneuver	-	-	-	-	-	-	57	77	-	58	80	-
Stage 1	-	-	-	-	-	-	335	354	-	316	358	-
Stage 2	-	-	-	-	-	-	295	345	-	306	349	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.7			0.2			57.4			49.8		
HCM LOS							F			E		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	110	767	-	-	869	-	-	124
HCM Lane V/C Ratio	0.392	0.073	-	-	0.019	-	-	0.365
HCM Control Delay (s)	57.4	10.1	-	-	9.2	-	-	49.8
HCM Lane LOS	F	B	-	-	A	-	-	E
HCM 95th %tile Q(veh)	1.6	0.2	-	-	0.1	-	-	1.5

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	1	0	577	627	1
Future Vol, veh/h	0	1	0	577	627	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Free	-	None	-	Yield
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	1	0	627	682	1
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	-	-	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	-
Pot Cap-1 Maneuver	0	0	0	-	-	-
Stage 1	0	0	0	-	-	-
Stage 2	0	0	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	-	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	0	0		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBT EBLn1		SBT	SBR		
Capacity (veh/h)	-		-	-		
HCM Lane V/C Ratio	-		-	-		
HCM Control Delay (s)	-		0	-		
HCM Lane LOS	-		A	-		
HCM 95th %tile Q(veh)	-		-	-		

Intersection						
Int Delay, s/veh	0.2					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	3	7	8	574	624	3
Future Vol, veh/h	3	7	8	574	624	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	8	9	624	678	3
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	1322	680	681	0	-	0
Stage 1	680	-	-	-	-	-
Stage 2	642	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	173	451	912	-	-	-
Stage 1	503	-	-	-	-	-
Stage 2	524	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	170	451	912	-	-	-
Mov Cap-2 Maneuver	170	-	-	-	-	-
Stage 1	495	-	-	-	-	-
Stage 2	524	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	17.4	0.1		0		
HCM LOS	C					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	912	-	301	-	-	
HCM Lane V/C Ratio	0.01	-	0.036	-	-	
HCM Control Delay (s)	9	0	17.4	-	-	
HCM Lane LOS	A	A	C	-	-	
HCM 95th %tile Q(veh)	0	-	0.1	-	-	

Intersection						
Int Delay, s/veh	0.1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	2	1	2	580	628	2
Future Vol, veh/h	2	1	2	580	628	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	1	2	630	683	2
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	1318	684	685	0	-	0
Stage 1	684	-	-	-	-	-
Stage 2	634	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	173	449	908	-	-	-
Stage 1	501	-	-	-	-	-
Stage 2	529	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	172	449	908	-	-	-
Mov Cap-2 Maneuver	172	-	-	-	-	-
Stage 1	499	-	-	-	-	-
Stage 2	529	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	21.8	0		0		
HCM LOS	C					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	908	-	217	-	-	
HCM Lane V/C Ratio	0.002	-	0.015	-	-	
HCM Control Delay (s)	9	0	21.8	-	-	
HCM Lane LOS	A	A	C	-	-	
HCM 95th %tile Q(veh)	0	-	0	-	-	

Timings

3c.Future 2024 Dismissal

1: E Cherokee Dr & Hickory Rd

03/28/2023



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	218	372	237	407	129	19	264	206	93	258	176
Future Volume (vph)	218	372	237	407	129	19	264	206	93	258	176
Lane Group Flow (vph)	232	445	252	433	137	20	281	219	99	274	187
Turn Type	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4	3	8		5	2		1	6	
Permitted Phases	4		8		8	2		2	6		6
Detector Phase	7	4	3	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	6.0	5.0	6.0	6.0	5.0	15.0	15.0	5.0	15.0	15.0
Minimum Split (s)	15.0	27.5	15.0	32.5	32.5	15.0	30.5	30.5	15.0	29.5	29.5
Total Split (s)	15.0	44.0	20.0	49.0	49.0	20.0	41.0	41.0	15.0	36.0	36.0
Total Split (%)	12.5%	36.7%	16.7%	40.8%	40.8%	16.7%	34.2%	34.2%	12.5%	30.0%	30.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
Act Effct Green (s)	42.9	33.4	52.3	38.1	38.1	47.8	41.4	41.4	54.7	50.8	50.8
Actuated g/C Ratio	0.36	0.28	0.44	0.32	0.32	0.40	0.34	0.34	0.46	0.42	0.42
v/c Ratio	0.83	0.88	0.89	0.79	0.23	0.04	0.45	0.33	0.25	0.35	0.24
Control Delay	48.7	59.3	57.1	48.0	5.2	20.3	35.3	5.6	21.5	28.0	5.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.7	59.3	57.1	48.0	5.2	20.3	35.3	5.6	21.5	28.0	5.1
LOS	D	E	E	D	A	C	D	A	C	C	A
Approach Delay		55.7		43.6			22.2			19.2	
Approach LOS		E		D			C			B	
Queue Length 50th (ft)	110	322	123	299	0	8	174	0	43	133	0
Queue Length 95th (ft)	#186	434	#258	404	42	25	271	57	83	255	52
Internal Link Dist (ft)		439		329			418			559	
Turn Bay Length (ft)	330		300			170		170	95		450
Base Capacity (vph)	279	585	287	626	661	565	618	664	410	789	771
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.83	0.76	0.88	0.69	0.21	0.04	0.45	0.33	0.24	0.35	0.24

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

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

Natural Cycle: 95

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.89

Intersection Signal Delay: 37.2

Intersection LOS: D

Intersection Capacity Utilization 72.9%

ICU Level of Service C

Analysis Period (min) 15

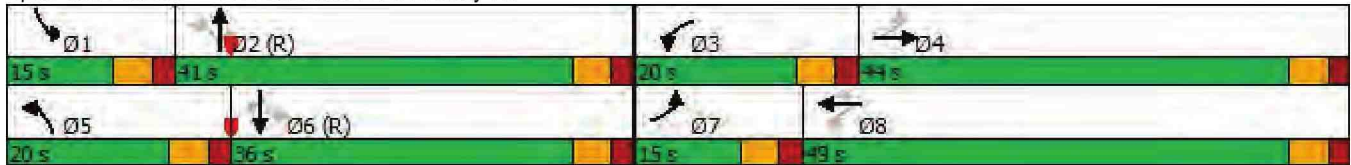
Timings

1: E Cherokee Dr & Hickory Rd

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

Queue shown is maximum after two cycles.

Splits and Phases: 1: E Cherokee Dr & Hickory Rd



HCM 6th Signalized Intersection Summary

1: E Cherokee Dr & Hickory Rd

3c.Future 2024 Dismissal

03/28/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	218	372	46	237	407	129	19	264	206	93	258	176
Future Volume (veh/h)	218	372	46	237	407	129	19	264	206	93	258	176
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1856	1870	1826	1752	1870	1841	1811	1796	1811	1870	1856
Adj Flow Rate, veh/h	232	396	0	252	433	0	20	281	219	99	274	187
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	3	2	5	10	2	4	6	7	6	2	3
Cap, veh/h	242	441		300	489		408	742	624	405	819	688
Arrive On Green	0.08	0.24	0.00	0.12	0.28	0.00	0.02	0.41	0.41	0.05	0.44	0.44
Sat Flow, veh/h	1781	1856	0	1739	1752	1585	1753	1811	1522	1725	1870	1572
Grp Volume(v), veh/h	232	396	0	252	433	0	20	281	219	99	274	187
Grp Sat Flow(s),veh/h/ln	1781	1856	0	1739	1752	1585	1753	1811	1522	1725	1870	1572
Q Serve(g_s), s	9.5	24.8	0.0	12.8	28.4	0.0	0.8	13.0	11.9	4.0	11.6	9.1
Cycle Q Clear(g_c), s	9.5	24.8	0.0	12.8	28.4	0.0	0.8	13.0	11.9	4.0	11.6	9.1
Prop In Lane	1.00		0.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	242	441		300	489		408	742	624	405	819	688
V/C Ratio(X)	0.96	0.90		0.84	0.88		0.05	0.38	0.35	0.24	0.33	0.27
Avail Cap(c_a), veh/h	242	595		300	635		585	742	624	459	819	688
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.3	44.3	0.0	31.3	41.4	0.0	20.0	24.7	24.4	19.5	22.2	21.5
Incr Delay (d2), s/veh	46.3	13.2	0.0	18.7	11.6	0.0	0.0	1.5	1.6	0.3	1.1	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.4	12.7	0.0	6.7	13.5	0.0	0.3	5.8	4.4	1.6	5.3	3.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	85.7	57.5	0.0	50.0	52.9	0.0	20.1	26.2	26.0	19.8	23.3	22.5
LnGrp LOS	F	E		D	D		C	C	C	B	C	C
Approach Vol, veh/h	628			685			520			560		
Approach Delay, s/veh	67.9			51.9			25.9			22.4		
Approach LOS	E			D			C			C		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.3	54.7	20.0	34.0	7.9	58.0	15.0	39.0				
Change Period (Y+Rc), s	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5				
Max Green Setting (Gmax), s	9.5	35.5	14.5	38.5	14.5	30.5	9.5	43.5				
Max Q Clear Time (g_c+I1), s	6.0	15.0	14.8	26.8	2.8	13.6	11.5	30.4				
Green Ext Time (p_c), s	0.1	4.6	0.0	1.7	0.0	3.9	0.0	2.0				

Intersection Summary

HCM 6th Ctrl Delay 43.5

HCM 6th LOS D

Notes

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

Intersection						
Int Delay, s/veh	0.3					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑	↑	↑	
Traffic Vol, veh/h	1	625	588	1	14	7
Future Vol, veh/h	1	625	588	1	14	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	Free	-	None	-	None
Storage Length	-	-	-	280	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	2	3	4	2	2	2
Mvmt Flow	1	644	606	1	14	7
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	607	0	-	0	1252	606
Stage 1	-	-	-	-	606	-
Stage 2	-	-	-	-	646	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	971	-	-	-	190	497
Stage 1	-	-	-	-	545	-
Stage 2	-	-	-	-	522	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	971	-	-	-	190	497
Mov Cap-2 Maneuver	-	-	-	-	330	-
Stage 1	-	-	-	-	544	-
Stage 2	-	-	-	-	522	-
Approach	EB	WB		SB		
HCM Control Delay, s	0	0		15.3		
HCM LOS				C		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	971	-	-	-	372	
HCM Lane V/C Ratio	0.001	-	-	-	0.058	
HCM Control Delay (s)	8.7	-	-	-	15.3	
HCM Lane LOS	A	-	-	-	C	
HCM 95th %tile Q(veh)	0	-	-	-	0.2	

Intersection												
Int Delay, s/veh	1.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	33	604	17	2	565	24	10	0	2	19	0	46
Future Vol, veh/h	33	604	17	2	565	24	10	0	2	19	0	46
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	Yield	-	-	None	-	-	None
Storage Length	-	-	-	-	-	205	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	5	2	2	2	2	2	2	2
Mvmt Flow	34	623	18	2	582	25	10	0	2	20	0	47

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	582	0	0	641	0	0	1310	1286	632	1287	1295	582
Stage 1	-	-	-	-	-	-	700	700	-	586	586	-
Stage 2	-	-	-	-	-	-	610	586	-	701	709	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	992	-	-	943	-	-	136	164	480	141	162	513
Stage 1	-	-	-	-	-	-	430	441	-	496	497	-
Stage 2	-	-	-	-	-	-	482	497	-	429	437	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	992	-	-	943	-	-	118	155	480	134	153	513
Mov Cap-2 Maneuver	-	-	-	-	-	-	118	155	-	134	153	-
Stage 1	-	-	-	-	-	-	407	418	-	470	496	-
Stage 2	-	-	-	-	-	-	436	496	-	405	414	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.4			0			34.3			21.8		
HCM LOS							D			C		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	135	992	-	-	943	-	-	281
HCM Lane V/C Ratio	0.092	0.034	-	-	0.002	-	-	0.238
HCM Control Delay (s)	34.3	8.8	-	-	8.8	-	-	21.8
HCM Lane LOS	D	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	0.3	0.1	-	-	0	-	-	0.9

Intersection						
Int Delay, s/veh	2.7					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	2	574	611	12	81	79
Future Vol, veh/h	2	574	611	12	81	79
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	60	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	2	2	6	2	2	2
Mvmt Flow	2	631	671	13	89	87
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	684	0	-	0	1313	678
Stage 1	-	-	-	-	678	-
Stage 2	-	-	-	-	635	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	909	-	-	-	175	452
Stage 1	-	-	-	-	504	-
Stage 2	-	-	-	-	528	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	909	-	-	-	175	452
Mov Cap-2 Maneuver	-	-	-	-	315	-
Stage 1	-	-	-	-	503	-
Stage 2	-	-	-	-	528	-
Approach	EB	WB		SB		
HCM Control Delay, s	0	0		23.2		
HCM LOS	C					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	909	-	-	-	370	
HCM Lane V/C Ratio	0.002	-	-	-	0.475	
HCM Control Delay (s)	9	-	-	-	23.2	
HCM Lane LOS	A	-	-	-	C	
HCM 95th %tile Q(veh)	0	-	-	-	2.5	

Intersection												
Int Delay, s/veh	8.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	31	483	16	19	645	27	8	0	17	71	1	78
Future Vol, veh/h	31	483	16	19	645	27	8	0	17	71	1	78
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	160	-	130	150	-	150	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	95	95	95	95	95	95
Heavy Vehicles, %	3	3	3	3	3	3	2	2	2	2	2	2
Mvmt Flow	33	514	17	20	686	29	8	0	18	75	1	82

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	715	0	0	531	0	0	1362	1335	514	1324	1323	686
Stage 1	-	-	-	-	-	-	580	580	-	726	726	-
Stage 2	-	-	-	-	-	-	782	755	-	598	597	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.227	-	-	2.227	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	881	-	-	1031	-	-	125	154	560	133	156	447
Stage 1	-	-	-	-	-	-	500	500	-	416	430	-
Stage 2	-	-	-	-	-	-	387	417	-	489	491	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	881	-	-	1031	-	-	97	146	560	123	147	447
Mov Cap-2 Maneuver	-	-	-	-	-	-	97	146	-	123	147	-
Stage 1	-	-	-	-	-	-	482	482	-	401	422	-
Stage 2	-	-	-	-	-	-	309	409	-	456	473	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.5			0.2			23.4			70.4		
HCM LOS							C			F		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	222	881	-	-	1031	-	-	198
HCM Lane V/C Ratio	0.119	0.037	-	-	0.02	-	-	0.797
HCM Control Delay (s)	23.4	9.2	-	-	8.6	-	-	70.4
HCM Lane LOS	C	A	-	-	A	-	-	F
HCM 95th %tile Q(veh)	0.4	0.1	-	-	0.1	-	-	5.6

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	1	0	490	540	1
Future Vol, veh/h	0	1	0	490	540	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Free	-	None	-	Yield
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	1	0	533	587	1
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	-	-	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	-
Pot Cap-1 Maneuver	0	0	0	-	-	-
Stage 1	0	0	0	-	-	-
Stage 2	0	0	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	-	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	0	0		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR		
Capacity (veh/h)	-	-	-	-		
HCM Lane V/C Ratio	-	-	-	-		
HCM Control Delay (s)	-	0	-	-		
HCM Lane LOS	-	A	-	-		
HCM 95th %tile Q(veh)	-	-	-	-		

Intersection						
Int Delay, s/veh	0.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	4	12	6	486	537	4
Future Vol, veh/h	4	12	6	486	537	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	13	7	528	584	4
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	1128	586	588	0	-	0
Stage 1	586	-	-	-	-	-
Stage 2	542	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	226	510	987	-	-	-
Stage 1	556	-	-	-	-	-
Stage 2	583	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	224	510	987	-	-	-
Mov Cap-2 Maneuver	224	-	-	-	-	-
Stage 1	550	-	-	-	-	-
Stage 2	583	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	14.7	0.1		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	987	-	387	-	-	
HCM Lane V/C Ratio	0.007	-	0.045	-	-	
HCM Control Delay (s)	8.7	0	14.7	-	-	
HCM Lane LOS	A	A	B	-	-	
HCM 95th %tile Q(veh)	0	-	0.1	-	-	

Intersection						
Int Delay, s/veh	0.1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	2	1	2	490	547	3
Future Vol, veh/h	2	1	2	490	547	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	1	2	533	595	3
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	1134	597	598	0	-	0
Stage 1	597	-	-	-	-	-
Stage 2	537	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	224	503	979	-	-	-
Stage 1	550	-	-	-	-	-
Stage 2	586	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	223	503	979	-	-	-
Mov Cap-2 Maneuver	223	-	-	-	-	-
Stage 1	548	-	-	-	-	-
Stage 2	586	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	18.3	0		0		
HCM LOS	C					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	979	-	274	-	-	
HCM Lane V/C Ratio	0.002	-	0.012	-	-	
HCM Control Delay (s)	8.7	0	18.3	-	-	
HCM Lane LOS	A	A	C	-	-	
HCM 95th %tile Q(veh)	0	-	0	-	-	

TRAFFIC VOLUME WORKSHEETS

22-080 Hickory Flat Adult Community - Cherokee County, GA
Traffic Volumes

A&R Engineering
 March 2023

1. Hickory Rd @ E Cherokee Dr

A.M. Peak Hour

Condition	E Cherokee Drive Northbound					E Cherokee Drive Southbound					Hickory Road Eastbound					Hickory Road Westbound			
	L	T	R	Tot		L	T	R	Tot		L	T	R	Tot		L	T	R	Tot
Existing 2022 Traffic Counts:	80	297	228	605		149	331	300	780		317	413	21	751		141	225	145	511
Growth Factor (%):	1	1	1			1	1	1			1	1	1			1	1	1	
No-Build 2024 Volumes:	82	303	233	618		152	338	306	796		323	421	21	765		144	230	148	522
Shifted Trips:	-16	0	0	-16		0	0	0	0		0	0	-4	-4		0	0	0	0
Total New Trips:	0	2	4	6		0	1	0	1		1	1	0	2		2	0	0	2
Future 2024 Traffic Volumes:	66	305	237	608		152	339	306	797		324	422	17	763		146	230	148	524

P.M. Peak Hour

Condition	E Cherokee Drive Northbound					E Cherokee Drive Southbound					Hickory Road Eastbound					Hickory Road Westbound			
	L	T	R	Tot		L	T	R	Tot		L	T	R	Tot		L	T	R	Tot
Existing 2022 Traffic Counts:	35	313	220	568		93	349	223	665		228	396	27	651		239	585	128	952
Growth Factor (%):	1	1	1			1	1	1			1	1	1			1	1	1	
No-Build 2024 Volumes:	36	319	224	579		95	356	227	678		233	404	28	665		244	597	131	972
Shifted Trips:	-7	0	0	-7		0	0	0	0		0	0	-6	-6		0	0	0	0
Total New Trips:	0	2	3	5		0	2	1	3		1	1	0	2		4	1	0	5
Future 2024 Traffic Volumes:	29	321	227	577		95	358	228	681		234	405	22	661		248	598	131	977

Dismissal Peak Hour

Condition	E Cherokee Drive Northbound					E Cherokee Drive Southbound					Hickory Road Eastbound					Hickory Road Westbound			
	L	T	R	Tot		L	T	R	Tot		L	T	R	Tot		L	T	R	Tot
Existing 2022 Traffic Counts:	24	257	198	479		91	251	172	514		213	364	56	633		227	398	126	751
Growth Factor (%):	1	1	1			1	1	1			1	1	1			1	1	1	
No-Build 2024 Volumes:	24	262	202	488		93	256	175	524		217	371	57	645		232	406	129	767
Shifted Trips:	-5	0	0	-5		0	0	0	0		0	0	-11	-11		0	0	0	0
Total New Trips:	0	2	4	6		0	2	1	3		1	1	0	2		5	1	0	6
Future 2024 Traffic Volumes:	19	264	206	489		93	258	176	527		218	372	46	636		237	407	129	773

22-080 Hickory Flat Adult Community - Cherokee County, GA
Traffic Volumes

A&R Engineering
 March 2023

2. Hickory Rd@E Drwy Dean Rusk

A.M. Peak Hour

Condition	- Northbound				Driveway East of Dean Rusk School Southbound				Hickory Road Eastbound				Hickory Road Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing 2022 Traffic Counts:	0	0	0	0	0	0	2	2	1	638	0	639	0	764	10	774
Growth Factor (%):	1	1	1		1	1	1		1	1	1		1	1	1	
No-Build 2024 Volumes:	0	0	0	0	0	0	2	2	1	651	0	652	0	779	10	789
Shifted Trips:	0	0	0	0	0	0	0	0	0	-4	0	-4	0	-16	0	-16
Total New Trips:	0	0	0	0	0	0	0	0	0	2	0	2	0	1	0	1
Future 2024 Traffic Volumes:	0	0	0	0	0	0	2	2	1	649	0	650	0	764	10	774

P.M. Peak Hour

Condition	- Northbound				Driveway East of Dean Rusk School Southbound				Hickory Road Eastbound				Hickory Road Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing 2022 Traffic Counts:	0	0	0	0	1	0	4	5	18	666	0	684	0	830	17	847
Growth Factor (%):	1	1	1		1	1	1		1	1	1		1	1	1	
No-Build 2024 Volumes:	0	0	0	0	1	0	4	5	18	679	0	697	0	847	17	864
Shifted Trips:	0	0	0	0	0	0	0	0	0	-6	0	-6	0	-7	0	-7
Total New Trips:	0	0	0	0	0	0	0	0	0	1	0	1	0	2	0	2
Future 2024 Traffic Volumes:	0	0	0	0	1	0	4	5	18	674	0	692	0	842	17	859

Dismissal Peak Hour

Condition	- Northbound				Driveway East of Dean Rusk School Southbound				Hickory Road Eastbound				Hickory Road Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing 2022 Traffic Counts:	0	0	0	0	14	0	7	21	1	622	0	623	0	579	1	580
Growth Factor (%):	1	1	1		1	1	1		1	1	1		1	1	1	
No-Build 2024 Volumes:	0	0	0	0	14	0	7	21	1	634	0	635	0	591	1	592
Shifted Trips:	0	0	0	0	0	0	0	0	0	-11	0	-11	0	-5	0	-5
Total New Trips:	0	0	0	0	0	0	0	0	0	2	0	2	0	2	0	2
Future 2024 Traffic Volumes:	0	0	0	0	14	0	7	21	1	625	0	626	0	588	1	589

22-080 Hickory Flat Adult Community - Cherokee County, GA
Traffic Volumes

A&R Engineering
 March 2023

3. Hickory Rd@Dean Rusk Drwy

A.M. Peak Hour

Condition	Site Driveway 1 Northbound				Dean Rusk School Driveway Southbound				Hickory Road Eastbound				Hickory Road Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing 2022 Traffic Counts:	0	0	0	0	17	0	68	85	140	621	0	761	0	646	123	769
Growth Factor (%):	1	1	1		1	1	1		1	1	1		1	1	1	
No-Build 2024 Volumes:	0	0	0	0	17	0	69	86	143	633	0	776	0	659	125	784
Shifted Trips:	16	0	0	16	0	0	0	0	0	-4	4	0	0	-16	0	-16
Total New Trips:	5	0	2	7	0	0	0	0	0	0	3	3	1	0	0	1
Future 2024 Traffic Volumes:	21	0	2	23	17	0	69	86	143	629	7	779	1	643	125	769

P.M. Peak Hour

Condition	Site Driveway 1 Northbound				Dean Rusk School Driveway Southbound				Hickory Road Eastbound				Hickory Road Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing 2022 Traffic Counts:	0	0	0	0	2	0	12	14	5	684	0	689	0	829	5	834
Growth Factor (%):	1	1	1		1	1	1		1	1	1		1	1	1	
No-Build 2024 Volumes:	0	0	0	0	2	0	12	14	5	698	0	703	0	846	5	851
Shifted Trips:	7	0	0	7	0	0	0	0	0	-6	6	0	0	-7	0	-7
Total New Trips:	4	0	1	5	0	0	0	0	0	0	5	5	2	0	0	2
Future 2024 Traffic Volumes:	11	0	1	12	2	0	12	14	5	692	11	708	2	839	5	846

Dismissal Peak Hour

Condition	Site Driveway 1 Northbound				Dean Rusk School Driveway Southbound				Hickory Road Eastbound				Hickory Road Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing 2022 Traffic Counts:	0	0	0	0	19	0	45	64	32	603	0	635	0	559	24	583
Growth Factor (%):	1	1	1		1	1	1		1	1	1		1	1	1	
No-Build 2024 Volumes:	0	0	0	0	19	0	46	65	33	615	0	648	0	570	24	594
Shifted Trips:	5	0	0	5	0	0	0	0	0	-11	11	0	0	-5	0	-5
Total New Trips:	5	0	2	7	0	0	0	0	0	0	6	6	2	0	0	2
Future 2024 Traffic Volumes:	10	0	2	12	19	0	46	65	33	604	17	654	2	565	24	591

22-080 Hickory Flat Adult Community - Cherokee County, GA
Traffic Volumes

A&R Engineering
 March 2023

4. Hickory Rd @ Sequoyah Drwy

A.M. Peak Hour

Condition	- Northbound				Sequoyah School Driveway Southbound				Hickory Road Eastbound				Hickory Road Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing 2022 Traffic Counts:	0	0	0	0	0	0	2	2	105	765	0	870	0	572	139	711
Growth Factor (%):	1	1	1		1	1	1		1	1	1		1	1	1	
No-Build 2024 Volumes:	0	0	0	0	0	0	2	2	107	780	0	887	0	583	142	725
Shifted Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total New Trips:	0	0	0	0	0	0	0	0	0	2	0	2	0	5	0	5
Future 2024 Traffic Volumes:	0	0	0	0	0	0	2	2	107	782	0	889	0	588	142	730

P.M. Peak Hour

Condition	- Northbound				Sequoyah School Driveway Southbound				Hickory Road Eastbound				Hickory Road Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing 2022 Traffic Counts:	0	0	0	0	14	0	26	40	36	672	0	708	0	819	25	844
Growth Factor (%):	1	1	1		1	1	1		1	1	1		1	1	1	
No-Build 2024 Volumes:	0	0	0	0	14	0	27	41	37	685	0	722	0	835	26	861
Shifted Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total New Trips:	0	0	0	0	0	0	0	0	0	5	0	5	0	4	0	4
Future 2024 Traffic Volumes:	0	0	0	0	14	0	27	41	37	690	0	727	0	839	26	865

Dismissal Peak Hour

Condition	- Northbound				Sequoyah School Driveway Southbound				Hickory Road Eastbound				Hickory Road Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing 2022 Traffic Counts:	0	0	0	0	79	0	77	156	2	557	0	559	0	594	12	606
Growth Factor (%):	1	1	1		1	1	1		1	1	1		1	1	1	
No-Build 2024 Volumes:	0	0	0	0	81	0	79	160	2	568	0	570	0	606	12	618
Shifted Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total New Trips:	0	0	0	0	0	0	0	0	0	6	0	6	0	5	0	5
Future 2024 Traffic Volumes:	0	0	0	0	81	0	79	160	2	574	0	576	0	611	12	623

22-080 Hickory Flat Adult Community - Cherokee County, GA
Traffic Volumes

A&R Engineering
 March 2023

5. Hickory Rd @ Oak Crest Rd

A.M. Peak Hour

Condition	Oak Crest Road Northbound				Sequoyah School Main Driveway Southbound				Hickory Road Eastbound				Hickory Road Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing 2022 Traffic Counts:	11	1	42	54	74	1	46	121	208	762	8	978	26	376	166	568
Growth Factor (%):	1	1	1		1	1	1		1	1	1		1	1	1	
No-Build 2024 Volumes:	11	1	43	55	75	1	47	123	212	777	8	997	27	384	169	580
Shifted Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total New Trips:	0	0	0	0	0	0	0	0	0	2	0	2	0	5	0	5
Future 2024 Traffic Volumes:	11	1	43	55	75	1	47	123	212	779	8	999	27	389	169	585

P.M. Peak Hour

Condition	Oak Crest Road Northbound				Sequoyah School Main Driveway Southbound				Hickory Road Eastbound				Hickory Road Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing 2022 Traffic Counts:	16	3	22	41	15	1	26	42	52	672	10	734	16	785	31	832
Growth Factor (%):	1	1	1		1	1	1		1	1	1		1	1	1	
No-Build 2024 Volumes:	16	3	22	41	15	1	27	43	53	685	10	748	16	801	32	849
Shifted Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total New Trips:	0	0	0	0	0	0	0	0	0	5	0	5	0	4	0	4
Future 2024 Traffic Volumes:	16	3	22	41	15	1	27	43	53	690	10	753	16	805	32	853

Dismissal Peak Hour

Condition	Oak Crest Road Northbound				Sequoyah School Main Driveway Southbound				Hickory Road Eastbound				Hickory Road Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing 2022 Traffic Counts:	8	0	17	25	70	1	76	147	30	469	16	515	19	627	26	672
Growth Factor (%):	1	1	1		1	1	1		1	1	1		1	1	1	
No-Build 2024 Volumes:	8	0	17	25	71	1	78	150	31	478	16	525	19	640	27	686
Shifted Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total New Trips:	0	0	0	0	0	0	0	0	0	5	0	5	0	5	0	5
Future 2024 Traffic Volumes:	8	0	17	25	71	1	78	150	31	483	16	530	19	645	27	691

22-080 Hickory Flat Adult Community - Cherokee County, GA
Traffic Volumes

A&R Engineering
 March 2023

6.E Cherokee Dr @ RIRO Drwy

A.M. Peak Hour

Condition	E Cherokee Drive Northbound					E Cherokee Drive Southbound					Site Driveway (RIRO) Eastbound					Hickory Road Westbound			
	L	T	R	Tot		L	T	R	Tot		L	T	R	Tot		L	T	R	Tot
Existing 2022 Traffic Counts:	0	605	0	605		0	493	0	493		0	0	0	0		0	0	0	0
Growth Factor (%):	1	1	1			1	1	1			1	1	1			1	1	1	
No-Build 2024 Volumes:	0	617	0	617		0	503	0	503		0	0	0	0		0	0	0	0
Shifted Trips:	0	-16	0	-16		0	-4	0	-4		0	0	0	0		0	0	0	0
Total New Trips:	0	6	0	6		0	3	0	3		0	0	0	0		0	0	0	0
Future 2024 Traffic Volumes:	0	607	0	607		0	502	0	502		0	0	0	0		0	0	0	0

P.M. Peak Hour

Condition	E Cherokee Drive Northbound					E Cherokee Drive Southbound					Site Driveway (RIRO) Eastbound					Hickory Road Westbound			
	L	T	R	Tot		L	T	R	Tot		L	T	R	Tot		L	T	R	Tot
Existing 2022 Traffic Counts:	0	568	0	568		0	615	0	615		0	0	0	0		0	0	0	0
Growth Factor (%):	1	1	1			1	1	1			1	1	1			1	1	1	
No-Build 2024 Volumes:	0	579	0	579		0	627	0	627		0	0	0	0		0	0	0	0
Shifted Trips:	0	-7	0	-7		0	-6	0	-6		0	0	0	0		0	0	0	0
Total New Trips:	0	5	0	5		0	6	0	6		0	0	0	0		0	0	0	0
Future 2024 Traffic Volumes:	0	577	0	577		0	627	0	627		0	0	0	0		0	0	0	0

Dismissal Peak Hour

Condition	E Cherokee Drive Northbound					E Cherokee Drive Southbound					Site Driveway (RIRO) Eastbound					Hickory Road Westbound			
	L	T	R	Tot		L	T	R	Tot		L	T	R	Tot		L	T	R	Tot
Existing 2022 Traffic Counts:	0	479	0	479		0	534	0	534		0	0	0	0		0	0	0	0
Growth Factor (%):	1	1	1			1	1	1			1	1	1			1	1	1	
No-Build 2024 Volumes:	0	489	0	489		0	545	0	545		0	0	0	0		0	0	0	0
Shifted Trips:	0	-5	0	-5		0	-11	0	-11		0	0	0	0		0	0	0	0
Total New Trips:	0	6	0	6		0	6	1	7		0	0	0	0		0	0	0	0
Future 2024 Traffic Volumes:	0	490	0	490		0	540	1	541		0	0	0	0		0	0	0	0

22-080 Hickory Flat Adult Community - Cherokee County, GA
Traffic Volumes

A&R Engineering
 March 2023

7. E Cherokee Dr @ Site Drwy 3

A.M. Peak Hour

Condition	E Cherokee Drive Northbound					E Cherokee Drive Southbound					Site Driveway 3 Eastbound					- Westbound			
	L	T	R	Tot		L	T	R	Tot		L	T	R	Tot		L	T	R	Tot
Existing 2022 Traffic Counts:	0	605	0	605		0	493	0	493		0	0	0	0		0	0	0	0
Growth Factor (%):	1	1	1			1	1	1			1	1	1			1	1	1	
No-Build 2024 Volumes:	0	617	0	617		0	503	0	503		0	0	0	0		0	0	0	0
Shifted Trips:	16	-16	0	0		0	-4	0	-4		0	0	4	4		0	0	0	0
Total New Trips:	1	2	0	3		0	2	2	4		3	0	1	4		0	0	0	0
Future 2024 Traffic Volumes:	17	603	0	620		0	501	2	503		3	0	5	8		0	0	0	0

P.M. Peak Hour

Condition	E Cherokee Drive Northbound					E Cherokee Drive Southbound					Site Driveway 3 Eastbound					- Westbound			
	L	T	R	Tot		L	T	R	Tot		L	T	R	Tot		L	T	R	Tot
Existing 2022 Traffic Counts:	0	568	0	568		0	615	0	615		0	0	0	0		0	0	0	0
Growth Factor (%):	1	1	1			1	1	1			1	1	1			1	1	1	
No-Build 2024 Volumes:	0	579	0	579		0	627	0	627		0	0	0	0		0	0	0	0
Shifted Trips:	7	-7	0	0		0	-6	0	-6		0	0	6	6		0	0	0	0
Total New Trips:	1	2	0	3		0	3	3	6		3	0	1	4		0	0	0	0
Future 2024 Traffic Volumes:	8	574	0	582		0	624	3	627		3	0	7	10		0	0	0	0

Dismissal Peak Hour

Condition	E Cherokee Drive Northbound					E Cherokee Drive Southbound					Site Driveway 3 Eastbound					- Westbound			
	L	T	R	Tot		L	T	R	Tot		L	T	R	Tot		L	T	R	Tot
Existing 2022 Traffic Counts:	0	479	0	479		0	534	0	534		0	0	0	0		0	0	0	0
Growth Factor (%):	1	1	1			1	1	1			1	1	1			1	1	1	
No-Build 2024 Volumes:	0	489	0	489		0	545	0	545		0	0	0	0		0	0	0	0
Shifted Trips:	5	-5	0	0		0	-11	0	-11		0	0	11	11		0	0	0	0
Total New Trips:	1	2	0	3		0	3	4	7		4	0	1	5		0	0	0	0
Future 2024 Traffic Volumes:	6	486	0	492		0	537	4	541		4	0	12	16		0	0	0	0

22-080 Hickory Flat Adult Community - Cherokee County, GA
Traffic Volumes

A&R Engineering
 March 2023

8.E Cherokee Dr @ Site Drwy 4

A.M. Peak Hour

Condition	E Cherokee Drive Northbound				E Cherokee Drive Southbound				Site Driveway 4 Eastbound				- Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing 2022 Traffic Counts:	0	605	0	605	0	493	0	493	0	0	0	0	0	0	0	0
Growth Factor (%):	1	1	1		1	1	1		1	1	1		1	1	1	
No-Build 2024 Volumes:	0	617	0	617	0	503	0	503	0	0	0	0	0	0	0	0
Shifted Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total New Trips:	1	1	0	2	0	2	1	3	2	0	1	3	0	0	0	0
Future 2024 Traffic Volumes:	1	618	0	619	0	505	1	506	2	0	1	3	0	0	0	0

P.M. Peak Hour

Condition	E Cherokee Drive Northbound				E Cherokee Drive Southbound				Site Driveway 4 Eastbound				- Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing 2022 Traffic Counts:	0	568	0	568	0	615	0	615	0	0	0	0	0	0	0	0
Growth Factor (%):	1	1	1		1	1	1		1	1	1		1	1	1	
No-Build 2024 Volumes:	0	579	0	579	0	627	0	627	0	0	0	0	0	0	0	0
Shifted Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total New Trips:	2	1	0	3	0	1	2	3	2	0	1	3	0	0	0	0
Future 2024 Traffic Volumes:	2	580	0	582	0	628	2	630	2	0	1	3	0	0	0	0

Dismissal Peak Hour

Condition	E Cherokee Drive Northbound				E Cherokee Drive Southbound				Site Driveway 4 Eastbound				- Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing 2022 Traffic Counts:	0	479	0	479	0	534	0	534	0	0	0	0	0	0	0	0
Growth Factor (%):	1	1	1		1	1	1		1	1	1		1	1	1	
No-Build 2024 Volumes:	0	489	0	489	0	545	0	545	0	0	0	0	0	0	0	0
Shifted Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total New Trips:	2	1	0	3	0	2	3	5	2	0	1	3	0	0	0	0
Future 2024 Traffic Volumes:	2	490	0	492	0	547	3	550	2	0	1	3	0	0	0	0

DRAFT



COUNCIL AGENDA REPORT

FROM: Nancy Moon

CC: City Clerk
Public Information

SUBJECT: **D-01-2023**, applicant requests deannexation of 1.71 +/- acres located off of Peardon Court, Holly Springs, GA, tax parcel 120A of tax plat 15N20

DATE: April 26, 2023

COUNCIL MEETING DATE: May 1, 2023

STAFF ANALYSIS

Applicants/Owners, Michael J. Griffith and Shannon Griffith, have requested that property located at 722 Peardon Court, parcel 120A of tax plat 15N20, be deannexed from the corporate boundaries of the City of Holly Springs. Per State of Georgia requirements, a copy of a resolution from Cherokee County consenting to the de-annexation has been attached.

The property is part of the planned development, Morgan's Run, and is zoned Traditional Neighborhood Development. The owner of this property, at that time, lived at this address and left his lot as a larger lot. The subdivision is completely built and this lot was sold after development in 2021. The applicant/current owner wishes to deannex from the City.

The Cherokee County Board of Commissioners heard this case on February 21, 2023 and voted unanimously to accept the property back into unincorporated County. They also placed a 60-day moratorium on the property, if the City approves the deannexation, to allow time to rezone the property to an appropriate zoning category. The County response letter and staff report are included within this packet.

Per [O.C.G.A. § 36-35-2](#), should this property be deannexed, it shall not be subject to annexation for a period of three years from the date of deannexation.

CONCURRENCES

N/A

FISCAL IMPACT

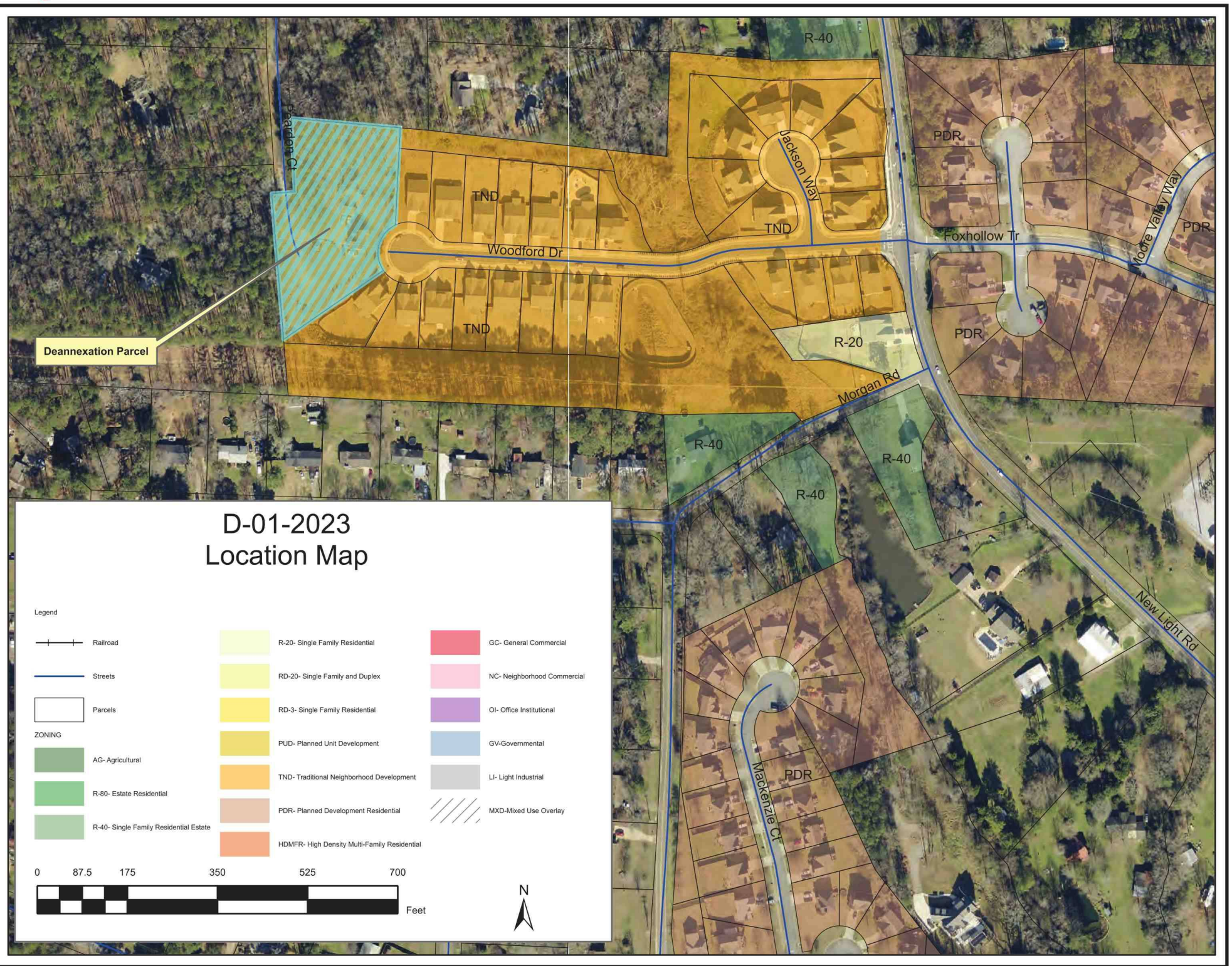
Loss of City Tax Revenue

ALTERNATIVES

Denial

ATTACHMENTS

Location Map Application
Deed County Resolution
Copy of City Tax Bill



DRAFT



**CITY OF HOLLY SPRINGS, GEORGIA
PETITION OF LANDOWNER REQUESTING DEANNEXATION**

The undersigned owners of the property described in Appendix A [***attach a legal description or other identification of the property and label it Appendix A***] hereby petition the City of Holly Springs, Georgia and request that said City deannex the described property from the city limits of said City.

Said owners certify that they are the owners of all of the land identified in Appendix A and that there are no other owners or co-owners of any such property [***all owners sign below and attach a warranty deed or other conveyance of the property, verifying ownership and label it Appendix B***].

Such owners further certify that the governing authority of Cherokee County has approved such deannexation. A certified copy of the resolution of said county approving deannexation is attached hereto as Appendix B [***attach a certified copy of the County resolution approving deannexation and label it Appendix C***].

Such owners further certify that the deannexation of the described property will not result in the creation of an unincorporated island in violation of Georgia law.

Owners:

Name: Michael J. Griffith
Address: 722 Peardon Court, Canton
Telephone: 678-334-9882 30115

Name: Shannon Griffith
Address: 722 Peardon Court, Canton
Telephone: 770-894-1547 30115

Name: _____

Name: _____

Address: _____

Address: _____

Telephone: _____

Telephone: _____

(Add Additional Sheets, as Necessary)

Please submit to the City of Holly Springs Community Development Department, 3235 Holly Springs Parkway, Holly Springs, GA 30115; (770) 345-5533

Deannexation Fees

Total Acreage of Deannexation Area	Fee
0-5	\$500
6-50	\$1000
51+	\$2,500 plus \$10 per acre over 50

PLAT BOOK:118 PG:2345
 Filed: 07/11/2019 03:44 PM
 Clerk File Number: 28-2019-000443
 Rec: 58.00
 Patty Baker, Clerk of Superior Court
 Cherokee County, GA

FLING INFORMATION BOX

Plat
 Recorded 7/11/2019 3:48 PM
 Patty Baker
 Clerk of Superior Court
 Cherokee County, GA
 Book 118 Page 2345
 Participant IDs: 4546886099

WATER AND SEWER CERTIFICATE

CERTIFICATE OF CHEROKEE COUNTY WATER AND SEWAGE AUTHORITY PURSUANT TO ALL REQUIREMENTS OF THE CHEROKEE WATER AND SEWAGE AUTHORITY HAVING BEEN FULFILLED, THIS FINAL PLAT IS APPROVED FOR RECORDING.

SEE ORIGINAL SIGNATURES - PLAT BOOK 118 PAGE 1438
 CHEROKEE COUNTY WATER AND SEWAGE AUTHORITY

STATION	TRANSIT	ANGLE	CHORD	BENCHMARK
1	120.00	120.00	120.00	120.00
2	120.00	120.00	120.00	120.00
3	120.00	120.00	120.00	120.00
4	120.00	120.00	120.00	120.00
5	120.00	120.00	120.00	120.00

SITE NOTE

THE LOWEST FINISHED FLOOR ELEVATIONS (INCLUDING UNFINISHED BASEMENTS) FOR LOTS UPSTREAM OF THE CULVERT ROAD CROSSING SHALL BE NO LESS THAN ONE FOOT ABOVE THE LOW POINT IN THE ROAD.

LEGEND & ABBREVIATIONS

— FENCE	— STORM SEWER EASEMENT	— TRANSFORMER BOX (TMB)
— SANITARY SEWER	— CALCULATED POINT	— FLAT POLE (FP)
— SANITARY SEWER SERVICE	— FIRE HYDRANT (FH)	— WATER VALVE (WV)
— WATER LINE	— WATER METER (WM)	— LIGHT POLE (LP)
— UNDERGROUND POWER LINE	— GAS METER (GM)	— GAS VALVE (GV)
— OVERHEAD POWER LINE	— HEAD WALL (HW)	— CURB AND GUTTER (C&G)
— TELEPHONE LINE	— SPOT ELEVATION	— ELECTRIC METER (EM)
— FIBER OPTIC	— POWER POLE (PP)	— STON
— CABLE TELEVISION	— BENCHMARK	— CLEANDOUT (CO)
— TOPOGRAPHIC CONTOUR	— SS MANHOLE (SM)	
— PROPERTY LINE		
— CATCH BASIN (CWB)		
— DRAIN INLET (DI)		
— JUNCTION BOX (JB)		

FINAL PLAT SHEET 1

N/T
 TONYA BRUCE
 DE 5019 PG 213
 PIN 15-0267-0014

N/T
 CHARLES W. KELLEY &
 TONYA BRUCE
 DE 5019 PG 213
 PIN 15-0267-0014

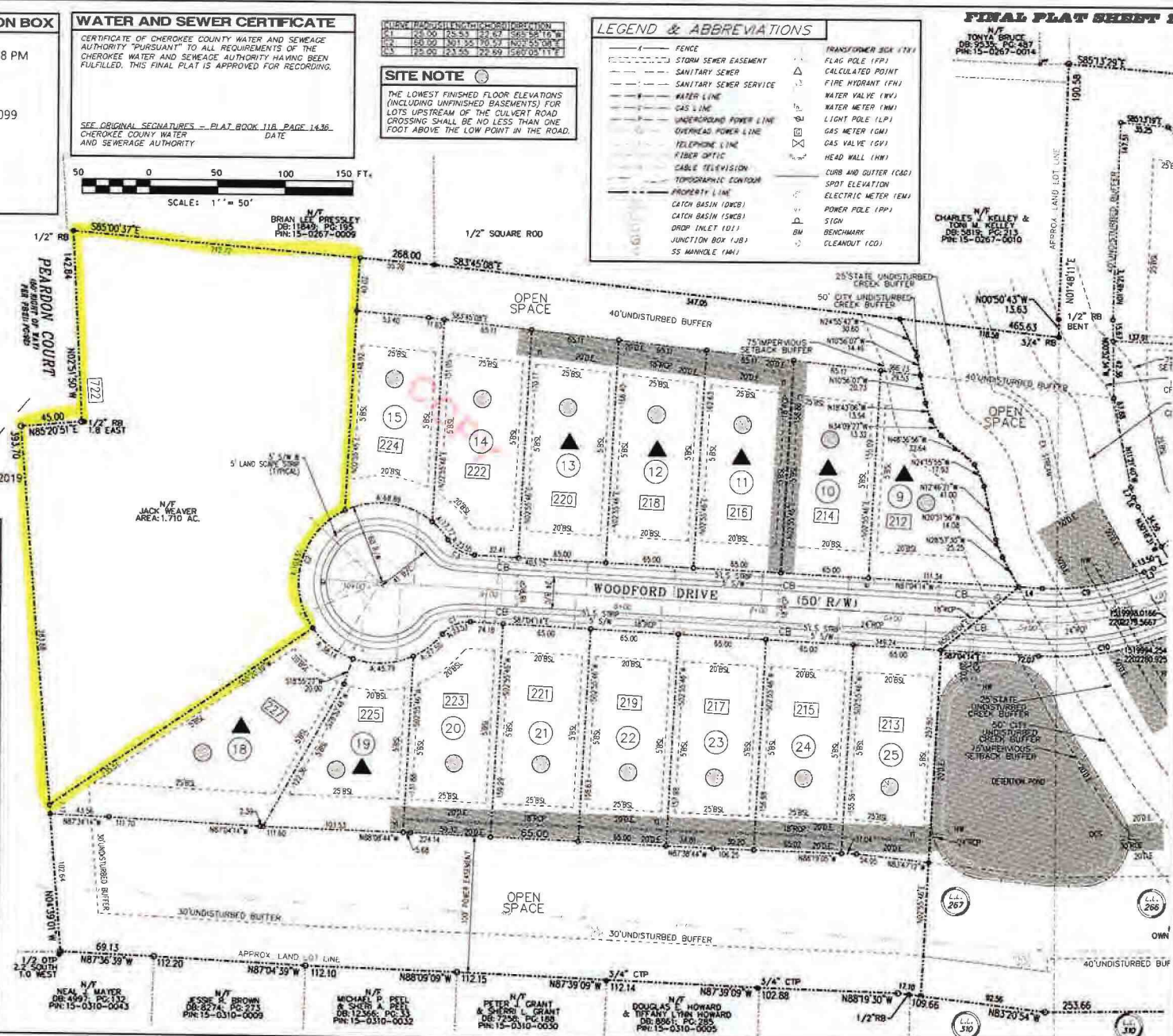


NOTE:
 ALL PROPERTY CORNERS ARE TO
 1/2" REBAR WITH CAP UNLESS
 OTHERWISE NOTED

FINAL PLAT
 FOR
MORGAN'S RUN S/D
PHASE 2
 LOCATED IN L.L.'S 266, 267, & 311
 15th DISTRICT, 2nd SECTION
 CITY OF HOLLY SPRINGS
 CHEROKEE COUNTY, GA

DATE	REVISIONS
1/3/20/2018	1/27/2019 -
SCALE	1" = 50'
DRAWN BY	ADDRESSES
CHECKED BY	RTS
FIELD CREW	1/10/18

NORTHPOINT
 LAND SURVEYING
 801 WINTHROP DRIVE
 KENNESAW, GEORGIA 30142
 PHONE (770) 536-5589
 WWW.NORTHPOINTLANDSURVEYING.COM





Rec: \$25.00 TRANSFER TAX \$400.00

Patty Baker, Clerk of Superior Court - Cherokee County, GA

ParticipantIDs: 1156462359 SubmitterID: 0466245412

Return Recorded Document to:

SELLERS & WARREN, P.C.

ATTORNEYS AT LAW

115 Woodland Way

Canton, GA 30114

LIMITED WARRANTY DEED

STATE OF GEORGIA
COUNTY OF CHEROKEE

File #: C215943

THIS INDENTURE made this **23rd** day of **July, 2021**, between **JACK E. WEAVER**, of the County of **CHEROKEE**, State of **Georgia**, as party or parties of the first part, hereinunder called Grantor, and **MICHAEL J. GRIFFITH and SHANNON GRIFFITH**, as joint tenants with right of survivorship and not as tenants in common, as party or parties of the second part, hereinafter called Grantee (the words "Grantor" and "Grantee" to include their respective heirs, successors and assigns where the context requires or permits).

WITNESSETH that: Grantor, for and in consideration of the sum of **TEN AND NO/100 DOLLARS (\$10.00)** and other good and valuable considerations in hand paid, at and before the sealing and delivery of these presents, the receipt whereof is hereby acknowledged, has granted, bargained, sold, aliened, conveyed and confirmed, and by these presents does grant, bargain, sell, alien, convey and confirm unto the said Grantee:

SEE EXHIBIT "A" ATTACHED HERETO AND MADE A PART HEREOF.

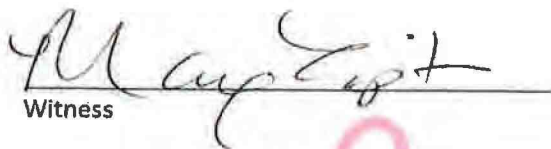
This Deed is given subject to all easements and restrictions of record.

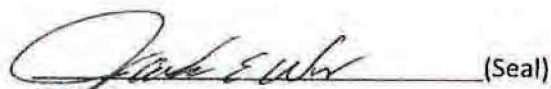
TO HAVE AND TO HOLD the said tract or parcel of land, together with all and singular the rights, members and appurtenances thereof, to the same being, belonging or in anywise appertaining, to the only proper use, benefit and behoof of the said Grantee, forever in **FEE SIMPLE**.

AND THE SAID party of the first part, for its heirs, executors and administrators, will warrant and forever defend the right and title to the above described property, unto the said party of the second part, its heirs, successors and/or assigns, against the claims of all persons owning, holding or claiming by, through or under the said party of the first part.

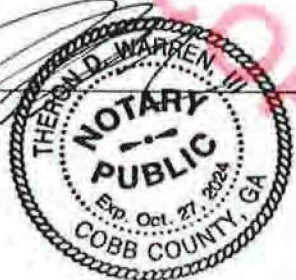
IN WITNESS WHEREOF, Grantor has hereunto set Grantor's hand and seal this day and year first above written.

Signed, sealed and delivered in the presence of:


Witness

 (Seal)
JACK E. WEAVER


Notary Public



Rec: \$25.00 TRANSFER TAX \$400.00

Patty Baker, Clerk of Superior Court - Cherokee County, GA

ParticipantIDs: 1156462359 SubmitterID: 0466245412

EXHIBIT "A"

ALL TRACT OR PARCEL OF LAND LYING AND BEING IN LAND LOT 267 OF THE 15TH DISTRICT, 2ND SECTION, CITY OF HOLLY SPRINGS, CHEROKEE COUNTY, GEORGIA, AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS: BEGIN AT A POINT LOCATED AT THE SOUTHEAST TERMINUS OF PEARDON COURT (50 FOOT RIGHT OF WAY) (SAID POINT BEING LOCATED 1.8 FEET WEST OF A POINT MARKED BY A ½ INCH REBAR FOUND) FROM SAID POINT OF BEGINNING, RUNNING THENCE NORTH 02 DEGREES 51 MINUTES 50 SECONDS WEST (AND ALONG THE EAST RIGHT OF WAY LINE OF PEARDON COURT) 142.84 FEET TO A POINT MARKED BY A ½ INCH REBAR; RUNNING THENCE SOUTH 85 DEGREES 00 MINUTES 37 SECONDS EAST 212.72 FEET TO A POINT AND CORNER; RUNNING THENCE SOUTH 02 DEGREES 55 MINUTES 46 SECONDS WEST 40.02 FEET TO A POINT; RUNNING THENCE SOUTH 02 DEGREES 55 MINUTES 46 SECONDS WEST (AND ALONG THE WEST LINE OF LOT 15, MORGAN'S RUN SUBDIVISION PHASE 2) 148.92 FEET TO A POINT LOCATED ON THE NORTHERLY RIGHT OF WAY LINE OF THE CUL-DE-SAC OF WOODFORD DRIVE (50 FOOT RIGHT OF WAY); RUNNING THENCE SOUTHWESTERLY, THENCE SOUTHERLY, THENCE SOUTHEASTERLY (AND ALONG THE RIGHT OF WAY LINE OF THE CUL-DE-SAC OF WOODFORD DRIVE) A DISTANCE OF 103.51 FEET TO A POINT LOCATED AT THE NORTHWEST CORNER OF LOT 18 MORGAN'S RUN SUBDIVISION PHASE 2; RUNNING THENCE SOUTH 55 DEGREES 20 MINUTES 39 SECONDS WEST (AND ALONG THE WEST LINE OF SAID LOT 18) 235.51 FEET TO A POINT AND CORNER; RUNNING THENCE NORTH 04 DEGREES 39 MINUTES 01 SECONDS WEST 283.88 FEET TO A POINT LOCATED AT THE SOUTHWEST TERMINUS OF PEARDON COURT; RUNNING THENCE NORTH 85 DEGREES 20 MINUTES 51 SECONDS EAST (AND ALONG THE TERMINUS OF PEARDON COURT) A DISTANCE OF 45 FEET TO THE POINT OF BEGINNING.

THE ABOVE DESCRIBED TRACT OR PARCEL OF LAND IS MORE PARTICULARLY SHOWN AS A 1.710 ACRE TRACT ON, AND DELINEATED ACCORDING TO, THAT CERTAIN PLAT OF SURVEY TITLED "FINAL PLAT FOR MORGAN'S RUN S/D PHASE 2" DATED MARCH 28, 2018, REVISED JANUARY 27, 2019 BY NORTH POINT LAND SURVEYING, BEARING THE SEAL OF RYAN M. SCHULDI, GEORGIA REGISTERED LAND SURVEYOR NO. 3219, WHICH SAID PLAT OF SURVEY IS RECORDED AT PLAT BOOK 118, PAGE 2345, CHEROKEE COUNTY, GEORGIA DEED RECORDS AND WHICH SAID PLAT IS INCORPORATED HEREIN BY THIS REFERENCE THERETO FOR A MORE COMPLETE DESCRIPTION OF THE COURSES AND DISTANCES, METES AND BOUNDS OF THE LAND DESCRIBED HEREIN.

✓

PT-61 (Rev. 2/18)

To be filed in **CHEROKEE COUNTY**

PT-61 028-2021-009856

SECTION A - SELLER'S INFORMATION (Do not use agent's information)				SECTION C - TAX COMPUTATION	
SELLER'S LAST NAME Weaver	FIRST NAME Jack	MIDDLE E.	Exempt Code If no exempt code enter NONE		NONE
MAILING ADDRESS (STREET & NUMBER) 722 Peardon Ct.			1. Actual Value of consideration received by seller Complete Line 1A if actual value unknown		\$400,000.00
CITY, STATE / PROVINCE / REGION, ZIP CODE, COUNTRY Canton, GA 30115 USA		DATE OF SALE 7/23/2021	1A. Estimated fair market value of Real and Personal property		\$0.00
SECTION B - BUYER'S INFORMATION (Do not use agent's information)			2. Fair market value of Personal Property only		\$0.00
BUYER'S LAST NAME Griffith	FIRST NAME Michael	MIDDLE J.	3. Amount of liens and encumbrances not removed by transfer		\$0.00
MAILING ADDRESS (Must use buyer's address for tax billing & notice purposes) 722 Peardon Ct.			4. Net Taxable Value (Line 1 or 1A less Lines 2 and 3)		\$400,000.00
CITY, STATE / PROVINCE / REGION, ZIP CODE, COUNTRY Canton, GA 30115 USA		Check Buyers Intended Use () Residential () Commercial () Agricultural () Industrial	5. TAX DUE at .10 per \$100 or fraction thereof (Minimum \$1.00)		\$400.00
SECTION D - PROPERTY INFORMATION (Location of Property (Street, Route, Hwy, etc))					
HOUSE NUMBER & EXTENSION (ex 285A) 722		PRE-DIRECTION, STREET NAME AND TYPE, POST DIRECTION Peardon Court			SUITE NUMBER
COUNTY CHEROKEE		CITY (IF APPLICABLE) Holly Springs	MAP & PARCEL NUMBER 15N20 120A		ACCOUNT NUMBER
TAX DISTRICT	GMD	LAND DISTRICT 15th	ACRES 1.71	LAND LOT 267	SUB LOT & BLOCK
SECTION E - RECORDING INFORMATION (Official Use Only)					
DATE	DEED BOOK	DEED PAGE		PLAT BOOK	PLAT PAGE

ADDITIONAL BUYERS
Griffith, Shannon

CITY OF HOLLY SPRINGS

PO BOX 990
 HOLLY SPRINGS, GA 30142-0990
 (770)345-5536



2022 PROPERTY TAX

PROPERTY INFORMATION

MAP/PARCEL/LOT: 15N20- 120 A
 OWNER NAME: GRIFFITH MICHAEL J &
 LOCATION: 722 PEARDON CT
 BILLING DATE: 04/24/23
 DUE DATE: 12/20/22
 LEGAL DESCRIPTION: LOT 16 MORGANS RUN PH 2

AMOUNT DUE

LAST PAYMENT: DATE: 12/06/22 AMOUNT: 1,342.96
 PRIOR BALANCE: 1,342.96-
 CURRENT CHARGES: 1,342.96
 PENALTY: 0.00
 TOTAL DUE: 0.00

PROPERTY VALUE ASSESSMENTS

FAIR MARKET LAND VALUE: 51,000
 FAIR MARKET IMPROVEMENT VALUE: 423,343
 LAND VALUE: 20,400
 IMPROVEMENT VALUE: 169,337
 CITY TAX NET VALUE: 189,737
 FIRE TAX NET VALUE: 189,737

EXEMPTIONS

CURRENT CHARGES DETAIL

DESCRIPTION	UNITS	RATE	AMOUNT
Real Prop City Tax	1.00	3.841000	728.78
Real Prop Fire Tax	1.00	2.984000	566.18
Stormwater Utility	1.00	48.000000	48.00

SPECIAL MESSAGE

If you have sold this property, forward the bill to the new owner and fax a copy of the settlement statement to 770-345-0209. If you have an escrow, forward the tax bill to your mortgage company as soon as possible.

Pursuant to state law (O.C.G.A. 48-2-40) interest will be added to this bill monthly if the balance is not paid by the due date. Pursuant to state law (O.C.G.A. 48-2-44) penalties will also be added to the unpaid balance beginning 120 days after the due date.

Please see our website, www.hollyspringsga.us, regarding senior exemption qualifications. Questions regarding county exemptions, assessments or the fair market value of your property should be directed to the Cherokee County Assessor's office at 678-493-6120.

PAYMENT COUPON - PLEASE DETACH AND RETURN THIS PORTION ALONG WITH YOUR PAYMENT

ACCOUNT INFORMATION

MAP/PARCEL/LOT: 15N20- 120 A ACCOUNT ID: 2863
 LOCATION: 722 PEARDON CT
 TAX YEAR: 2022

AMOUNT DUE

CURRENT DUE: 0.00
 PENALTY: 0.00
 TOTAL DUE: 0.00



AMOUNT ENCLOSED

MAKE CHECKS PAYABLE TO:

GRIFFITH MICHAEL J &
 GRIFFITH SHANNON
 722 PEARDON CT
 CANTON, GA 30115

CITY OF HOLLY SPRINGS
 PO BOX 990
 HOLLY SPRINGS, GA 30142-0990

**STATE OF GEORGIA
COUNTY OF CHEROKEE**

RESOLUTION NO. 2023-R-025

**A RESOLUTION OF THE CHEROKEE COUNTY BOARD OF COMMISSIONERS TO
AUTHORIZE A DEANNEXATION OF PROPERTY WITHIN THE BOUNDARIES OF
THE CITY OF HOLLY SPRINGS LOCATED AT 722 PEARDON COURT, CANTON,
GEORGIA 30115; AND FOR OTHER PURPOSES.**

WHEREAS, the Constitution of the State of Georgia, approved by the voters of the State in November of 1982, and effective July 1, 1983, provides in Article IX, Section II, Paragraph I thereof, that the governing authority of the County may adopt clearly reasonable ordinances, resolutions, and regulations; and

WHEREAS, pursuant to O.C.G.A. § 36-36-22, municipalities have the authority to deannex land within the existing corporate limits thereof upon the following:

- 1) the written and signed application of all the owners of the land in question; and
- 2) the adoption of a resolution by the governing authority of the county in which such property is located consenting to such deannexation; and

WHEREAS, the owners of real property located at 722 Peardon Court, Canton, Georgia 30115 and known in the records of the Cherokee County Tax Assessor as parcel 15N20120A (hereinafter "Property"), desire to have said Property deannexed from the City of Holly Springs and have said Property become part of unincorporated Cherokee County, Georgia; and

WHEREAS, the owners of said property have made a request to the Board of Commissioners of Cherokee County, Georgia for consent to the proposed deannexation of said Property; and

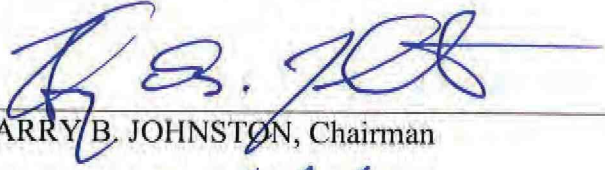
WHEREAS, the Board of Commissioners hereby finds that the public health, safety, and welfare will be served by the deannexation of said Property.

[this portion intentionally left blank]

NOW, THEREFORE, BE IT RESOLVED THAT the Cherokee County Board of Commissioners, and it is hereby so resolved by the authority of the same, that the Cherokee County Board of Commissioners hereby consents to the proposed deannexation of 722 Peardon Court, Canton, Georgia 30115 from the corporate boundaries of the City of Holly Springs, and hereby directs the County Clerk to provide a certified copy of this resolution to the owners of the Property and to the appropriate officials for the City of Holly Springs.

SO RESOLVED, APPROVED, AND ADOPTED this 21st day of February, 2023.

By:


HARRY B. JOHNSTON, Chairman

Attest:


CHRISTY BLACK, County Clerk



Cherokee
County
1831
GEORGIA
PLANNING AND ZONING

February 24, 2023

Michael and Shannon Griffith
722 Peardon Court
Canton, GA 30115

RE: 722 Peardon Court De-annexation Request

Dear Mr. and Ms. Griffith,

The de-annexation application for 722 Peardon Court was on the agenda of the regular meeting of the Cherokee County Board of Commissioners on February 21, 2023. The case involves a 1.71 +/- acre parcel (15N20 120A). The property is currently zoned TND within the City of Holly Springs and is a single-family residence. On February 21, 2023, the Board of Commissioners voted unanimously to accept the de-annexation back into the County.

Additionally, the Board of Commissioner approved a vote that contingent upon the City's approval, a 60-day moratorium is placed on the property while it is being rezoned to the recommended R-40 County zoning.

Feel free to contact to me if you have any questions.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Kevin Turner', with a large, sweeping flourish extending to the right.

Kevin Turner, AICP
Deputy Director



STAFF REVIEW & ANALYSIS OF DEANNEXATION REQUEST

Final 2/10/2023

City	Holly Springs
Case Number D-01-2023	Applicant: Michael and Shannon Griffith
Receipt of Deannexation Application	2/6/2023
Application Deemed Complete	2/6/2023
Next Board of Commissioners Meeting	2/21/2023

	Yes	No
Is the property to be deannexed contiguous to county jurisdictional boundary?	X	
Holly Springs Future Development Map Designation	Suburban Living	
Surrounding / Contiguous City Future Development Map	Suburban Neighborhood	
Surrounding County Future Development Map	Suburban Living	
Does this annexation create an "island" of incorporated land?		X
Existing Holly Springs Zoning	TND	
Recommended County Zoning	R-60	

Comments:

The applicant wishes to deannex from the City of Holly Springs back to unincorporated Cherokee County. The deannexation property is at 722 Peardon Court, (15N20 120A) and consists of 1.71 +/- acres.

It is surrounded on two sides by Holly Springs properties zoned TND and unincorporated County properties to the west and north that are zoned R-40. Based on the current use of the property (residential) and the surrounding uses, the County recommends a zoning designation of R-40.

**GIRMA INSURANCE PROGRAM
with Pollution and Ancillary Coverages**

Comparative Analysis for May 1, 2023 Renewal

	2022-2023			2023-2024			Cost Comparison		
	Current Program	Current Rating Basis	Current Premium	Proposed Program	Proposed Rating Basis	Proposed Premium	Exposure Change	Premium Change	Net Rate Change
Program Details	Current Program	Current Rating Basis	Current Premium	Proposed Program	Proposed Rating Basis	Proposed Premium	Exposure Change	Premium Change	Net Rate Change
Pollution Liability (GIRMA)			\$13,519			\$24,320			
Each Incident Limit	\$1,000,000	12,701	from 8/15/22 to 5/1/23	\$1,000,000	\$16,213		27.7%	27.7%	0.0%
Aggregate Limit	\$12,000,000	Population		\$12,000,000	Population				
Deductible	\$1,000			\$1,000					
Mold Matter Remediation	\$1,000,000			\$1,000,000					
Disinfection Event Expenses	\$50,000	Expenses Sublimit \$250K		\$50,000	Expenses Sublimit \$250K				
		Deductible Each Incident			Deductible Each Incident				
Pollution Annualized Premium			\$19,052			\$24,320		27.7%	
Program Details	Current Program	Current Rating Basis	Current Premium	Proposed Program	Proposed Rating Basis	Proposed Premium	Exposure Change	Premium Change	Net Rate Change
Municipal Workforce AD&D (CV Starr)			\$2,000			\$2,000	13.3%	0.0%	-13.3%
Limit	\$50,000	45		\$50,000	51				
Deductible	\$0	Employees		\$0	Employees				
Off-Duty Liability (Lexington Ins. Co.)			\$12,716			\$14,624	5.3%	15.0%	9.7%
Limit	\$1,000,000	38		\$1,000,000	40				
Deductible	\$10,000	Officers		\$10,000	Officers				
Excess Crime (Hanover Ins./Allmerica)			\$2,500			\$2,651	9.7%	6.0%	-3.6%
Limit	\$1,500,000	62		\$1,500,000	68				
Deductible	\$500,000	Employees		\$500,000	Employees				
Excess Cyber Liability (Berkley Ins.)			\$25,285			\$27,814	-4.8%	10.0%	14.8%
Limit	\$1,000,000	\$21,000,000		\$1,000,000	\$20,000,000				
Deductible	\$250,000	Revenue		\$250,000	Revenue				
Terrorism & Sabotage (Hiscox, Inc.)			\$1,586			\$1,367	-17.9%	-13.8%	4.1%
Limit	\$4,274,094	\$4,274,094		\$3,507,494	\$3,507,494				
Deductible	\$5,000	TIV		\$5,000	TIV				
Ancillary Lines Total			\$44,087			\$48,456		9.9%	

A RESOLUTION OF THE MAYOR AND CITY COUNCIL OF THE CITY OF HOLLY SPRINGS, GEORGIA, DECLARING CERTAIN PROPERTY AS SURPLUS AND AUTHORIZING ITS SALE OR DISPOSAL

WHEREAS, it has been determined that the City has no further use of these certain item;
and

WHEREAS, the City Council may determine that these items are surplus property; and

WHEREAS, the fair market value, if any, is determined for the surplus property and its disposal will be for the common benefit; and,

WHEREAS, the City Manager or his designee will oversee the sale or disposal of this item; and,

NOW THEREFORE, IT IS HEREBY RESOLVED that the Mayor and City Council of the City of Holly Springs hereby approve the surplus and authorize the sale or disposal of the items described in attached Exhibit "A":

This Resolution is adopted this 1st day of May 2023.

CITY OF HOLLY SPRINGS

Steven W. Miller, Mayor

Attest:

Karen Norred, City Clerk
(Seal)

Exhibit A

Year	Make	Model	VIN
	Exmark	Laser Z	314653112
2016	Dodge	Charger	2C3CDXAG2GH155826
2017	Dodge	Charger	2C3CDXAT5HH581798

DRAFT

AN ORDINANCE TO AMEND THE CODE OF THE CITY OF HOLLY SPRINGS, GEORGIA, AS AMENDED; TO AMEND CHAPTER 66 – STREETS, SIDEWALKS AND OTHER PUBLIC PLACES, ARTICLE IV – PARKS AND RECREATION FACILITIES; SECTION 66-121 – USE OF FACILITIES AND SECTION 66-124 – MOTOR VEHICLES; TO PROVIDE FOR SEVERABILITY; TO REPEAL CONFLICTING ORDINANCES; TO PROVIDE AN EFFECTIVE DATE; AND FOR OTHER PURPOSES.

The Council of the City of Holly Springs hereby ordains that:

Section 1. That Section 66-121. – Use of facilities., Articles IV, Parks and Recreation Facilities of Chapter 66 Streets, Sidewalks and Other Public Places of the Code of the City of Holly Springs, Georgia, as amended, is hereby deleted and replaced to read as follows:

Section 66-121. – Use of facilities.

- (a) All park properties are to be used on a first come, first served, basis.
- (b) Each person using the public parks and ground shall clean up all debris, extinguish all fires when such fires are permitted, and leave the premises in good order and the facilities in neat and sanitary condition.
- (c) Any person, association, group or organization that desires to reserve parks, pavilions and recreation facilities shall fill out a park facility reservation form and may be required to pay a fee and security deposit.

Section 2. That Section 66-124. – Motor vehicles., Articles IV, Parks and Recreation Facilities of Chapter 66 Streets, Sidewalks and Other Public Places of the Code of the City of Holly Springs, Georgia, as amended, is hereby deleted and replaced to read as follows:

Section 66-124. – Motor vehicles.

No person shall operate any motorized vehicle, including motorcycles, mopeds or any other similar vehicle, in any part of or upon any road in any park or recreational facility owned, operated or controlled by the city, except upon roads within such park or recreational facility and in designated parking areas. No motorized vehicle described in this section shall be parked or left standing at any place in any park or recreational facility owned, operated or controlled by the city, except in areas designated for such purpose.

Overnight parking of motor vehicles is prohibited.

Section 3. If any Section, sub-section, sentence, clause, phrase or any portion of this Ordinance be declared invalid or unconstitutional by any court or competent jurisdiction or if the provisions of any part of this Ordinance as applied to any particular situation or set of circumstances shall be declared invalid or unconstitutional, such invalidity shall not be construed to affect the portions of this Ordinance not so held to be invalid. It is hereby declared to be the intent of the

City Council to provide for separable and divisible parts and he does hereby adopt any and all parts hereof as may not be held invalid for any reason.

Section 4. This Ordinance shall become effective immediately upon approval by the Mayor and Council.

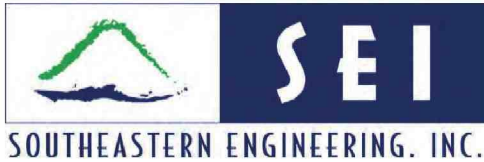
SO ORDAINED, this 15th day of May, 2023.

CITY OF HOLLY SPRINGS, GEORGIA

Steven W. Miller, Mayor

Attest:

Karen Norred, City Clerk
(Seal)



2470 Sandy Plains Rd
Marietta, GA 30066
P (770) 321-3936

PROFESSIONAL SERVICES AGREEMENT ADDENDUM NO. 9

This ADDENDUM to the AGREEMENT made and entered into 10/27/2022, by and between Southeastern Engineering, Inc., and the client identified herein, provides for the Additional Services described under the Scope of Services section of this agreement.

CLIENT: City of Holly Springs
C/O Stonecrest Homes GA., LLC
623 West Crossville Road, Suite 204
Roswell, GA 30075
VIA EMAIL: cheiserjr@stonecresthomesga.com
Ph#: 314-303-4994

PROJECT NAME: **Holly Springs Town Center Post Award (1076-21-274)**

SCOPE OF SERVICES:

Task 14 – Hourly Engineering Services

This task is intended to cover any on-demand engineering consultation services requested by the Client as needed for the Holly Springs Town Center Project. This will allow SEI to respond quickly to requests without having a formal proposal in place for each task. *SEI will seek e-mail authorization with an estimate of cost on any request prior to utilizing this allowance. The hourly rates are included in Attachment B of this document.*

COMPENSATION:

Please initial all authorized tasks below:

PROFESSIONAL FEES			
Description	Task Subtotal	Billed	Authorized Tasks
Task 14 – Hourly Engineering Services	\$10,000	<i>Monthly, % complete of Allowance</i>	Client Initial

IN WITNESS WHEREOF, the Agreement is accepted on the later date written below, subject to the terms and conditions stated above and the aforementioned Agreement.

CLIENT CITY OF HOLLY SPRINGS

SOUTHEASTERN ENGINEERING, INC.

Signed _____

Signed _____

DocuSigned by:

Chad Epple

21D3AB68A03F424...

Chad Epple

Name (Typed) _____

Name (Typed) _____

TITLE _____

TITLE _____

Vice President

DATE _____

DATE _____

04/14/2023

ATTACHMENT A

EXCLUSIONS:

This agreement does not include the following:

- ☒ Zoning or zoning modification applications and coordination
- ☒ GDOT or other agency coordination
- ☒ Community coordination meetings
- ☒ Graphic design
- ☒ Traffic engineering services
- ☒ Land surveying services
- ☒ Structural engineering and inspection
- ☒ Soil testing/geotechnical analysis of existing soils or levels of compaction
- ☒ Subsurface utility location and/or investigation
- ☒ Utility capacity analyses
- ☒ Offsite utility evaluation and/or extension
- ☒ Offsite utility easements
- ☒ Utility coordination
- ☒ SBV - variance through EPD and/or local jurisdiction
- ☒ Offsite silt study
- ☒ Dam breach
- ☒ FEMA coordination and/or letter of Map Revision
- ☒ MS4 requirements
- ☒ Architectural services
- ☒ Landscape architectural services
- ☒ Irrigation design
- ☒ Tree survey and/or as-builts
- ☒ Planting plans
- ☒ Inspecting and/or placing plants on site
- ☒ State waters and/or wetland location, delineation and/or permitting through USACE
- ☒ Preparation of Storm Water Management, Inspection and Maintenance Agreement or similar/related documents
- ☒ LDP submittal or revisions
- ☒ Final plat submittal or revisions
- ☒ Cost estimates or Quantity take offs
- ☒ Construction management, contract administration or price/cost negotiations of construction work
- ☒ Settlement of disputes of claims due to contractor default or insolvency or discontinuation of work
- ☒ Maintenance services (post-construction or otherwise)

ATTACHMENT B

HOURLY RATE SCHEDULE:

Services shall be invoiced according to the following rates:

Environmental Personnel:

	<u>Rates per Hour</u>
Environmental Scientist 1:	\$ 85.00
Environmental Services Manager:	\$ 125.00

Planning and Landscape Architecture Personnel:

Administrative:	\$ 60.00
Technician:	\$ 60.00
Land Planner:	\$ 125.00
Landscape Architect:	\$ 135.00

Engineering Personnel:

Administrative:	\$ 70.00
Technician:	\$ 75.00
LiDAR/GIS Technician:	\$ 105.00
Remote Sensing Specialist:	\$ 125.00
Designer I:	\$ 75.00
Designer II:	\$ 95.00
Designer III:	\$ 115.00
Engineer I:	\$ 105.00
Engineer II:	\$ 125.00
Engineer III:	\$ 160.00
Project Manager:	\$ 175.00
Senior Project Manager:	\$ 185.00
Project Controls Manager:	\$ 115.00
Director/Principal:	\$ 250.00

Hourly* Surveying Personnel:

Field Crew: (1 Man)	\$ 120.00
Field Crew: (2 Man)	\$ 180.00
Field Crew: (3 man)	\$ 230.00
Survey Technician 1:	\$ 85.00
Survey Technician 2:	\$ 105.00
Survey Technician 3:	\$ 120.00
Administrative:	\$ 70.00

**Overtime rates = 1.5 x standard rates*

Salary Surveying Personnel (Overtime Exempt):

Survey Division Manager: (PLS)	\$ 195.00
Project Manager: (PLS)	\$ 160.00
Associate Project Manager: (LSIT)	\$ 130.00
Field Coordinator:	\$ 125.00