Planning Commission

North Augusta
South Carolina's Riverfront

Minutes for the Wednesday, December 20, 2023, Regular Meeting
Council Chambers, 100 Georgia Avenue

Members of the Planning Commission

Dr. Christine Crawford
Chair

Bob Bigger, *Vice Chair*
Jesse Elliott
Timothy V. Key
Leonard Carter, Jr.
Rett Harbeson
Chelsea Waddell

CITIZEN ASSISTANCE: Individuals requiring special assistance or a sign interpreter to participate in the meeting are asked to please notify the Department of Planning and Development 48 hours prior to the meeting at 803-441-4221.

1. **Call to Order** – 7:00 p.m.

2. **Roll Call** Timothy Key, Rett Harbeson, Leonard Carter, Chelsea Waddell and Bob Bigger acting as Chairman, were all in attendance.

3. **Approval of Minutes** – November 15, 2023 Study Session and Regular Meeting

   Timothy Key made the 1st motion, Leonard Carter made the 2nd motion. Minutes were approved unanimously.

4. **Confirmation of Agenda**

5. **RZM23-003** – A request by Riverside Village H Owner, LLC to rezone approximately 0.5 acres located along Wanninger Run, TPNs 007-17-02-009, 007-17-02-010, 007-17-02-011, 007-17-02-012, and 007-17-02-013 from PD, Planned Development to D, Downtown Mixed Use.

Tommy Paradise spoke about the North Augusta's New Development Code that was adopted and set in place on December 18, 2023. The new Development Code eliminated the Downtown Mixed-Use District. Mr. Paradise continued by stating the adjacent townhomes are zoned Downtown Mixed Use 2 and he recommended that the parcels in RZM23-003 be rezoned to Downtown Mixed Use 2 as well. He stated that there was an administrative oversight in 2019 that unknowingly excluded the property from being rezoned.

John Long of 2572 Brookdale Dr, approached the podium and expressed that he was prepared to answer any questions. No questions were asked.

Timothy Key made the first motion, Len Carter made the 2nd motion, it was approved unanimously.

6. **MSP23-010** – A request by SHJ Development, LLC, f/k/a TWAS Properties, LLC for a Major Waiver from landscaping requirements of the North Augusta Development Code, Article 3, Section 3.8.5.8.5.e Highway Corridor Overlay District, Front Setback Landscaping and Article 10, Table 10-6 Buffer Width and Landscaping Requirements.

Mr. Paradise spoke about Article 3, Section 3.8.5.8.5.e stating that if the front setback exceeds 30 ft and a parking or drive aisle is provided between the front property and a structure, the 1st 20 ft measured from the property line should be landscaped to the standards of type D buffer. Mr. Paradise continued by stating the City of North Augusta has an easement along Highway 25 and the city engineer does not want anything planted in. There is also a detention pond located on the parcel that cannot be relocated due to connectivity and the city engineer does not want anything planted in it as well. Mr. Paradise stated that the City does not want the buffer in place and the issue is beyond the developers control.

Alex Perry of 1141 Dixon Rd, stated he is the design manager for Tidal Wave Auto Spa. He expressed that he is available to answer any questions that the member might have. No questions were asked.

Mr. Paradise added that he visited the site and noticed there is no space between the detention pond and the easement to build anything without tampering with either the detention pond or easement.

Len Carter asked about the need for a car wash in that particular area if there is one a block away.

Mr. Perry answered by stating that Tidal Wave Auto Spa would offer different amenities that would be seen once it was built.

Mr. Paradise stated the access point for the auto spa would be on Merovan Dr.

There were no public comments.

Tim Key made the 1st motion, Len Carter made the 2nd motion, it was approved unanimously.

7. **Business Meeting**

a. Election of Officers

Dr. Christine Crawford was reelected as Chairman
Bob Bigger was reelected as Vice Chairman
It was approved unanimously.

b. Adoption of 2024 Calendar

Rett Harbeson made the 1st motion to adopt the 2024 Meeting schedule with the business meeting being moved to November 20th, Chelsea Waddell made the 2nd motion, it was approved unanimously.

8. **Staff Report**

a. November Performance Report

9. **Adjourn** 7:31pm

Respectfully Submitted,

Thomas L. Paradise, Director
Department of Planning and Development

Department of Planning and Development

North Augusta
South Carolina's Riverfront

Project Staff Report
SP23-002 Oakhaven Apartments
Prepared by: La'Stacia Reese
Meeting Date: January 17, 2024

SECTION 1: PROJECT SUMMARY

Project Name	Oakhaven Apartments
Applicant	Oakhaven Apartments, LLC
Engineer	Cranston Engineering Group
Address/Location	980 Edgefield Road
Parcel Number	011-06-01-001
Total Development Size	± 15.8 acres
Existing Zoning	GC, General Commercial
Overlay	N/A
Traffic Impact Tier	3
Proposed Use	± 306 Apartment units
Future Land Use	Commercial Retail

SECTION 2: PLANNING COMMISSION CONSIDERATION

Section 5.6 of the North Augusta Development Code (NADC) provides uniform approval procedures for site plans.

5.6.1 Purpose

The site plan review provisions and regulations of this section are intended to promote the safe, functional and aesthetic development of property and to ensure that new structures, utilities, streets, parking, circulation systems, yards and open spaces are developed in conformance with the standards of this Chapter. The site plan review considers the siting of structures and related site improvements to promote harmonious relationships with adjacent development.

5.6.2 Major and Minor Site Plans

The approval of a site plan is hereby required as a condition for the issuance of a building permit. No building permit shall be approved unless a site plan has been approved in accordance with the procedures prescribed in this section.

5.6.6 Major Site Plan Approval Procedure

5.6.6.1 Generally – Approval of a major site plan is a two (2) step process. A pre-application conference is recommended. The first step is the submission of a preliminary site plan application and required information for review by the Department and the Planning Commission. The second step is the submission of a final site plan for review by the Department for compliance with the approval of the Planning Commission and other provisions of this Chapter.

5.6.6.2 Preliminary Site Plan –

a. An application for approval of a site plan and required information shall be submitted to the Department. The Director shall determine whether the application for a preliminary site plan is complete as prescribed in Appendix B, Application Documents.

b. If the site plan application is complete and conforms to this Chapter, the Director shall forward the application, along with conditional use permit application if applicable, to the Planning Commission within thirty (30) days of the determination of completeness. The Director's report to the Planning Commission on the application shall address compliance of the site development plan with the provisions of this Chapter, the suitability of plans proposed, and shall include a recommendation for approval or denial and any recommended waivers, conditions of approval or modifications to the site plan as submitted, if any, with reasons therefore.

c. (omitted for brevity)

d. A majority vote is required for the Planning Commission to approve, approve with conditions or waivers or both, if applicable, or deny a preliminary site plan application.

e. A preliminary site plan approval by the Planning Commission must be processed and approved as a final site plan by the Director and City Engineer prior to the issuance of any building permit and before the vesting period provided for in §5.6.7.5 shall commence. (Adopt. 12-1-08; Ord. 2008-18)

5.6.6.3 Final Site Plan

After a final decision by the Planning Commission to approve a preliminary site plan and all required conditions of a conditional use permit, if applicable, the application may be processed for final site plan approval. The final site plan shall be prepared and submitted to the Director in the same manner as set forth in §5.6.6.2. If the final site plan conforms to the approval of the Planning Commission, the provisions of this Chapter and all required conditions or waivers or both, if applicable, the Director shall approve the site plan. If the final site plan is complete, but does not conform to the approval of the Planning Commission, the provisions of this Chapter and any conditions or waivers or both, if applicable, the Director shall deny the site plan and return to applicant for revision and resubmission. If the applicant disagrees with the decision of the Director, an appeal

may be filed in accordance with the procedures set forth in §18.4. (Rev. 12-1-08; Ord. 2008-18)

Final approval will be granted by staff when the plans are in substantial compliance with the requirements of the North Augusta Development Code and any proposed conditions.

SECTION 3: PUBLIC NOTICE

Per NADC Table 5-1, no public notice is required for a major site plan. A notice for the Planning Commission meeting was placed on the City website, www.northaugustasc.gov, on January 10, 2024.

SECTION 4: SITE HISTORY

The subject property was annexed into the corporate city limits with Ordinance 84-11 in July 1984. The subject property is currently vacant and at one time there was a single-family detached dwelling on the property. Sections of the property have been subdivided over time for future commercial developments.

SECTION 5: EXISTING SITE CONDITIONS

	Existing Land Use	Future Land Use	Zoning
Subject Parcel	Vacant	Commercial Retail	GC, General Commercial
North	Interstate	Commercial Retail	N/A
South	Convenience store with gasoline sales	Commercial Retail	GC, General Commercial
East	Convenience store with gasoline sales/vacant	Commercial Retail	Outside City Limits/GC, General Commercial
West	Vacant	Residential Single Family	R-5 Mixed Residential

Access – The site currently has access from Edgefield Road and Frontage Road. Additional access to the apartment site was approved in for a drive on the QuikTrip site that is currently under development.

Topography – The grade falls significantly across the property from east to west away from Edgefield Road.

Utilities – Water and wastewater service are available. The property is served by the City of North Augusta water and sewer.

Floodplain – The site does not include federally designated floodplain and wetlands.

Drainage Basin – The property is located within the Pole Branch Basin. The basin has an overall poor water quality rating. Pole Branch basin is one of the city's largest basins. The basin borders along Highway 25 at I-20 to Arbor Place off of Walnut Lane and then encompasses Bergen Road and its communities. The Pole Branch watershed includes high density residential, high density commercial, and some industrial areas. Major traffic corridors including Highway 25, I-20, Five Notch Road, and all the neighboring communities impact this watershed. The preliminary physical stream assessments at Pole Branch indicate that this stream channel is currently not effective at transporting current loads of stormwater during heavy storm events. Due to the high nutrient concentrations identified after the first sample event, Pole Branch has been a focus of the city monitoring program and attempts to identify sources of pollution will continue in the basin. As problems are identified, solutions will be implemented in conjunction with increased

public education and outreach about the problems in this basin. Stream segment assessments throughout the basin are needed.

SECTION 6: STAFF EVALUATION AND ANALYSIS

1. Multifamily Development is permitted in General Commercial zoning district. The subject property is approximately 15.8 acres in area. The proposed development will include up to 306 units made up of approximately 180 one-bedroom units and 126 two-bedroom units. There are 18 total apartment buildings, along with some carriage houses and a clubhouse building.

2. The future land use classification for the site is Commercial Retail. The proposed use is appropriate for the future land use classification.

3. Parking calculations for the proposed multifamily development must be a minimum of 1.5 parking spaces per unit. The site plans indicate that parking will be designated in lots surrounding each apartment building. One guest parking spot per every 4 units is required. Plans show 577 parking spaces for the apartment units. The number of parking spaces provided is sufficient for the use.

4. The site plan proposes access from driveway access Modern Market Drive that was approved in a separate permit and Frontage Road, proposed to be Mighty Oak Trail. A Traffic Impact Analysis (TIA) was submitted to the City of North Augusta and SCDOT. Traffic mitigation plans have been reviewed by SCDOT.

5. Building elevations are provided for the multifamily units in attachments. The materials appear to be fiber cement lap siding, brick veneer, and glass windows. The materials are appropriate for residential structures.

6. The applicant received a variance from the Board of Zoning Appeals in November 2022 for relief from the maximum setback requirements within the Highway Corridor Overlay District for the previous North Augusta Development Code. The buildings are proposed to be three-story units.

7. The proposed landscaping is sufficient and proposes preserving the existing landscaping found within property.

8. The Stormwater management department must approve the sediment and erosion control plans.

9. Approval of the Major Site Plan application includes the street names Mighty Oak Trail to replace the name for Road #1 Frontage Road, Road #2 was previously approved by the Planning Commission as Modern Market Drive, Road #3 was previously Zippy Run, proposed to be named Sapling Row, Road #4 previously Bravo Pass proposed to be Rustling Branch and Road #5 previously Home at Oakhaven Drive proposed to be Canopy Drive for the internal drives. The road names have been reserved by Aiken County Addressing for one year.

10. Staff recommends approval of the site plan with the following conditions:

    1) This approval includes certification of the use of the road names Mighty Oak Trail, Sapling Row, Road, Rustling Branch and Canopy Drive.
    2) Traffic improvements recommended by the Traffic Impact Analysis and approved by SCDOT will be installed on a schedule acceptable to SCDOT.
    3) Any outstanding comments will be addressed to the satisfaction of City staff.

SECTION 7: ATTACHMENTS

Aerial Map
Topography
Current Zoning
Application Materials
Site Plans
Traffic Impact Analysis

cc Oakhaven Apartments, LLC, via email
Cranston Engineering Group, via email

North Augusta
South Carolina's Riverfront

Aerial Map
Application Number SP23-002
Tax Parcel Number
011-06-01-001

0 70 140 280 420 560
Feet

1/5/2024 3:59 PM

N

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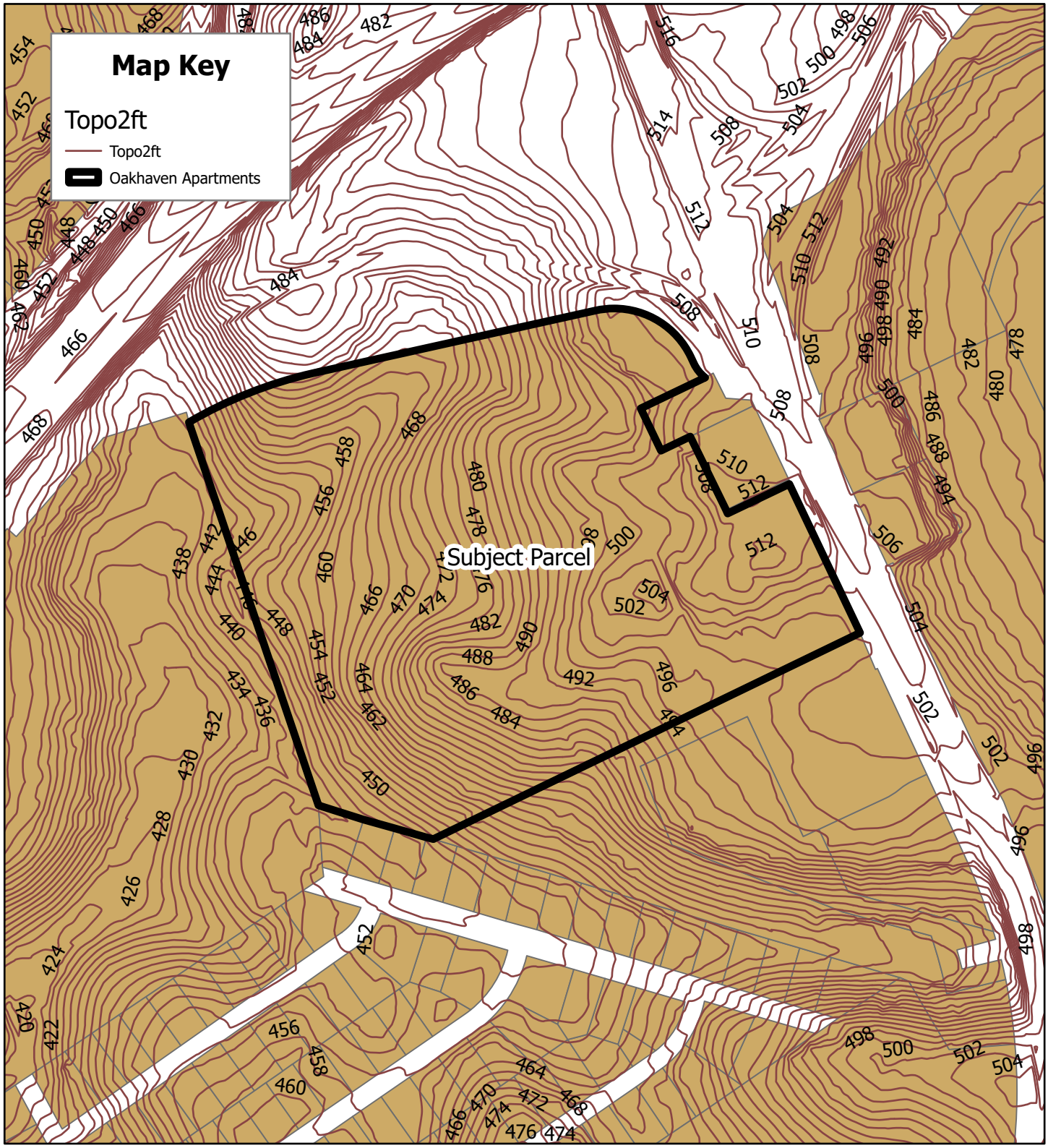


0 60 120 240 360 480
Feet

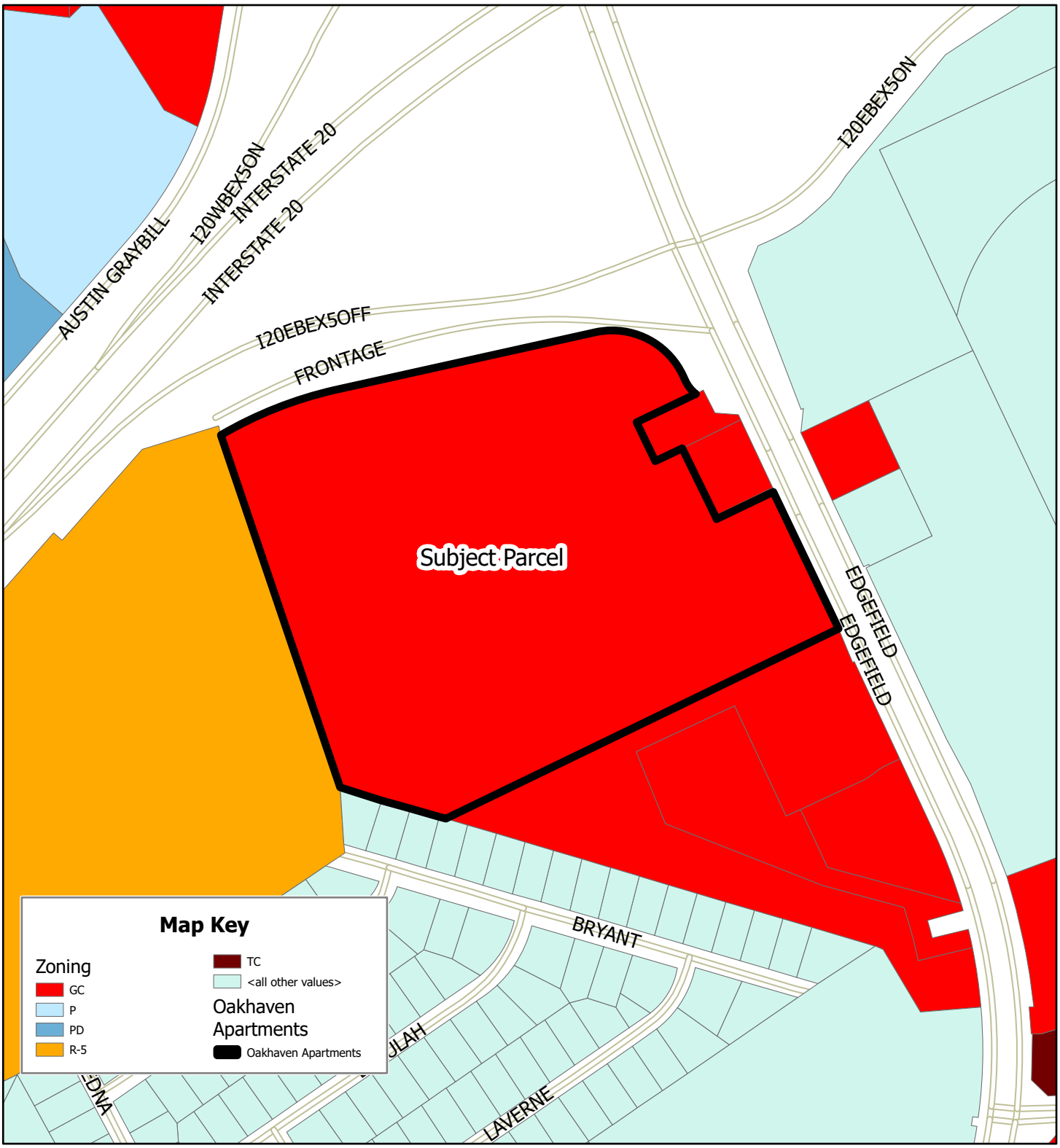
1/5/2024 3:59 PM

N

North Augusta
South Carolina's Riverfront

Topography Map
Application Number SP23-002
Tax Parcel Number
011-06-01-001

Path: C:\Users\lreese\Documents\ArcGIS\Projects\SP23-002 Oakhaven Apartments\SP23-002 Oakhaven Apartments.aprx



North Augusta
South Carolina's Riverfront

Zoning Map
Application Number SP23-002
Tax Parcel Number
011-06-01-001
Zoned GC, General Commercial

0 87.5 175 350 525 700
Feet

1/10/2024

N

Path: C:\Users\lreese\Documents\ArcGIS\Projects\SP23-002 Oakhaven Apartments\SP23-002 Oakhaven Apartments.aprx

Application for Development Approval

Please type or print all information

North Augusta
South Carolina's Riverfront

Staff Use

Application Number PPD23-003 **Date Received** 8/24/23

Review Fee $2500.00 **Date Paid** 8/24/23

1. **Project Name** Oakhaven Apartments

   Project Address/Location 980 Edgefield Road

   Total Project Acreage 15.8 **Current Zoning** GC

   Tax Parcel Number(s) 011-06-01-001

2. **Applicant/Owner Name** Oakhaven Apartments LLC **Applicant Phone** 803-760-6104

   Mailing Address 901 Green St.

   City Augusta **ST** GA **Zip** 30901 **Email** kurt@atcdevelopment.com

3. **Is there a Designated Agent for this project?** ____ **Yes** X **No**
   If Yes, attach a notarized Designation of Agent form. (required if Applicant is not property owner)

4. **Engineer/Architect/Surveyor** James Dean **License No.** 35947

   Firm Name Cranston LLC **Firm Phone** 706-722-1588

   Firm Mailing Address 452 Ellis ST.

   City Augusta **ST** GA **Zip** 30901 **Email** bfine@cranstonengineering.com jpdean@cranstonengineering.com

   Signature James P D **Date** 8/4/2023

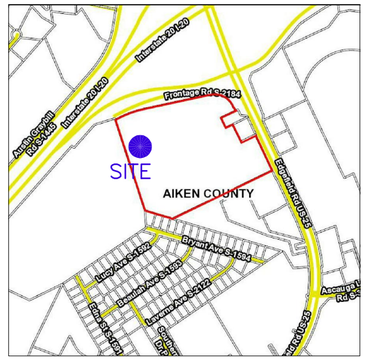
5. Is there any recorded restricted covenant or other private agreement that is contrary to, conflicts with or prohibits the use or activity on the property that is the subject of the application?
   (Check one.) ____ yes X no

6. In accordance with Section 5.1.2.3 of the North Augusta Development Code, I hereby request the City of North Augusta review the attached project plans. The documents required by the City of North Augusta, as outlined in Appendix B of the North Augusta Development Code, are attached for the City's review for completeness. The applicant acknowledges that all required documents must be correct and complete to initiate the compliance review process.

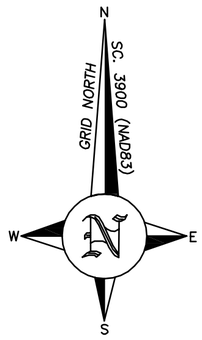
7. _____ 8/14/23
   Applicant or Designated Agent Signature **Date**

   Kurt Eyring
   Print Applicant or Agent Name

CLERK OF SUPERIOR COURT

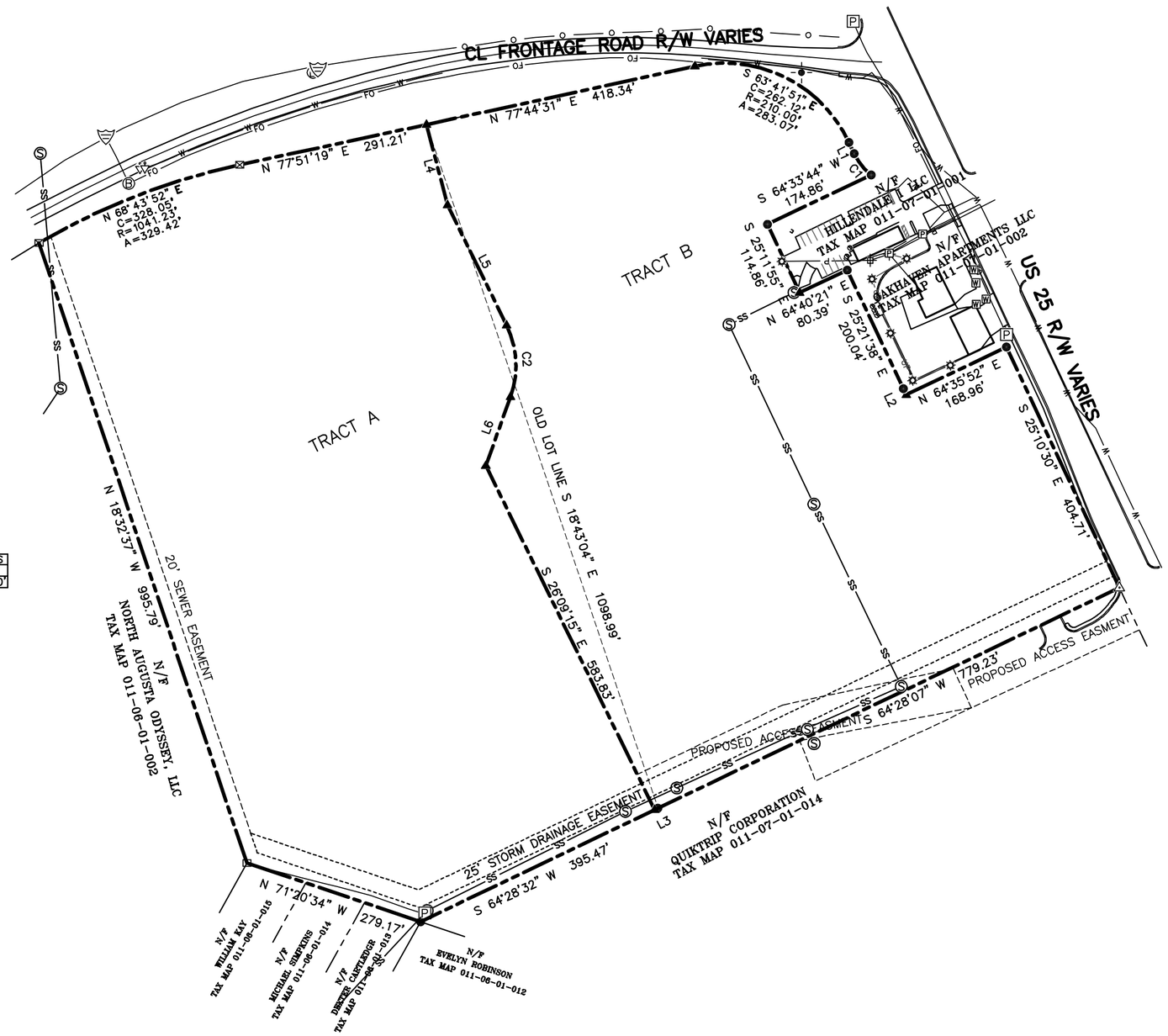


SITE MAP
N.T.S.



LINE	BEARING	DISTANCE
L1	S 25°02'42" E	18.77'
L2	S 25°27'37" E	10.00'
L3	S 64°28'32" W	5.54'
L4	S 14°37'04" E	126.49'
L5	S 26°12'23" E	203.98'
L6	S 19°47'42" W	111.32'

CURVE	CHORD BEARING	CHORD	ARC	RADIUS
C1	S 38°20'29" E	41.38'	41.76'	90.00'
C2	S 03°09'45" E	109.21'	112.19'	140.00'



SYMBOLS LEGEND

- —P— – OVERHEAD POWER LINE
- —UP— – BURIED POWER LINE
- – POWER POLE
- – LIGHT POLE
- —FO— – BURIED FIBER OPTIC CABLE
- —W— – BURIED WATER LINE
- —SS— – SANITARY SEWER LINE
- —o— – CHAIN LINK FENCE
- —x— – WIRE FENCE
- —||— – WOOD FENCE
- – BURIED FIBER OPTIC CABLE MARKER SIGN
- P – PHONE PEDESTAL
- – FIBER BURIED HANDHOLE
- – PARKING BOLLARD
- – SIGN
- W – MONITORING WELL
- – FIRE HYDRANT
- – WATER VALVE
- S – SANITARY SEWER MANHOLE
- – BENCHMARK
- – CALCULATED POINT
- – MAGNETIC NAIL SET
- – ½" REBAR SET
- – ½" REBAR FOUND
- – ½" PIPE FOUND
- – BOREHOLE
- – CONCRETE R/W MONUMENT

REFERENCES

DEED BOOK 2430, PAGE 61–63.
PLAT BOOK 48, PAGE 63.
PLAT BOOK 64, PAGE 240.

150 0 150 300
GRAPHIC SCALE 1" = 150'

GENERAL NOTES

1. ALL UTILITIES ARE NOT SHOWN ON THIS SURVEY.
2. ALL FENCES ARE NOT SHOWN ON THIS SURVEY.
3. THIS SURVEY IS SUBJECT TO ALL EASEMENTS, RIGHTS–OF–WAY, AND PROTECTIVE COVENANTS OF RECORD.
4. THIS SURVEY IS NOT BASED ON A TITLE ABSTRACT.
5. FLOOD ZONE INFORMATION IS NOT SHOWN ON THIS SURVEY.
6. THIS SURVEY WAS PREPARED IN CONFORMITY WITH THE TECHNICAL STANDARDS FOR PROPERTY SURVEYS IN SOUTH CAROLINA AND MEETS OR EXCEEDS THE REQUIREMENTS FOR A CLASS "A" SURVEY AS SPECIFIED THEREIN; ALSO THERE ARE NO VISIBLE ENCROACHMENTS OR PROJECTIONS OTHER THAN SHOWN BY SURVEYOR JOHN A. McGILL #4792.

11/27/23

SOUTH CAROLINA REGISTERED No. 4792 LAND SURVEYOR JOHN A. McGILL
11/27/23

SOUTH CAROLINA McGILL & ASSOCIATES LAND SURVEYORS No. C00217 CERTIFICATE OF AUTHORIZATION

THE FIELD DATA UPON WHICH THIS PLAT IS BASED HAS A CLOSURE PRECISION OF ONE FOOT IN 10,000 FEET AND AN ANGULAR ERROR OF 2 SECONDS PER ANGLE POINT, AND WAS ADJUSTED USING CARLSON BRx7. ANGLES TURNED BY A CARLSON BRx7 AND DISTANCES MEASURED WITH A CARLSON BRx7.

BOUNDARY SURVEY FOR:

OAKHAVEN APARTMENTS, LLC

TRACT A 15.37 ACRES
TRACT B 15.43 ACRES
TAX MAP 011–06–01–001
AIKEN COUNTY, SOUTH CAROLINA

SURVEY DATE	NOVEMBER 13, 2021
MAP CLOSURE	1/240,401
DRAWN BY	M.J.M.
JOB NO.	2021–2225–2
C.O.A. No.	LSF000082
SHEET NO.	1 OF 1
REVISIONS	

JOHN A. McGILL, P.C.
Land Surveying
NPDES Monitoring

McGill And Associates, Est. 1972
934 Shields Pond Road
Thomson, Ga. 30824
Phone: (706) 595–5612
Email: office@johnamcgillpc.com

COMcheck Software Version COMcheckWeb
Envelope Compliance Certificate

Project Information

Energy Code:	2015 IECC
Project Title:	Oakhaven Clubhouse
Location:	North Augusta, South Carolina
Climate Zone:	3a
Project Type:	New Construction
Vertical Glazing / Wall Area:	25%

Construction Site:
North Augusta, South Carolina

Owner/Agent:
Kurt Eyring
ATC Development
PO Box 1372
Augusta, Georgia 30903

Designer/Contractor:
James Hawthorn
James C Hawthorn Associates
1900 Kress Wood Circle
Kettering, Hawaii 45429
937-477-1119
jim@jcharc.com

Additional Efficiency Package(s)

Credits: 1.0 Required 1.0 Proposed
Enhanced Interior Lighting Controls, 1.0 credit

Building Area	Floor Area
1-Town Hall : Nonresidential	4468

Envelope Assemblies

Assembly	Gross Area or Perimeter	Cavity R-Value	Cont. R-Value	Proposed U-Factor	Budget U-Factor(a)
Roof: Attic Roof, Wood Joists, [Bldg. Use 1 - Town Hall]	4468	38.0	0.0	0.027	0.027
Floor: Unheated Slab-On-Grade, [Bldg. Use 1 - Town Hall] (c)	386	---	---	0.730	0.730
NORTH					
Ext. Wall: Wood-Framed, 16in. o.c., [Bldg. Use 1 - Town Hall]	984	15.0	0.0	0.083	0.064
Window: Vinyl Frame: Fixed, Perf. Specs.: Product ID P-TUB-20187, SHGC 0.25, [Bldg. Use 1 - Town Hall] (b)	247	---	---	0.442	0.460
Door: Glass (over 50% glazing): Metal Frame, Entrance Door, Perf. Specs.: Product ID P-TUB-20187, SHGC 0.25, [Bldg. Use 1 - Town Hall] (b)	63	---	---	0.442	0.770
Door: Insulated Metal, Non-Swinging, [Bldg. Use 1 - Town Hall]	56	---	---	0.130	0.179
EAST					
Ext. Wall: Wood-Framed, 16in. o.c., [Bldg. Use 1 - Town Hall]	930	15.0	0.0	0.083	0.064
Window: Vinyl Frame: Fixed, Perf. Specs.: Product ID P-TUB-20187, SHGC 0.25, [Bldg. Use 1 - Town Hall] (b)	377	---	---	0.442	0.460
Door: Glass (over 50% glazing): Metal Frame, Entrance Door, Perf. Specs.: Product ID P-TUB-20187, SHGC 0.25, [Bldg. Use 1 - Town Hall] (b)	21	---	---	0.442	0.770
SOUTH					
Ext. Wall: Wood-Framed, 16in. o.c., [Bldg. Use 1 - Town Hall]	919	15.0	0.0	0.083	0.064
Window: Vinyl Frame: Fixed, Perf. Specs.: Product ID P-TUB-20187, SHGC 0.25, [Bldg. Use 1 - Town Hall] (b)	49	---	---	0.442	0.460
WEST					
Ext. Wall: Wood-Framed, 16in. o.c., [Bldg. Use 1 - Town Hall]	930	15.0	0.0	0.083	0.064

Project Title: Oakhaven Clubhouse Report date: 07/17/23
Data filename: Page 1 of 8

Assembly	Gross Area or Perimeter	Cavity R-Value	Cont. R-Value	Proposed U-Factor	Budget U-Factor(a)
Window: Vinyl Frame: Fixed, Perf. Specs.: Product ID P-TUB-20187, SHGC 0.25, [Bldg. Use 1 - Town Hall] (b)	179	---	---	0.442	0.460
Door: Glass (over 50% glazing): Metal Frame, Entrance Door, Perf. Specs.: Product ID P-TUB-20187, SHGC 0.25, [Bldg. Use 1 - Town Hall] (b)	21	---	---	0.442	0.770

(a) Budget U-factors are used for software baseline calculations ONLY, and are not code requirements.
(b) Fenestration product performance must be certified in accordance with NFRC and requires supporting documentation.
(c) Slab-On-Grade proposed and budget U-factors shown in table are F-factors.

Envelope PASSES: Design 0.2% better than code

Envelope Compliance Statement

Compliance Statement: The proposed envelope design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed envelope systems have been designed to meet the 2015 IECC requirements in COM*check* Version COMcheckWeb and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

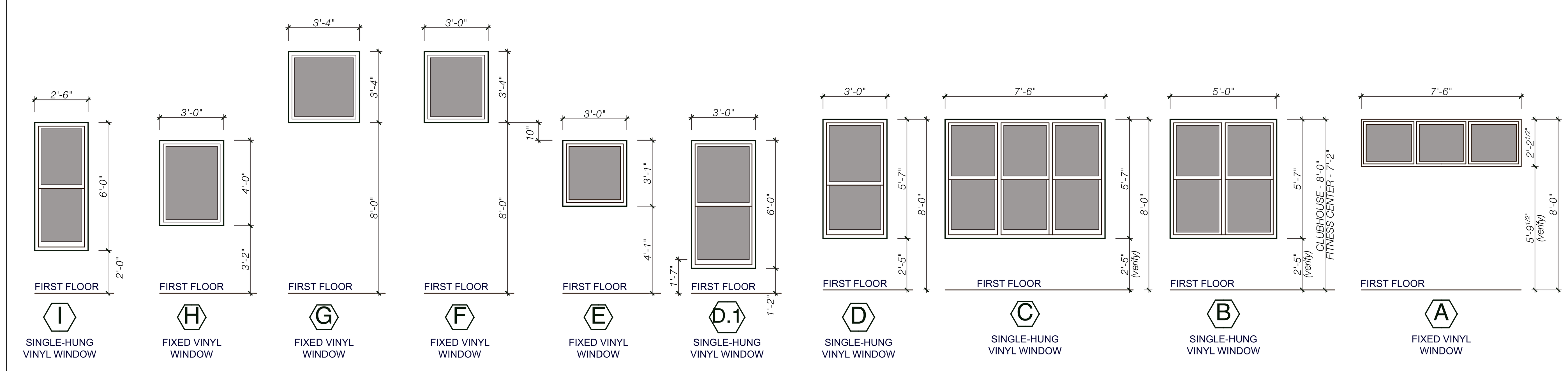
James C Hawthorn-Architect [signature] **July 19, 2023**
Name - Title Signature Date

TABLE 7-1 MULTIFAMILY DESIGN ELEMENTS REQUIRED

	A	B	
	Design Element	All Districts	
1.	Main Entrance (§7.2.3)	M	✓ requirement met
2.	Vehicle and Pedestrian Areas (§7.2.4)	O	n/a
3.	Garages (§7.2.5)	O	met on Clubhouse
4.	Roofs (§7.2.6)	M	✓ requirement met
5.	Foundation (§7.2.7)	O	✓ optional req's. met
6.	Exterior Finish Materials (§7.2.8)	M	✓ requirement met
7.	Windows and Entryways (§7.2.9)	O	✓ optional req's. met

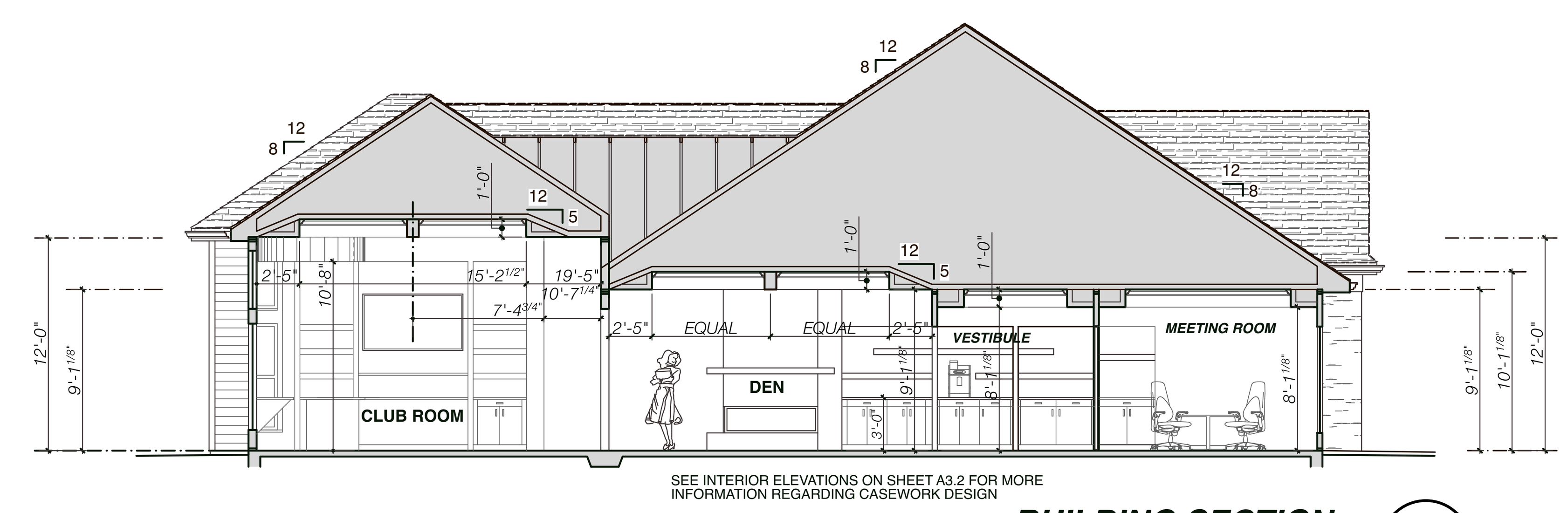
Please see following amenity building elevation pages with notes for each Building Design Element checked off in Table above.

Project Title: Oakhaven Clubhouse Report date: 07/17/23
Data filename: Page 2 of 8

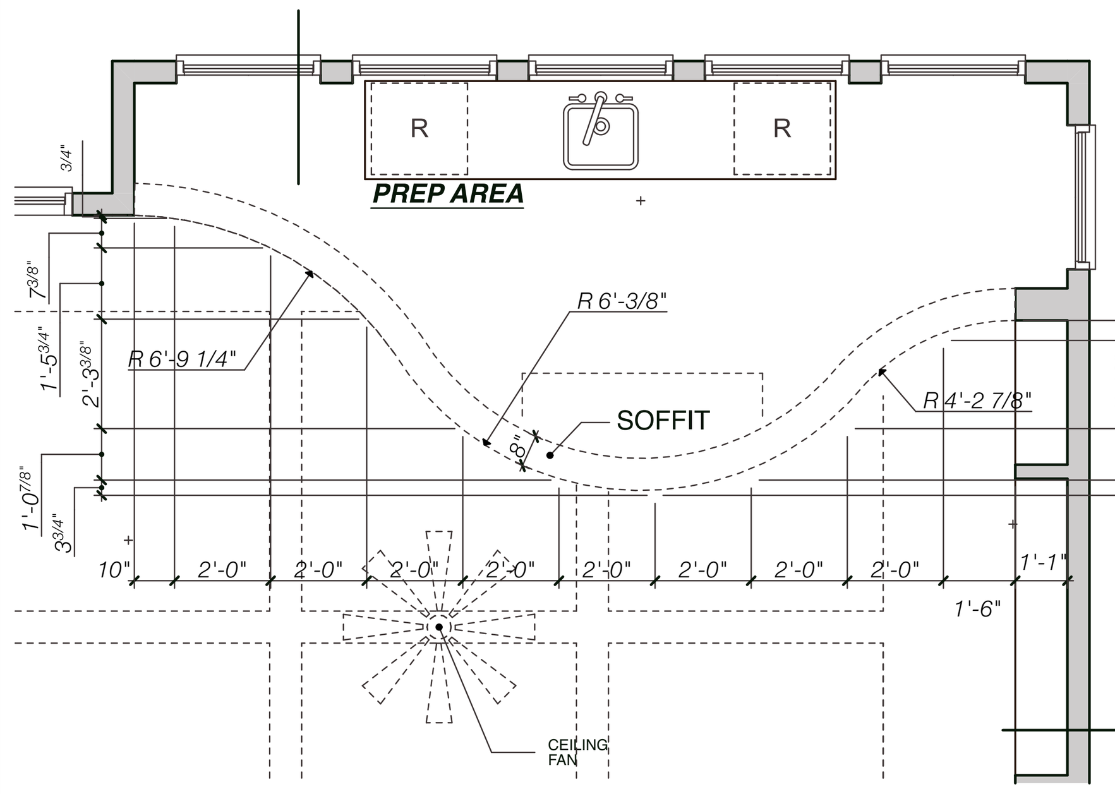


WINDOW NOTES:
1. **ALL DIMENSIONS ARE FOR ROUGH OPENINGS. FIELD VERIFY PRIOR TO ORDERING OR INSTALLING DOORS.**
2. VERIFY ROUGH OPENINGS AND REINFORCEMENTS IN FIELD PRIOR ORDERING.
3. INTERIOR WINDOWS TO BE SINGLE GLAZING IN ALUMINUM FRAMES
4. EXTERIOR WINDOWS TO BE FIXED OR SINGLE-HUNG VINYL WINDOWS
5. SAFETY GLAZING SHALL COMPLY WITH OBC SECTION 2406. ALL GLASS IN DOORS AND SIDELIGHTS SHALL BE SAFETY GLASS.
6. VERIFY QUANTITIES WITH GENERAL CONTRACTOR.

EXTERIOR WINDOW TYPES
0 2' 4' 8'



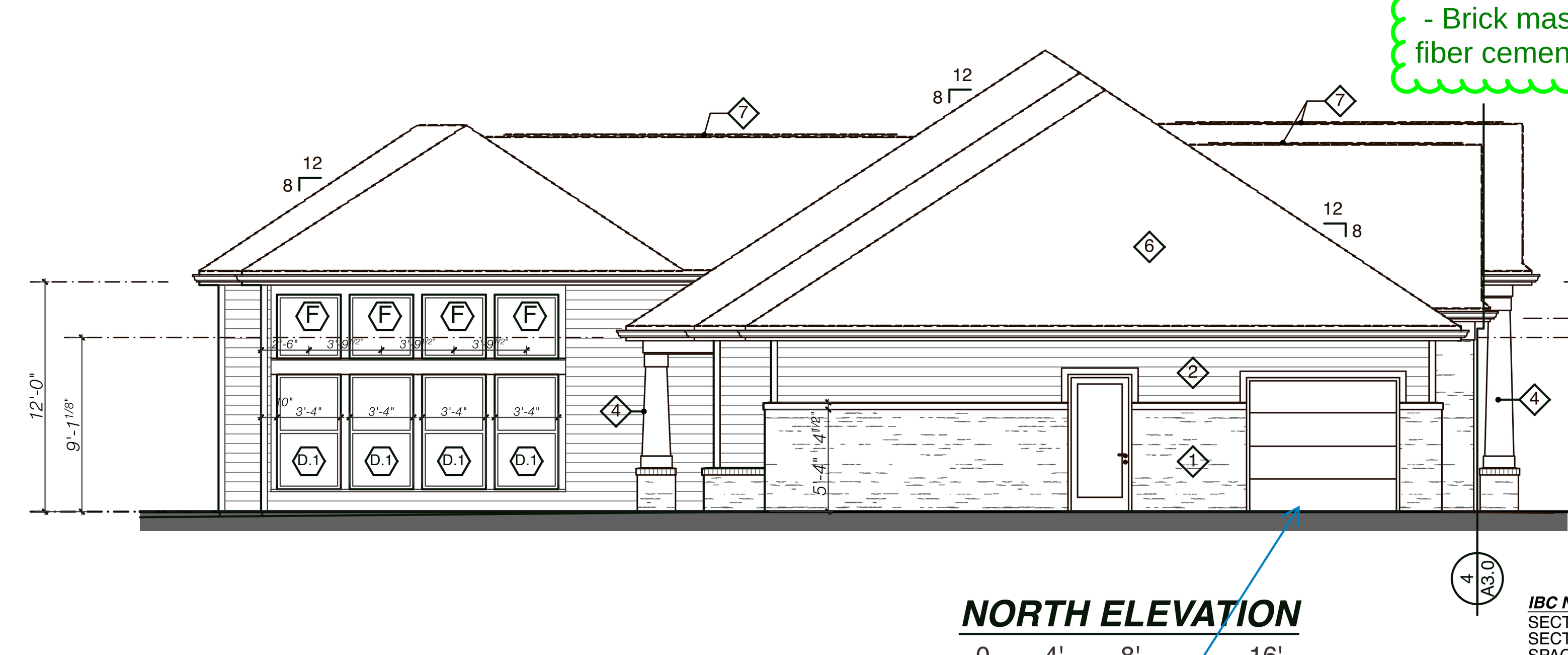
BUILDING SECTION 1 / A2.0
0 4' 8' 16'



RADIUS SOFFIT DIMENSION PLAN
0 2' 4' 8'

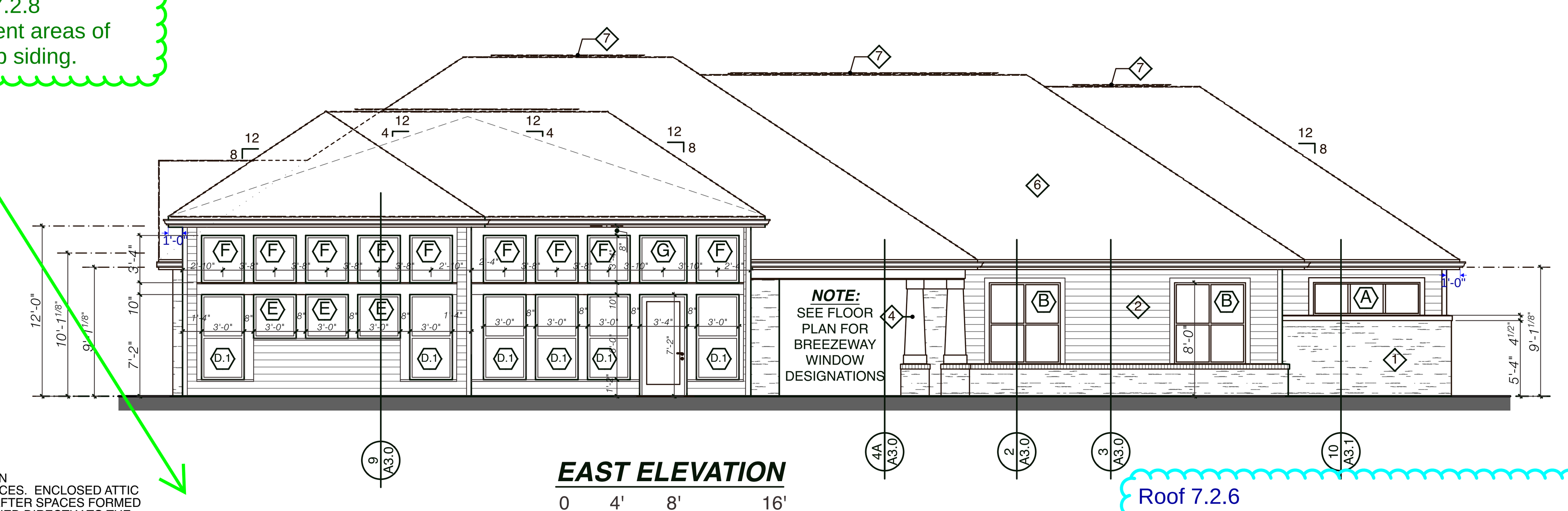
7.2.7 Foundation:
Poured in place concrete foundation.
Top of concrete slab will be approx. 6" to 8" above finished grade of landscaping.

Exterior Finish Materials 7.2.8
- Brick masonry with accent areas of fiber cement horizontal lap siding.



NORTH ELEVATION
0 4' 8' 16'

7.2.5 Garage:
Not prominent and on side elevation.
Less than 80sf.



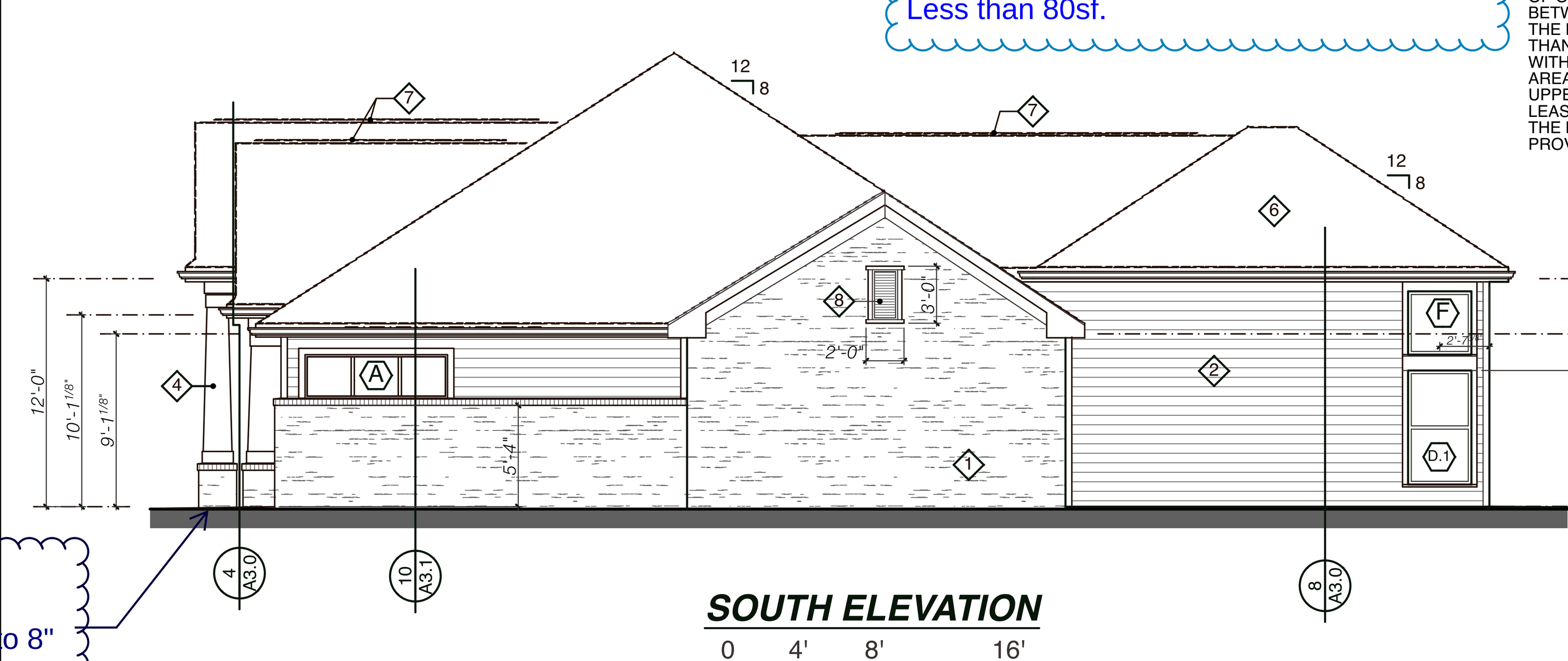
EAST ELEVATION
0 4' 8' 16'

IBC NOTES:
SECTION 1202 - VENTILATION
SECTION 1202.2 - ATTIC SPACES. ENCLOSED ATTIC SPACES AND ENCLOSED RAFTER SPACES FORMED WHERE CEILINGS ARE APPLIED DIRECTLY TO THE UNDERSIDE OF ROOF FRAMING MEMBERS SHALL HAVE CROSS VENTILATION FOR EACH SEPARATE SPACE BY VENTILATING OPENINGS PROTECTED AGAINST THE ENTRANCE OF RAIN AND SNOW. BLOCKING AND BRIDGING SHALL BE ARRANGED SO AS NOT TO INTERFERE WITH THE MOVEMENT OF AIR. A MINIMUM OF OF ONE INCH OF AIR SPACE SHALL BE PROVIDED BETWEEN THE INSULATION AND THE ROOF SHEATHING. THE NET FREE VENTILATING AREA SHALL NOT BE LESS THAN 1/300 OF THE AREA OF THE SPACE VENTILATED, WITH 50 PERCENT OF THE REQUIRED VENTILATING AREA PROVIDED BY VENTILATORS LOCATED IN THE UPPER PORTION OF THE SPACE TO BE VENTILATED AT LEAST 3 FEET ABOVE EAVE OR CORNICE VENTS WITH THE BALANCE OF THE REQUIRED VENTILATION PROVIDED BY EAVE OR CORNICE VENTS.

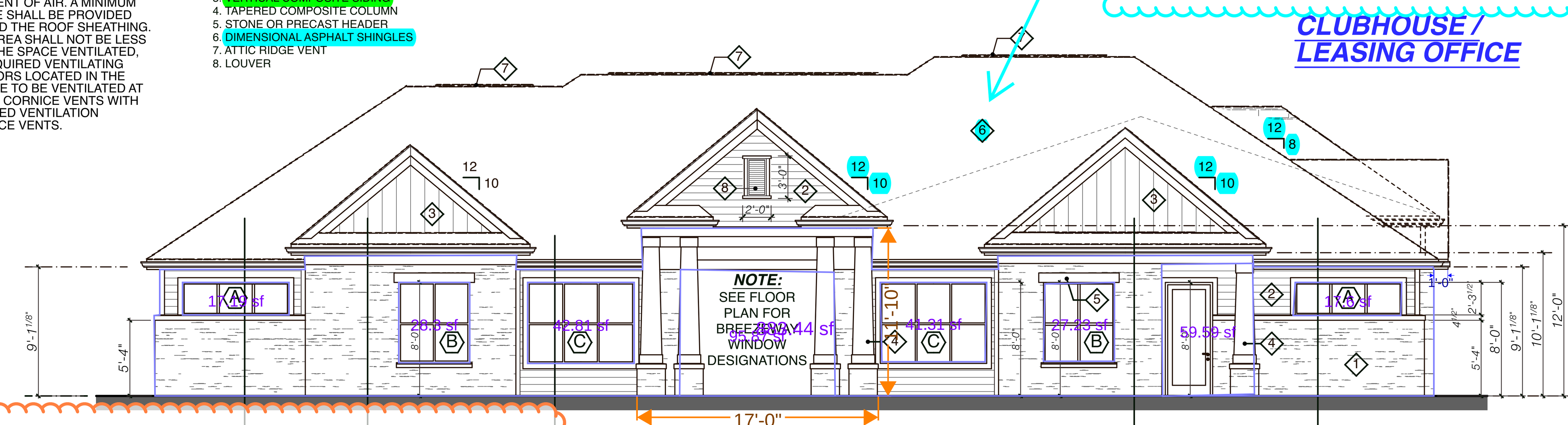
LEGEND
1. BRICK VENEER
2. HORIZONTAL LAP COMPOSITE SIDING
3. VERTICAL COMPOSITE SIDING
4. TAPERED COMPOSITE COLUMN
5. STONE OR PRECAST HEADER
6. DIMENSIONAL ASPHALT SHINGLES
7. ATTIC RIDGE VENT
8. LOUVER

Roof 7.2.6
- 8/12 & 10/12 pitch with 30 year architectural shingles.
- Gables facing the street
- Roof eave projection greater than 12"

CLUBHOUSE / LEASING OFFICE



SOUTH ELEVATION
0 4' 8' 16'



WEST ELEVATION
0 4' 8' 16'
FRONT ELEVATION

Main Entrance 7.2.3
- Faces street with recessed entry
- Porch & recessed entryway adjoins breezeway that leads to management office, pool amenities, & clubhouse entrances.
- Sidewalks connect Clubhouse to all Apartments and Amenities.
- Porch is 17' wide with an area greater than 63 square feet.
- Entry porch has two column groups and columns have a clear top, center, & bottom and match adjacent columns.

7.2.9 Windows & Entryways
330sf of window & entry = 38%
554sf of brick & fiber cement = 62%
884sf total front facade facing street

THE AMENITIES AT OAKHAVEN APARTMENTS
CLUBHOUSE & LEASING CENTER
CITY OF NORTH AUGUSTA
SOUTH CAROLINA

ATC DEVELOPMENT
3206 W Wimbleton Drive
Augusta, Georgia 30909
706-736-4748
atcdevelopment.com

JAMES C. HAWTHORN ASSOCIATES
ARCHITECTS
1900 KRESS WOOD CIRCLE
DAYTON, OHIO 45429
937.298.3607 JIM@JCHARC.COM

STATE OF SOUTH CAROLINA REGISTERED ARCHITECT
JAMES CLIFFORD HAWTHORN DAYTON, OHIO 7473
9.5.2023 JAMES C HAWTHORN

REVISIONS

NO.	DATE	DESCRIPTION
1.	9.6.2023	RELEASED FOR BUILDING PERMIT APPLICATION

DATE
9.6.2023

CLUBHOUSE

FILE NO.
23.003

SHEET NO.
A1.2

COMcheck Software Version COMcheckWeb
Envelope Compliance Certificate

Project Information

Energy Code:	2015 IECC
Project Title:	Fitness Center
Location:	North Augusta, South Carolina
Climate Zone:	3a
Project Type:	New Construction
Vertical Glazing / Wall Area:	8%

Construction Site:
North Augusta, South Carolina

Owner/Agent:
Kurt Eyring
ATC Development
PO Box 1372
Augusta, Georgia 30901
706-434-3043
kurt.eyring@atcdevelopment.com

Designer/Contractor:
James Hawthorn
James C Hawthorn Associates
1900 Kress Wood Circle
Kettering, Ohio 45429
937-477-1119
jim@jcharc.com

Additional Efficiency Package(s)

Credits: 1.0 Required 1.0 Proposed
Enhanced Interior Lighting Controls, 1.0 credit

Building Area	Floor Area
1-Exercise Center : Nonresidential	1663

Envelope Assemblies

Assembly	Gross Area or Perimeter	Cavity R-Value	Cont. R-Value	Proposed U-Factor	Budget U-Factor(a)
Roof: Attic Roof, Wood Joists, [Bldg. Use 1 - Exercise Center]	1663	38.0	0.0	0.027	0.027
Floor: Unheated Slab-On-Grade, [Bldg. Use 1 - Exercise Center] (c)	176	---	---	0.730	0.730
NORTH					
Ext. Wall: Wood-Framed, 16in. o.c., [Bldg. Use 1 - Exercise Center]	495	15.0	0.0	0.083	0.064
Door: Glass (over 50% glazing): Metal Frame, Entrance Door, Perf. Specs.: Product ID P-TUB-20187, SHGC 0.25, [Bldg. Use 1 - Exercise Center] (b)	21	---	---	0.442	0.770
Door: Insulated Metal, Non-Swinging, [Bldg. Use 1 - Exercise Center]	168	---	---	0.130	0.179
EAST					
Ext. Wall: Wood-Framed, 16in. o.c., [Bldg. Use 1 - Exercise Center]	288	15.0	0.0	0.083	0.064
Door: Insulated Metal, Swinging, [Bldg. Use 1 - Exercise Center]	42	---	---	0.130	0.610
SOUTH					
Ext. Wall: Wood-Framed, 16in. o.c., [Bldg. Use 1 - Exercise Center]	495	15.0	0.0	0.083	0.064
Window: Vinyl Frame: Fixed, Perf. Specs.: Product ID P-TUB-20187, SHGC 0.25, [Bldg. Use 1 - Exercise Center] (b)	28	---	---	0.442	0.460
WEST					
Ext. Wall: Wood-Framed, 16in. o.c., [Bldg. Use 1 - Exercise Center]	288	15.0	0.0	0.083	0.064

Assembly	Gross Area or Perimeter	Cavity R-Value	Cont. R-Value	Proposed U-Factor	Budget U-Factor(a)
Door: Glass (over 50% glazing): Metal Frame, Entrance Door, Perf. Specs.: Product ID P-TUB-20187, SHGC 0.25, [Bldg. Use 1 - Exercise Center] (b)	42	---	---	0.442	0.770
Window: Vinyl Frame: Fixed, Perf. Specs.: Product ID P-TUB-20187, SHGC 0.25, [Bldg. Use 1 - Exercise Center] (b)	28	---	---	0.442	0.460

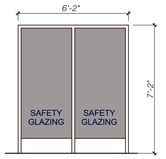
(a) Budget U-factors are used for software baseline calculations ONLY, and are not code requirements.
(b) Fenestration product performance must be certified in accordance with NFRC and requires supporting documentation.
(c) Slab-On-Grade proposed and budget U-factors shown in table are F-factors.

Envelope PASSES: Design 8% better than code

Envelope Compliance Statement

Compliance Statement: The proposed envelope design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed envelope systems have been designed to meet the 2015 IECC requirements in COM*check* Version COMcheckWeb and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

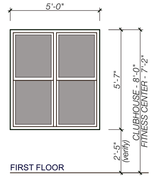
James C Hawthorn-Architect — Name - Title
Signature
July 19, 2023 — Date



INTERIOR WINDOW TYPES

0 2' 4' 8'

J
ALUMINUM STOREFRONT WINDOW

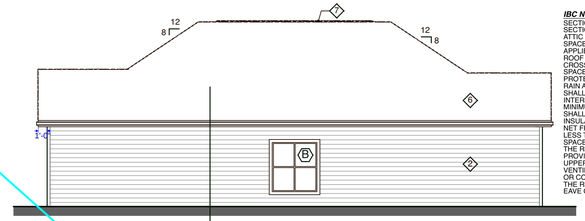


B
SINGLE-HUNG VINYL WINDOW

EXTERIOR WINDOW TYPES

0 2' 4' 8'

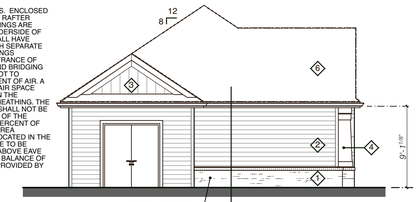
WINDOW NOTES:
1. **ALL DIMENSIONS ARE FOR ROUGH OPENINGS. FIELD VERIFY PRIOR TO ORDERING OR INSTALLING DOORS.**
2. VERIFY ROUGH OPENINGS AND REINFORCEMENTS IN FIELD PRIOR ORDERING.
3. INTERIOR WINDOWS TO BE SINGLE GLAZING IN ALUMINUM FRAMES
4. EXTERIOR WINDOWS TO BE FIXED OR SINGLE-HUNG VINYL WINDOWS
5. SAFETY GLAZING SHALL COMPLY WITH OBC SECTION 2406. ALL GLASS IN DOORS AND SIDELIGHTS SHALL BE SAFETY GLASS.
6. VERIFY QUANTITIES WITH GENERAL CONTRACTOR.



SOUTH ELEVATION

0 4' 8' 16'

IBC NOTES:
SECTION 1202 - VENTILATION
SECTION 1202.2 - ATTIC SPACES. ENCLOSED ATTIC SPACES AND ENCLOSED RAFTER SPACES FORMED WHERE CEILINGS ARE APPLIED DIRECTLY TO THE UNDERSIDE OF ROOF FRAMING MEMBERS SHALL HAVE CROSS VENTILATION FOR EACH SEPARATE SPACE BY VENTILATING OPENINGS PROTECTED AGAINST THE ENTRANCE OF RAIN AND SNOW. BLOCKING AND BRIDGING SHALL BE ARRANGED SO AS NOT TO INTERFERE WITH THE MOVEMENT OF AIR. A MINIMUM OF OF ONE INCH OF AIR SPACE SHALL BE PROVIDED BETWEEN THE INSULATION AND THE ROOF SHEATHING. THE NET FREE VENTILATING AREA SHALL NOT BE LESS THAN 1/300 OF THE AREA OF THE SPACE VENTILATED, WITH 50 PERCENT OF THE REQUIRED VENTILATING AREA PROVIDED BY VENTILATORS LOCATED IN THE UPPER PORTION OF THE SPACE TO BE VENTILATED AT LEAST 3 FEET ABOVE EAVE OR CORNICE VENTS WITH THE BALANCE OF THE REQUIRED VENTILATION PROVIDED BY EAVE OR CORNICE VENTS.

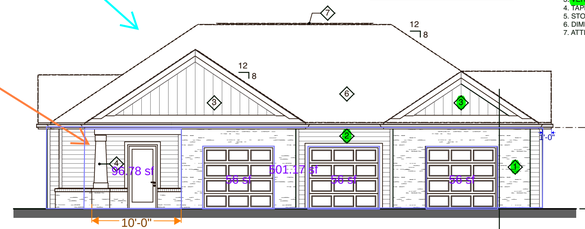


EAST ELEVATION

0 4' 8' 16'

LEGEND
1. BRICK VENEER
2. HORIZONTAL LAP COMPOSITE SIDING
3. VERTICAL COMPOSITE SIDING
4. TAPERED COMPOSITE COLUMN
5. STONE OR PRECAST HEADER
6. DIMENSIONAL ASPHALT SHINGLES
7. ATTIC RIDGE VENT

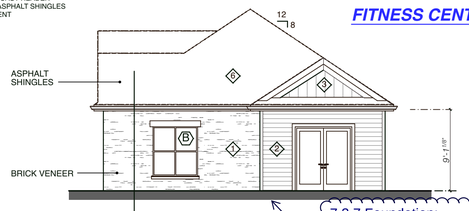
FITNESS CENTER



NORTH ELEVATION

0 4' 8' 16'

FRONT ELEVATION



WEST ELEVATION

0 4' 8' 16'

Main Entrance 7.2.3
- Faces pool amenity area with recessed porch entry
- Porch is 10' wide with an area greater than 63 square feet.
- Column is greater than 8" and has a top, center, & bottom.

Roof 7.2.6
- 8/12 pitch with 30 year architectural shingles.
- Gables facing pool & street
- Roof eave projection greater than 12"

7.2.7 Foundation:
Poured concrete foundation.
Less than 1' of foundation material will be visible.

Exterior Finish Materials 7.2.8
- Brick masonry with accent areas of fiber cement horizontal lap siding & vertical siding

FITNESS CENTER ROOM FINISH SCHEDULE

FIRST FLOOR

	LOCATION	FLOORS	WALLS	WALL FINISH	CEILING	REMARKS
F101	STRETCH AREA F101	LVT	DRYWALL	PAINT	DW	REFERENCED NOTE 1
F102	YOGA STUDIO F102	LVT	DRYWALL	PAINT	DW	
F103	FITNESS STUDIO F103	LVT	DRYWALL	PAINT	DW	
F104	HVAC F104	LVT	DRYWALL	PAINT	DW	
F105	VESTIBULE F105	LVT	DRYWALL	PAINT	DW	REFERENCED NOTE 1
F106	RESTROOM F106	LVT	DRYWALL	PAINT	DW	
F107	STORAGE F107	CONCRETE	DRYWALL	PAINT	DW	
F108	CHEMICAL STORAGE F108	CONCRETE	DRYWALL	PAINT	DW	
F109	POOL EQUIPMENT F109	CONCRETE	DRYWALL	PAINT	DW	

REFERENCED NOTES
1. PROVIDE WATER RESISTANT AND NON-ABSORBENT FINISHES PER OBC 1210.1 THROUGH 1210.2

LEGEND
VT VINYL TILE
LVT LUXURY VINYL TILE
CT CERAMIC TILE
CONC. CONCRETE
DW DRYWALL
SAT SUSPENDED ACOUSTIC TILE
P PAINT
WC WALL COVERING

7.2.9 Windows & Entryways
265sf of glass & porch entry = 53%
237sf of brick & fiber cement = 47%
502sf total front facade facing street

FITNESS CENTER DOOR SCHEDULE

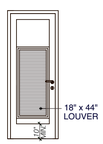
FIRST FLOOR

DOOR NO.	LOCATION	SIZE	TYPE	MATERIAL	FRAME	CLOSER	HARDWARE	THRESHOLD	FIRE RATING	REMARKS
F101	STRETCH AREA F101	6/0 X 7/0	G	WOOD	WOOD	YES	LOCKSET	YES		REFERENCED NOTE 1
F102	YOGA STUDIO F102	3/0 X 7/0	L	ALUM	ALUM		PASSAGE			
F102A	YOGA STUDIO F102	8/0 X 7/0	H	STEEL	-		-			
F103	FITNESS F103	8/0 X 7/0	H	STEEL	-		-			
F103A	FITNESS F103	8/0 X 7/0	H	STEEL	-		-			
F104	HVAC F104	3/0 X 7/0	C	WOOD	WOOD		PASSAGE			
F105	VESTIBULE F105	3/0 X 7/0	A	WOOD	WOOD	YES	LOCKSET	YES		REFERENCED NOTE 1
F106	RESTROOM F106	3/0 X 7/0	C	WOOD	WOOD		PRIVACY			REFERENCED NOTE 1
F107	STORAGE F107	3/0 X 7/0	C	WOOD	WOOD		LOCKSET			
F108	CHEMICAL STORAGE F108	3/0 X 7/0	J	WOOD	WOOD		LOCKSET	YES		
F109	POOL EQUIPMENT F109	6/0 X 7/0	I	WOOD	WOOD		LOCKSET	YES		

REFERENCED NOTES
1. PROVIDE APPROPRIATE SIGNAGE (INCLUDING TACTILE SIGNAGE) AT ALL EXIT DOORS, RESTROOM DOORS

GENERAL NOTES
1. COORDINATE HARDWARE SELECTION WITH THE OWNER. ALL MEANS OF EGRESS DOORS SHALL BE READILY OPENABLE FROM THE EGRESS SIDE WITHOUT THE USE OF A KEY OR SPECIAL KNOWLEDGE OR EFFORT.
2. SAFETY GLAZING SHALL COMPLY WITH SECTION 2406.0. ALL GLAZING IN DOORS AND SIDELIGHTS SHALL BE SAFETY GLASS.
3. DOOR CLOSERS: THE SWEEP PERIOD OF THE CLOSER SHALL BE ADJUSTED SO THAT FROM AN OPEN POSITION OF 70 DEGREES, THE DOOR WILL TAKE AT LEAST 3 SECONDS TO MOVE TO A POINT 9" FROM THE LATCH MEASURED TO THE LEADING EDGE OF THE DOOR.
4. EGRESS DOORS SHALL HAVE MIN. 32" REQ'D. CLEAR OPENINGS. WIDTH SHALL BE MEASURED FROM THE FACE OF THE DOOR (AT 90 DEGREES) TO THE OPPOSITE STOP.
5. DOOR HANDLES, PULLS, LATCHES, LOCKS AND OTHER OPERATING DEVICES SHALL BE A MAXIMUM OF 48" ABOVE THE FINISHED FLOOR.
6. THE OPERATING DEVICES SHALL BE CAPABLE OF OPERATION WITH ONE HAND AND SHALL NOT REQUIRE TIGHT GRASPING, TIGHT PINCHING OR TWISTING OF THE WRIST TO OPERATE. SEE DOOR SCHEDULE.
7. THERE ARE NO SPECIAL LOCKING ARRANGEMENTS AS A PART OF THIS PERMIT.
8. SECTION 1010.1.10 - ELECTRICAL ROOMS WITH EQUIPMENT RATED 800 AMPERES OR MORE AND OVER 6' WIDE THAT CONTAIN OVERCURRENT DEVICES, SWITCHING DEVICES OR CONTROL DEVICES WITH EXIT OR EXIT ACCESS DOORS SHALL BE EQUIPPED WITH PANIC HARDWARE OR FIRE EXIT HARDWARE. THE DOORS SHALL SWING IN THE DIRECTION OF EGRESS TRAVEL. PROJECT MANAGER SHALL VERIFY.

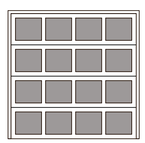
TYPE L
ALUMINUM STOREFRONT DOOR AND SIDELIGHT



TYPE K
WOOD DOOR AND FRAME

TYPE J
ALUMINUM CLAD WOOD DOOR AND FRAME

TYPE I
ALUMINUM CLAD WOOD DOOR AND FRAME



TYPE H
GLASS PANELED SECTIONAL OVERHEAD DOOR

TYPE G
ALUMINUM CLAD WOOD DOOR AND FRAME WITH FULL VISION PANEL

TYPE C
WOOD DOOR AND FRAME

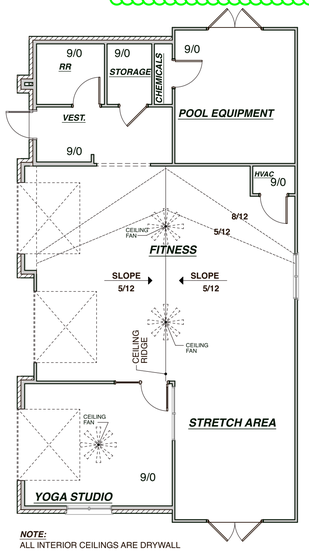
TYPE B
WOOD DOOR AND SIDELIGHT WITH FULL VISION PANEL AND WOOD FRAME

TYPE A
ALUMINUM CLAD WOOD DOOR AND FRAME WITH FULL VISION PANEL

DOOR TYPES

0 2' 4' 8'

NOTES:
1. **ALL DIMENSIONS ARE FOR ROUGH OPENINGS. FIELD VERIFY PRIOR TO ORDERING OR INSTALLING DOORS.**
2. INTERIOR GLASS DOORS TO BE SINGLE GLAZING.
3. EXTERIOR GLASS DOORS TO BE INSULATED THERMAL BREAK SYSTEM.
4. SAFETY GLAZING SHALL COMPLY WITH OBC SECTION 2406. ALL GLASS IN DOORS AND SIDELIGHTS SHALL BE SAFETY GLASS.
5. VERIFY QUANTITIES WITH GENERAL CONTRACTOR.

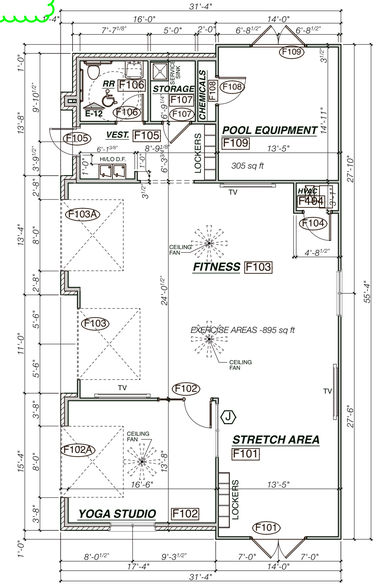


NOTE:
ALL INTERIOR CEILINGS ARE DRYWALL

REFLECTED CEILING PLAN

1,663 sq ft

0 4' 8' 16'



FITNESS CENTER FLOOR PLAN

1,663 sq ft

0 4' 8' 16'

THE AMENITIES AT OAKHAVEN APARTMENTS
FITNESS CENTER
CITY OF NORTH AUGUSTA
SOUTH CAROLINA

ATC DEVELOPMENT
3206 W Wimbleton Drive
Augusta, GA 30909
706-434-3043
atcdevelopment.com

JAMES C. HAWTHORN ASSOCIATES
ARCHITECTS
1900 Kress Wood Circle
Dayton, Ohio 45429
937.298.3607 jim@jcharc.com

STATE OF SOUTH CAROLINA — JAMES CLIFFORD HAWTHORN, OHIO 7473 — REGISTERED ARCHITECT

REVISIONS

NO.	DATE	DESCRIPTION
1.	9.6.2023	RELEASED FOR BUILDING PERMIT APPLICATION

DATE
9.6.2023

FITNESS CENTER

FILE NO.
23.003

SHEET NO.
A1.3

COMcheck Software Version COMcheckWeb
Envelope Compliance Certificate

Project Information

Energy Code: 2015 IECC
Project Title: Pool Cabana
Location: North Augusta, South Carolina
Climate Zone: 3a
Project Type: New Construction

Construction Site:
North Augusta, South Carolina

Owner/Agent:
Kurt Eyring
ATC Development
PO Box 1372
Augusta, Georgia 30903
704-434-3043
kurt.eyring@atcdevelopment.com

Designer/Contractor:
James Hawthorn
James C Hawthorn Associates
1900 Kress Wood Circle
Kettering, Ohio 45429
937-477-1119
jim@jcharc.com

Additional Efficiency Package(s)

Credits: 1.0 Required 1.0 Proposed
Enhanced Interior Lighting Controls, 1.0 credit

Building Area	Floor Area
1-Exercise Center : Nonresidential	320

Envelope Assemblies

Assembly	Gross Area or Perimeter	Cavity R-Value	Cont. R-Value	Proposed U-Factor	Budget U-Factor(a)
Roof: Attic Roof, Wood Joists, [Bldg. Use 1 - Exercise Center]	320	38.0	0.0	0.027	0.027
Floor: Unheated Slab-On-Grade, [Bldg. Use 1 - Exercise Center] (b)	84	---	---	0.730	0.730
NORTH					
Ext. Wall: Wood-Framed, 16in. o.c., [Bldg. Use 1 - Exercise Center]	90	15.0	0.0	0.083	0.064
Door: Insulated Metal, Swinging, [Bldg. Use 1 - Exercise Center]	21	---	---	0.130	0.610
EAST					
Ext. Wall: Wood-Framed, 16in. o.c., [Bldg. Use 1 - Exercise Center]	288	15.0	0.0	0.083	0.064
Door: Insulated Metal, Swinging, [Bldg. Use 1 - Exercise Center]	21	---	---	0.130	0.610
SOUTH					
Ext. Wall: Wood-Framed, 16in. o.c., [Bldg. Use 1 - Exercise Center]	90	15.0	0.0	0.083	0.064
Door: Insulated Metal, Swinging, [Bldg. Use 1 - Exercise Center]	21	---	---	0.130	0.610
WEST					
Ext. Wall: Wood-Framed, 16in. o.c., [Bldg. Use 1 - Exercise Center]	288	15.0	0.0	0.083	0.064

(a) Budget U-factors are used for software baseline calculations ONLY, and are not code requirements.
(b) Slab-On-Grade proposed and budget U-factors shown in table are F-factors.

Envelope PASSES: Design 10% better than code

Envelope Compliance Statement

Compliance Statement: The proposed envelope design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed envelope systems have been designed to meet the 2015 IECC requirements in COM*check* Version COMcheckWeb and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

James C Hawthorn-Architect — Name - Title
Signature
July 19, 2023 — Date

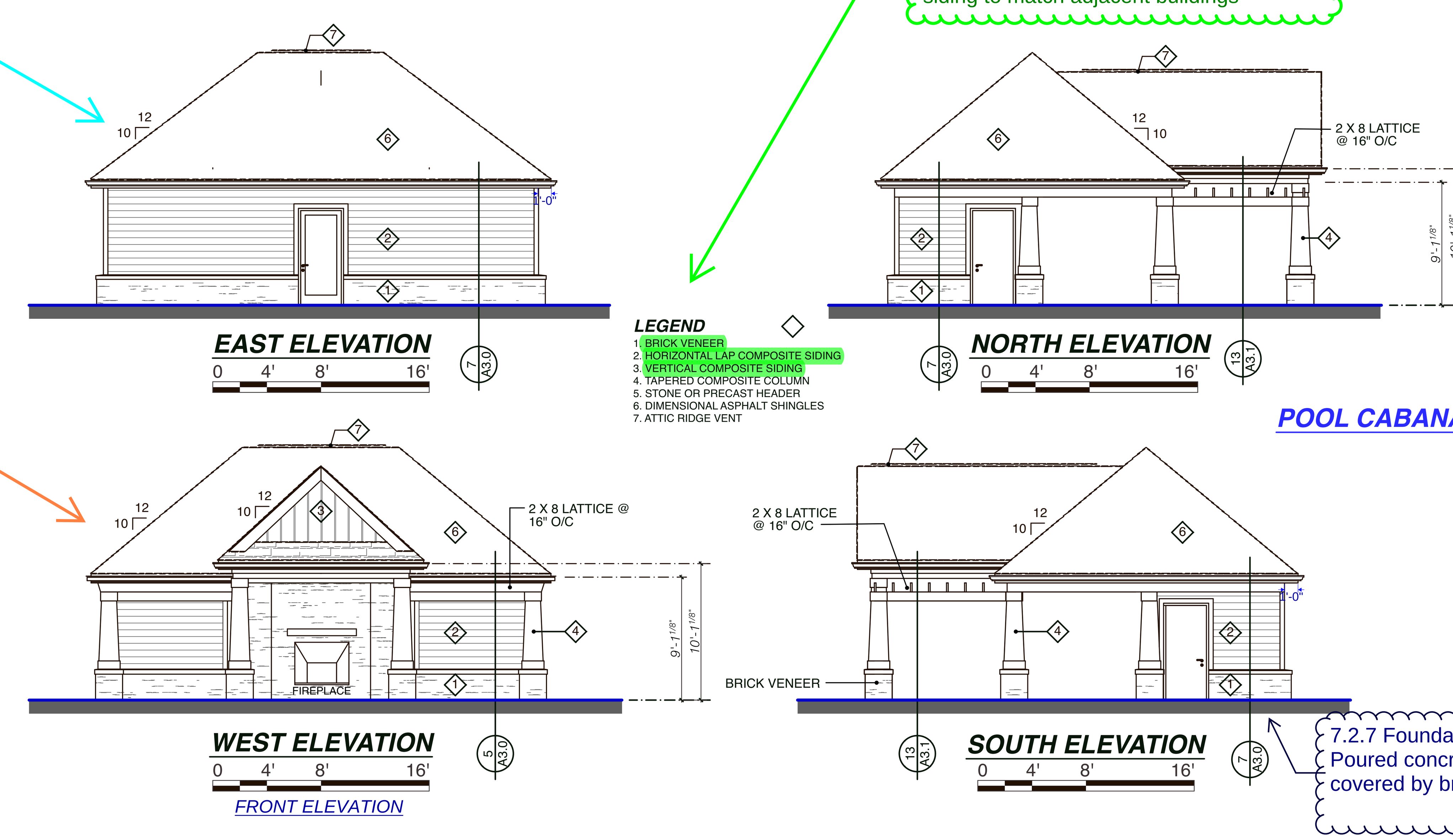
Roof 7.2.6
- 10/12 pitch with 30 year architectural shingles.
- Gable on front faces pool and clubhouse.
- Roof eave projection greater than 12"

Exterior Finish Materials 7.2.8
- Brick masonry with accent areas of fiber cement horizontal lap siding & vertical siding to match adjacent buildings

Main Entrance 7.2.3
- Faces pool area with 12' wide recessed porch entry
- Main porch is 32' wide with a covered area of 500 sf.
- Columns have a clear base, center section, & top.
- Columns and finishes match adjacent buildings.

7.2.7 Foundation:
Poured concrete foundation covered by brick. <12"

7.2.9 Windows & Entryways
Front elevation is an open air amenity porch for the pool area. Porch will have a TV, Fireplace sitting area, & drinking fountain.



CABANA CENTER ROOM FINISH SCHEDULE

FIRST FLOOR	LOCATION	FLOORS	WALLS	WALL FINISH	CEILING	REMARKS
C101	WOMENS RESTROOM C101	CONC.	DW/TILE	PAINT	DW	REFERENCED NOTE 1
C102	DOG WASK C102	CONC.	TILE	PAINT	DW	REFERENCED NOTE 1
C103	MENS RESTROOM C103	CONC.	DW/TILE	PAINT	DW	REFERENCED NOTE 1

1. PROVIDE WATER RESISTANT AND NON-ABSORBENT FINISHES PER OBC 1210.1 THROUGH 1210.2

LEGEND
VT VINYL TILE
LVT LUXURY VINYL TILE
CT CERAMIC TILE
CONC. CONCRETE
DW DRYWALL
SAT SUSPENDED ACOUSTIC TILE
P PAINT
WC WALL COVERING

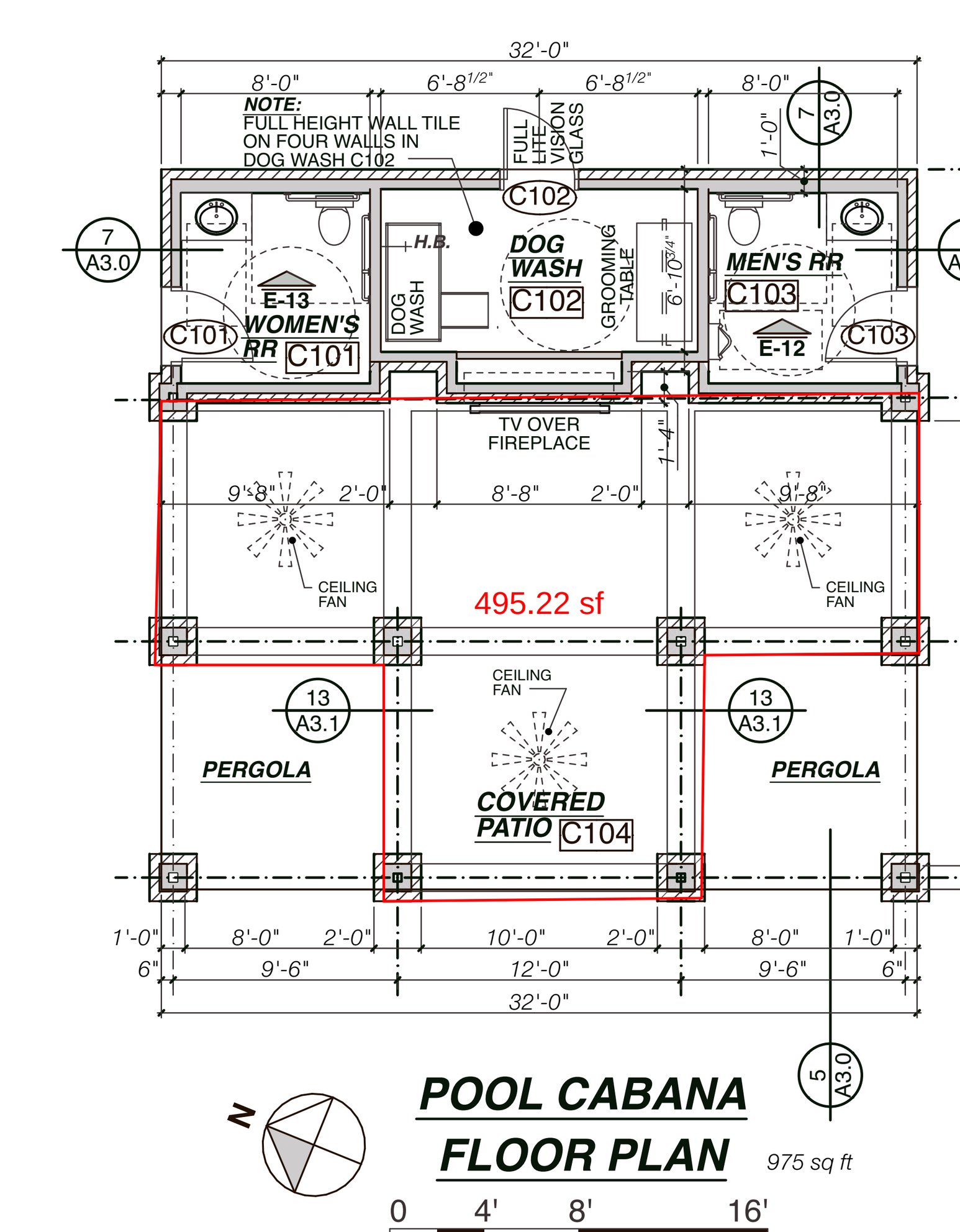
CABANA DOOR SCHEDULE

FIRST FLOOR

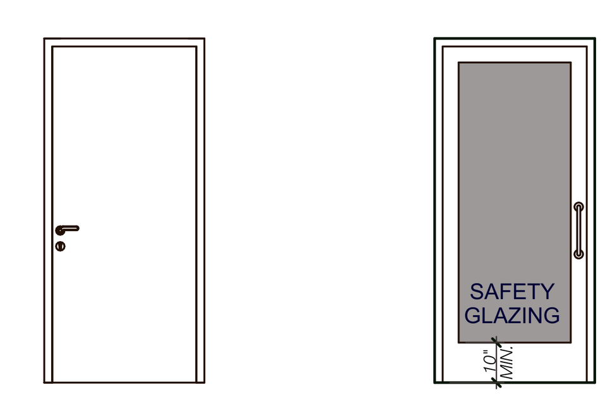
DOOR NO.	LOCATION	SIZE	TYPE	MATERIAL	FRAME	CLOSER	HARDWARE	THRESHOLD	FIRE RATING	REMARKS
C101	WOMENS RESTROOM C101	3/0 X 7/0	J	WOOD	WOOD	YES	PRIVACY	YES		REFERENCED NOTE 1
C102	DOG WASH C102	3/0 X 7/0	A	WOOD	WOOD	YES	PASSAGE	YES		
C103	MENS RESTROOM C103	3/0 X 7/0	J	WOOD	WOOD	YES	PRIVACY	YES		REFERENCED NOTE 1

REFERENCED NOTES
1. PROVIDE APPROPRIATE SIGNAGE (INCLUDING TACTILE SIGNAGE) AT ALL EXIT DOORS, RESTROOM DOORS

GENERAL NOTES
1. COORDINATE HARDWARE SELECTION WITH THE OWNER. ALL MEANS OF EGRESS DOORS SHALL BE READILY OPENABLE FROM THE EGRESS SIDE WITHOUT THE USE OF A KEY OR SPECIAL KNOWLEDGE OR EFFORT.
2. SAFETY GLAZING SHALL COMPLY WITH SECTION 2406.0. ALL GLAZING IN DOORS AND SIDELIGHTS SHALL BE SAFETY GLASS.
3. DOOR CLOSERS: THE SWEEP PERIOD OF THE CLOSER SHALL BE ADJUSTED SO THAT FROM AN OPEN POSITION OF 70 DEGREES, THE DOOR WILL TAKE AT LEAST 3 SECONDS TO MOVE TO A POINT 3" FROM THE LATCH MEASURED TO THE LEADING EDGE OF THE DOOR.
4 EGRESS DOORS SHALL HAVE MIN. 32" REQ'D. CLEAR OPENINGS. WIDTH SHALL BE MEASURED FROM THE FACE OF THE DOOR (AT 90 DEGREES) TO THE OPPOSITE STOP.
5. DOOR HANDLES, PULLS, LATCHES, LOCKS AND OTHER OPERATING DEVICES SHALL BE A MAXIMUM OF 48" ABOVE THE FINISHED FLOOR.
6. THE OPERATING DEVICES SHALL BE CAPABLE OF OPERATION WITH ONE HAND AND SHALL NOT REQUIRE TIGHT GRASPING, TIGHT PINCHING OR TWISTING OF THE WRIST TO OPERATE. SEE DOOR SCHEDULE.
7. THERE ARE NO SPECIAL LOCKING ARRANGEMENTS AS A PART OF THIS PERMIT.
8. SECTION 1010.1.10 - ELECTRICAL ROOMS WITH EQUIPMENT RATED 800 AMPERES OR MORE AND OVER 6' WIDE THAT CONTAIN OVERCURRENT DEVICES, SWITCHING DEVICES OR CONTROL DEVICES WITH EXIT OR EXIT ACCESS DOORS SHALL BE EQUIPPED WITH PANIC HARDWARE OR FIRE EXIT HARDWARE. THE DOORS SHALL SWING IN THE DIRECTION OF EGRESS TRAVEL. PROJECT MANAGER SHALL VERIFY.



POOL CABANA FLOOR PLAN 975 sq ft
AREA UNDER ROOF -785 sq ft



TYPE J
ALUMINUM CLAD WOOD DOOR AND FRAME

TYPE A
ALUMINUM CLAD WOOD DOOR AND FRAME WITH FULL VISION PANEL

DOOR TYPES

NOTES:
1. **ALL DIMENSIONS ARE FOR ROUGH OPENINGS. FIELD VERIFY PRIOR TO ORDERING OR INSTALLING DOORS.**
2. INTERIOR GLASS DOORS TO BE SINGLE GLAZING.
3. EXTERIOR GLASS DOORS TO BE INSULATED THERMAL BREAK SYSTEM.
4. SAFETY GLAZING SHALL COMPLY WITH OBC SECTION 2406. ALL GLASS IN DOORS AND SIDELIGHTS SHALL BE SAFETY GLASS.
5. VERIFY QUANTITIES WITH GENERAL CONTRACTOR.

THE AMENITIES AT OAKHAVEN APARTMENTS
POOL CABANA
CITY OF NORTH AUGUSTA
SOUTH CAROLINA

ATC DEVELOPMENT
3206 W Wimbledon Drive
Augusta, Georgia 30909
706-736-4748
atcdevelopment.com

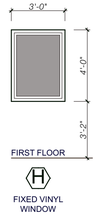
JAMES C. HAWTHORN ASSOCIATES
ARCHITECTS
1900 KRESS WOOD CIRCLE
DAYTON, OHIO 45429
937.298.3607 JIM@JCHARC.COM

STATE OF SOUTH CAROLINA — JAMES CLIFFORD HAWTHORN, DAYTON, OHIO, 7473 — REGISTERED ARCHITECT
9.5.2023 JAMES C HAWTHORN

REVISIONS

NO.	DATE	DESCRIPTION
1.	9.6.2023	RELEASED FOR BUILDING PERMIT APPLICATION

DATE 9.6.2023
POOL CABANA
FILE NO. 20.005
SHEET NO. **A1.4**



EXTERIOR WINDOW TYPES

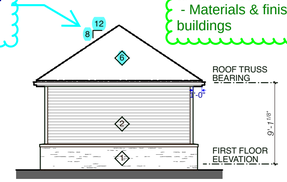
0 2' 4' 8'

WINDOW NOTES:

1. **ALL DIMENSIONS ARE FOR ROUGH OPENINGS. FIELD VERIFY PRIOR TO ORDERING OR INSTALLING DOORS.**
2. VERIFY ROUGH OPENINGS AND REINFORCEMENTS IN FIELD PRIOR ORDERING.
3. INTERIOR WINDOWS TO BE SINGLE GLAZING IN ALUMINUM FRAMES
4. EXTERIOR WINDOWS TO BE FIXED OR SINGLE-HUNG VINYL WINDOWS
5. SAFETY GLAZING SHALL COMPLY WITH OBC SECTION 2406. ALL GLASS IN DOORS AND SIDELIGHTS SHALL BE SAFETY GLASS.
6. VERIFY QUANTITIES WITH GENERAL CONTRACTOR.

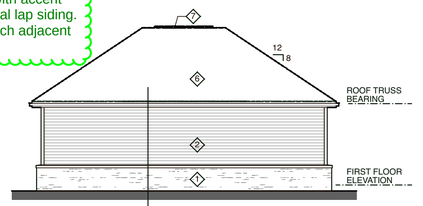
Roof 7.2.6
- 8/12 pitch with 30 year architectural shingles.
- Roof eave projections greater than 12"

Exterior Finish Materials 7.2.8
- Brick masonry water table with accent areas of fiber cement horizontal lap siding.
- Materials & finished will match adjacent buildings



WEST ELEVATION

0 4' 8' 16'



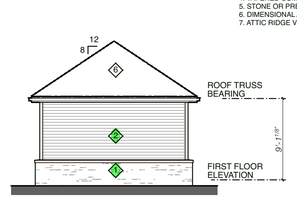
SOUTH ELEVATION

0 4' 8' 16'

LEGEND

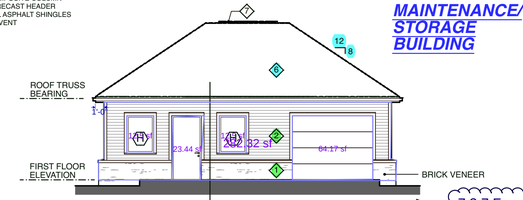
1. BRICK VENEER
2. HORIZONTAL LAP COMPOSITE SIDING
3. VERTICAL COMPOSITE SIDING
4. TAPERED COMPOSITE COLUMN
5. STONE OR PRECAST HEADER
6. DIMENSIONAL ASPHALT SHINGLES
7. ATTIC RIDGE VENT

MAINTENANCE/ STORAGE BUILDING



EAST ELEVATION

0 4' 8' 16'



NORTH ELEVATION

0 4' 8' 16'

FRONT ELEVATION

7.2.7 Foundation:
Poured concrete foundation covered by brick. < 12"

Main Entrance 7.2.3
- Maintenance Building is strictly for property maintenance staff only.
- Entrances face the street and maintenance parking area.

7.2.9 Windows & Entryways
112sf of window & entry = 40%
170sf of brick & fiber cement = 60%
282sf total front facade facing street

MAINTENANCE BUILDING ROOM FINISH SCHEDULE

FIRST FLOOR

	LOCATION	FLOORS	WALLS	WALL FINISH	CEILING	REMARKS
M101	MAINTENANCE AREA M101	CONC.	DRYWALL	PAINT	DW	REFERENCED NOTE 1
M102	RESTROOM M102	CONC.	DRYWALL	PAINT	DW	REFERENCED NOTE 1

REFERENCED NOTES

1. PROVIDE WATER RESISTANT AND NON-ABSORBENT FINISHES PER OBC 1210.1 THROUGH 1210.2

LEGEND

VT VINYL TILE
LVT LUXURY VINYL TILE
CT CERAMIC TILE
CONC. CONCRETE
DW DRYWALL
SAT SUSPENDED ACOUSTIC TILE
P PAINT
WC WALL COVERING

TYPE J

ALUMINUM CLAD WOOD DOOR AND FRAME

TYPE E

SECTIONAL OVERHEAD DOOR

TYPE C

WOOD DOOR AND FRAME

MAINTENANCE DOOR SCHEDULE

FIRST FLOOR

DOOR NO.	LOCATION	SIZE	TYPE	MATERIAL	FRAME	CLOSER	HARDWARE	THRESHOLD	FIRE RATING	REMARKS
M101	MAINTENANCE AREA M101	3/0 X 7/0	J	WOOD	WOOD	YES	LOCKSET	YES		REFERENCED NOTE 1
M101A	MAINTENANCE AREA M101	9/0 X 7/0	E	STEEL	-		-			
M102	RESTROOM M102	3/0 X 7/0	C	WOOD	WOOD		PRIVACY			REFERENCED NOTE 1

REFERENCED NOTES

1. PROVIDE APPROPRIATE SIGNAGE (INCLUDING TACTILE SIGNAGE) AT ALL EXIT DOORS, RESTROOM DOORS

GENERAL NOTES

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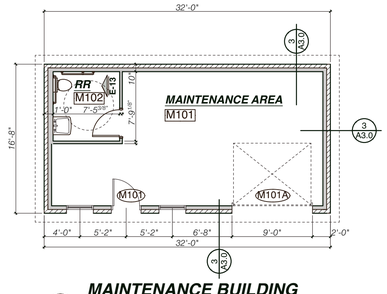
7. THERE ARE NO SPECIAL LOCKING ARRANGEMENTS AS A PART OF THIS PERMIT.
8. SECTION 1010.1.10 - ELECTRICAL ROOMS WITH EQUIPMENT RATED 800 AMPERES OR MORE AND OVER 6' WIDE THAT CONTAIN OVERCURRENT DEVICES, SWITCHING DEVICES OR CONTROL DEVICES WITH EXIT OR EXIT ACCESS DOORS SHALL BE EQUIPPED WITH PANIC HARDWARE OR FIRE EXIT HARDWARE. THE DOORS SHALL SWING IN THE DIRECTION OF EGRESS TRAVEL. PROJECT MANAGER SHALL VERIFY.



MAINTENANCE BUILDING

0 4' 8' 16'

533 sq ft

N

THE AMENITIES AT OAKHAVEN APARTMENTS
MAINTENANCE BUILDING
CITY OF NORTH AUGUSTA
SOUTH CAROLINA

ATC DEVELOPMENT
3206 W Wimbleton Drive
Augusta, GA 30909
706-294-7138
atcdevelopment.com

JAMES C. HAWTHORN ASSOCIATES
ARCHITECTS
1900 Kress Wood Circle
Dayton, Ohio 45429
937.298.3607 jim@jchARC.com

STATE OF SOUTH CAROLINA
JAMES CLIFFORD HAWTHORN
DAYTON, OHIO
7473
REGISTERED ARCHITECT

© 5.2023 JAMES C HAWTHORN

REVISIONS

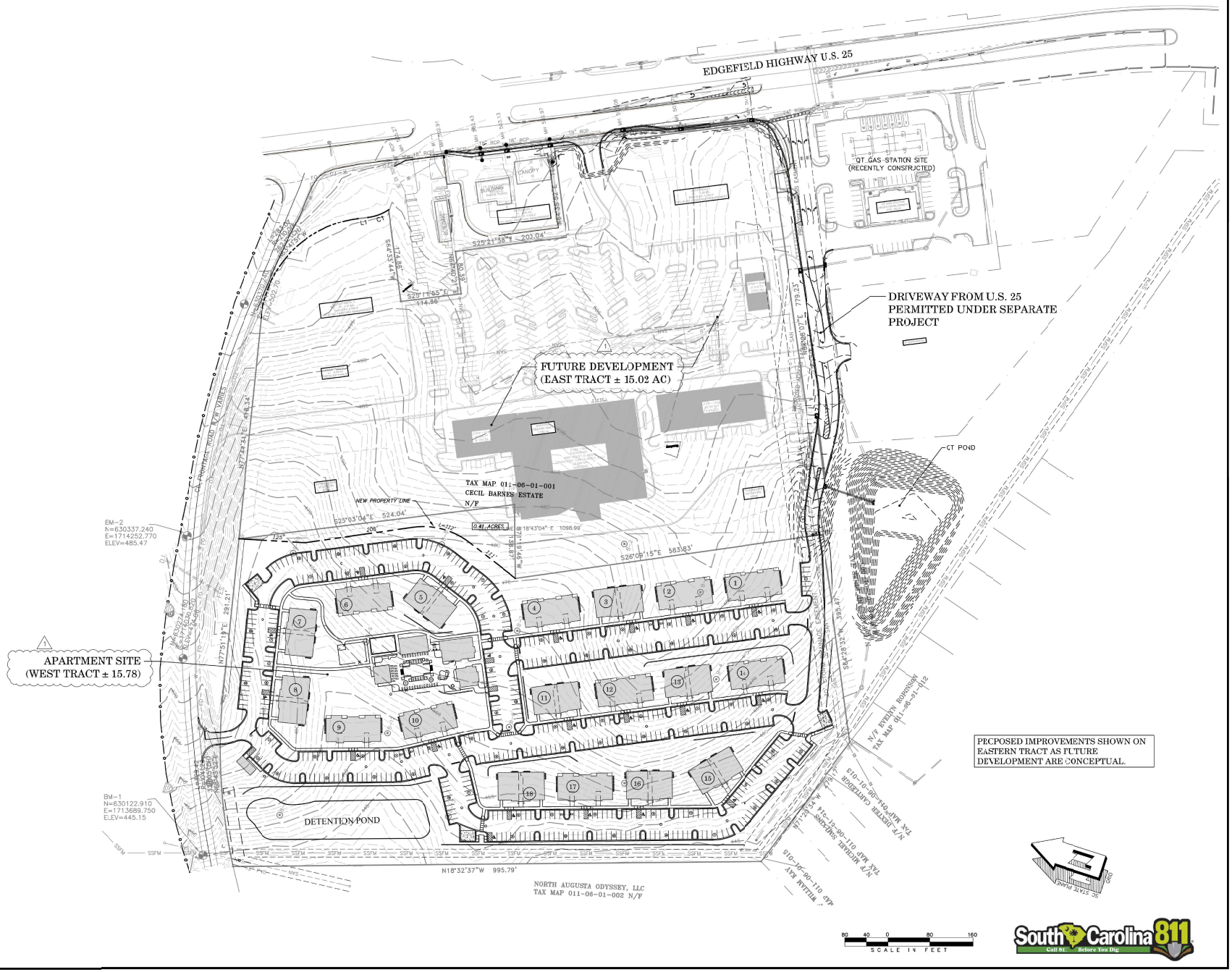
NO.	DATE	DESCRIPTION
1.	9.6.2023	RELEASED FOR BUILDING PERMIT APPLICATION

DATE
9.6.2023

MAINTENANCE BUILDING

FILE NO.
20.005

SHEET NO.
A1.5



CRANSTON

SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER NO.27380 JAMES P. DEAN 12-04-2023

SOUTH CAROLINA Cranston Engineering Group NO. C00575 CERTIFICATE OF AUTHORIZATION

REV #	DATE	DESCRIPTION
1	12/4/2023	PER CITY COMMENTS

OAKHAVEN APARTMENTS

OVERALL PLAN

DRAWN BY:	BSF/GSA
CHECKED BY:	BSF
APPROVED BY:	JPD
DATE:	AUGUST 4, 2023
SCALE:	1" = 80'
JOB No.	2021-0673
DRAWING No.	C-102

G:\PROJECTS\2021\2021-0673_DEER VALLEY APARTMENTS\AC-3RDRAWINGS\CIVIL\2021-0673_OV.DWG 12/4/2023 6:01 PM

TRAFFIC IMPACT ANALYSIS FOR

Supermarket, Retail & Outparcel Development

North Augusta, South Carolina

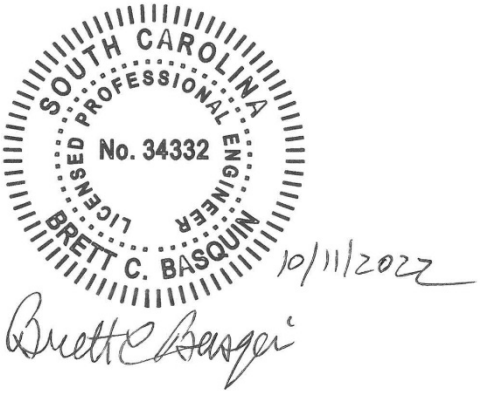
JANUARY 18, 2022

REVISED FEBRUARY 17, 2022

UPDATED JUNE 15, 2022

UPDATED OCTOBER 11, 2022

PREPARED FOR:
Halvorsen Development Corporation
851 South Federal Highway
Suite 201
Boca Raton, Florida 33432



PREPARED BY:

Foresite Group, LLC
3740 Davinci Court, Suite 100
Peachtree Corners, GA 30092
o | 770.368.1399
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1. Introduction

This report contains the results from a traffic impact analysis performed for a proposed commercial retail development in the City of North Augusta, South Carolina in Aiken County. Due to the nature of the proposed development, construction will be completed in a single phase, except for the outparcels. Full build-out will consist of a supermarket, commercial retail spaces, outparcels proposed with various land uses including a fast-food restaurant, coffee shop with drive-through, sit-down restaurant and urgent care/outpatient medical office. The site development will occupy an undeveloped section of land, located on the southwest side of Edgefield Road between Interstate 20 and Ascauga Lake Road.

For the update to the report in June 2022, the commercial site was updated, and a separate residential development was included in the analysis. The residential development is located to the west behind the commercial development and is proposed to have 306 units.

The purpose of the traffic impact study is to identify the impacts to traffic associated with the planned retail development at the proposed driveways along Edgefield Road, existing signalized intersections at the I-20 ramps and Ascauga Lake Road and the future intersection improvement planned at what will be a shared site access with a proposed adjacent gas station development. In addition to the proposed retail development, background traffic growth is being analyzed in the form of a background growth rate, provided in the analysis for the intersection improvement project. Figure 1 shows the proposed site location in the vicinity of the City of North Augusta, SC.

The site location is shown on an aerial image in Figure 2. A copy of the proposed site plan is provided in Appendix A.

This report has been prepared for submittal to the City of North Augusta and the South Carolina Department of Transportation (SCDOT) to evaluate the traffic conditions at the site. This report summarizes the data collected, proposed access points, projected traffic at the study intersections, analysis of traffic impacts including level of service (LOS), and conclusions from the analysis.

Figure 1: Vicinity Map

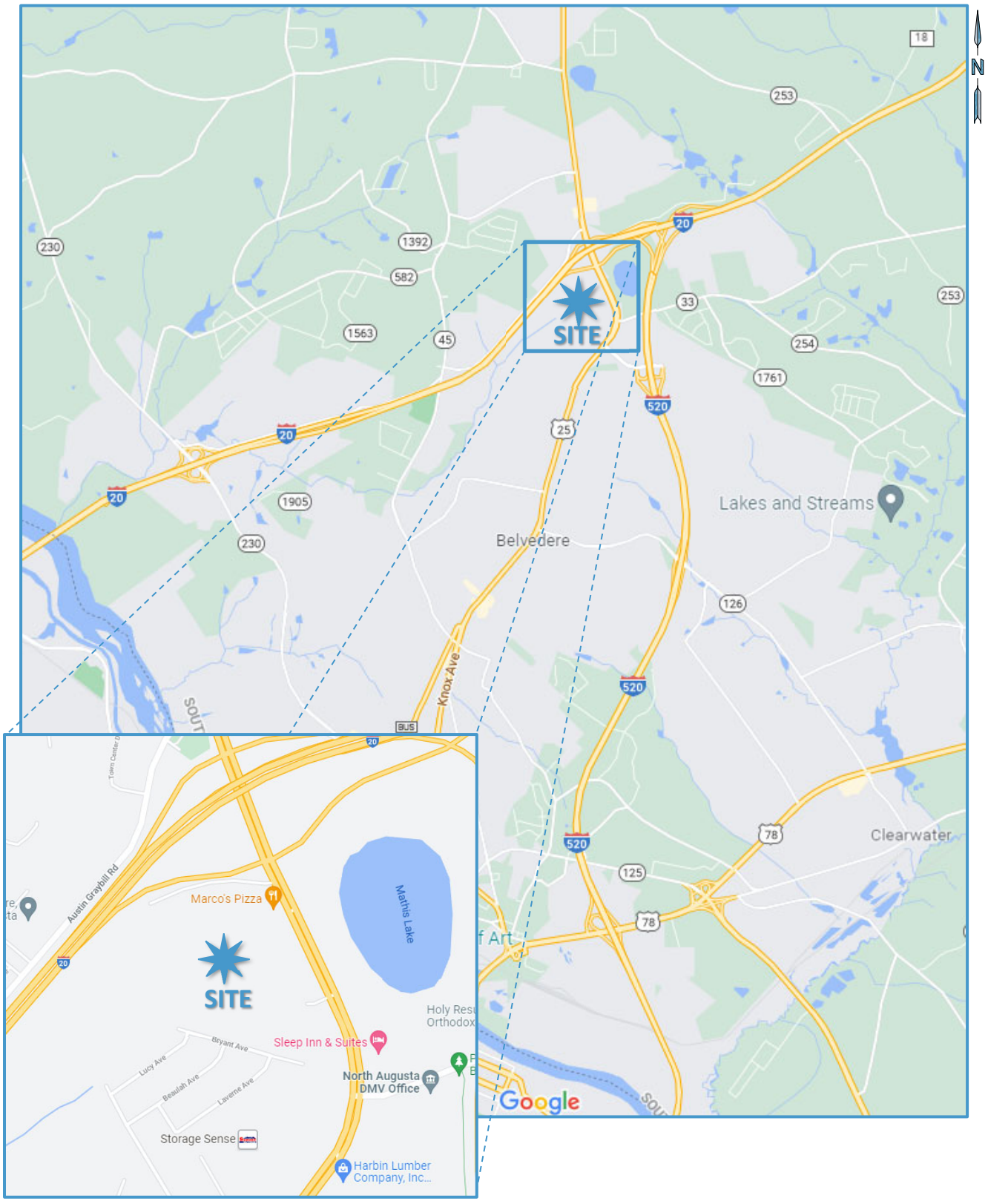


Figure 2: Site Location Aerial

2. Existing and Proposed Development Description

The site is located on the southwest side of Edgefield Road, to the south of I-20, in the City of North Augusta, SC. The planned development is located at an existing undeveloped site, adjacent to an existing outparcel with a small commercial development. The larger portion of the development will contain a supermarket and in-line commercial retail building space. The four outparcels are proposed to have a fast-food restaurant with drive-through window, coffee shop with drive-through window, sit down restaurant and an urgent care/outpatient medical office. A list of the proposed ITE land uses and codes used in this study are provided below:

- Supermarket (ITE code 850) – 51,908-SF
    - *This land use increased 4,668-SF – 6/15/22 update*
- Variety Store (ITE code 814) – 21,530-SF
    - *This land use decreased 170-SF – 6/15/22 update*
- Coffee Shop with Drive-Through Window (ITE code 937) – 3,500-SF
- Fast-Food Restaurant with Drive-Through Window (ITE code 934) – 5,000-SF
- Medical/Dental Office (ITE code 720) – 7,000-SF
- High Turnover/Sit Down Restaurant (ITE code 932) – 5,000-SF
- Fast Food Restaurant with Drive-Through Window (ITE code 934) – 2,875-SF
    - *This is a new building space identified as Retail C– 6/15/22 update*
- Multifamily Housing (Mid-Rise) (ITE code 221) – 306 Dwelling Units
    - *Adjacent proposed residential development with shared access– 6/15/22 update*

The development, at full build-out, will consist of a 51,908-SF supermarket and a total of 21,530-SF of additional mixed retail development identified as variety retail ITE code 814. The four outparcels will contain various land-uses as noted above. The update to the analysis included the additional fast-food restaurant and the multi-family housing. A copy of the proposed site plan is attached in Appendix A.

There are also plans for a different developer to construct a gas station with convenient store at the adjacent property to the south that will share access with the planned driveway (Driveway 2) between the two properties. The traffic impact analysis report for that development is referenced throughout this report. The adjacent gas station development includes a proposed signalized intersection at the shared driveway location.

3. Existing Conditions

3.1. Transportation Facilities

This traffic impact study examines the existing, background (2025), and build (2025) operations of the intersections listed in Table 1. There are three main roadways being analyzed in this report with roadway characteristics summarized in Table 2. The existing lane configuration is shown in Figure 3 and 3A.

Table 1: Study Intersections

#	Intersections	Traffic Control
1	Edgefield Rd at I-20 WB Ramp	Existing Signalized Intersection
2	Edgefield Rd at I-20 EB Ramp	Existing Signalized Intersection
3	Edgefield Rd at Access Rd	Existing Two-Way Stop Control (RIRO)
4	Edgefield Rd at Driveway 1	Propsed Two-Way Stop Control (RIRO)
5	Edgefield Rd at Driveway 2	Propsed Signalized Intersection
6	Edgefield Rd at Ascauga Lake Rd	Existing Signalized Intersection
7	Edgefield Rd at US 25 Connector	Existing Signalized Intersection

Edgefield Road / SR 121 is classified as a Principal Arterial. Edgefield Road runs primarily north to south from SR 19 to the north and US 1 to the south. This section of the road is a six-lane median divided highway in the area of the proposed site. The speed limit in this location is 45 mph.

Interstate 20 is classified as a Principal Arterial Interstate. I-20 runs east to west from the Georgia state line through Columbia. This section of the road is a four-lane median divided roadway. The speed limit in this location is 70 mph.

Ascauga Lake Road / SR 33 is classified as a Major Collector. Ascauga Lake Road runs east to west from Edgefield Rd to SR 191. Ascauga Lake Rd is primarily a two-lane undivided highway. The speed limit in this location is 45 mph.

Frontage Road is classified as a Major Collector. Frontage Road runs parallel to I-20. The road intersects Edgefield to the east and dead ends to the west. The road is approximately only 1,325-ft in length. This road will serve as the northernmost access location to the site with two access driveway locations to the site off this road.

US 25 Connector is classified as a Minor Arterial. US 25 Connector runs east to west from Edgefield Rd to I-520 NB and SB ramps. US 25 Connector is primarily a four-lane divided highway. The speed limit in this location is 45 mph. *This intersection was requested to be added to the study by the City of North Augusta for the October 2022 update.*

Figure 3: Existing Lane Geometry

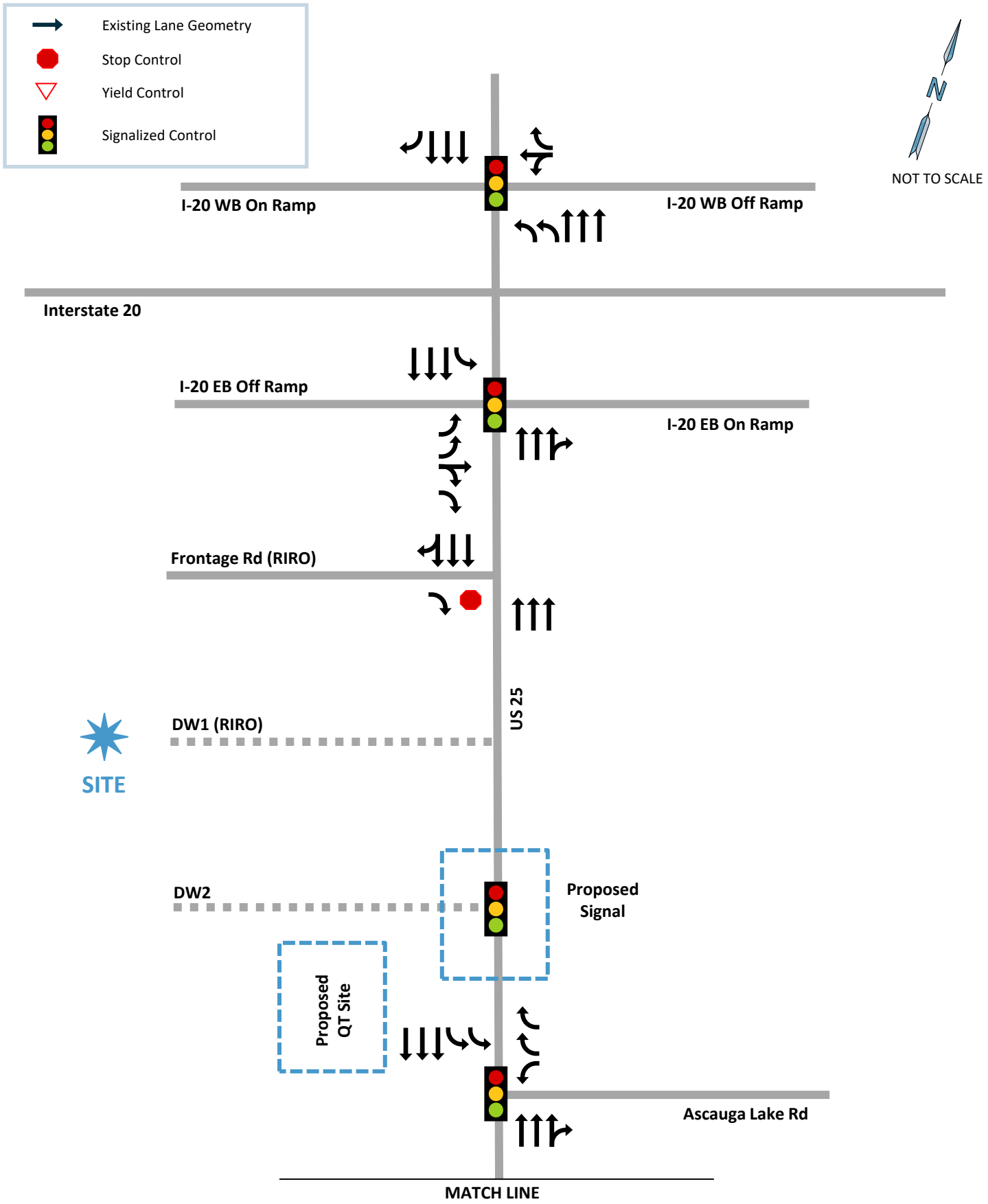


Figure 3A: Existing Lane Geometry

Existing Lane Geometry

Stop Control

Yield Control

Signalized Control

Intersection added to report October 2022 per City request.

NOT TO SCALE

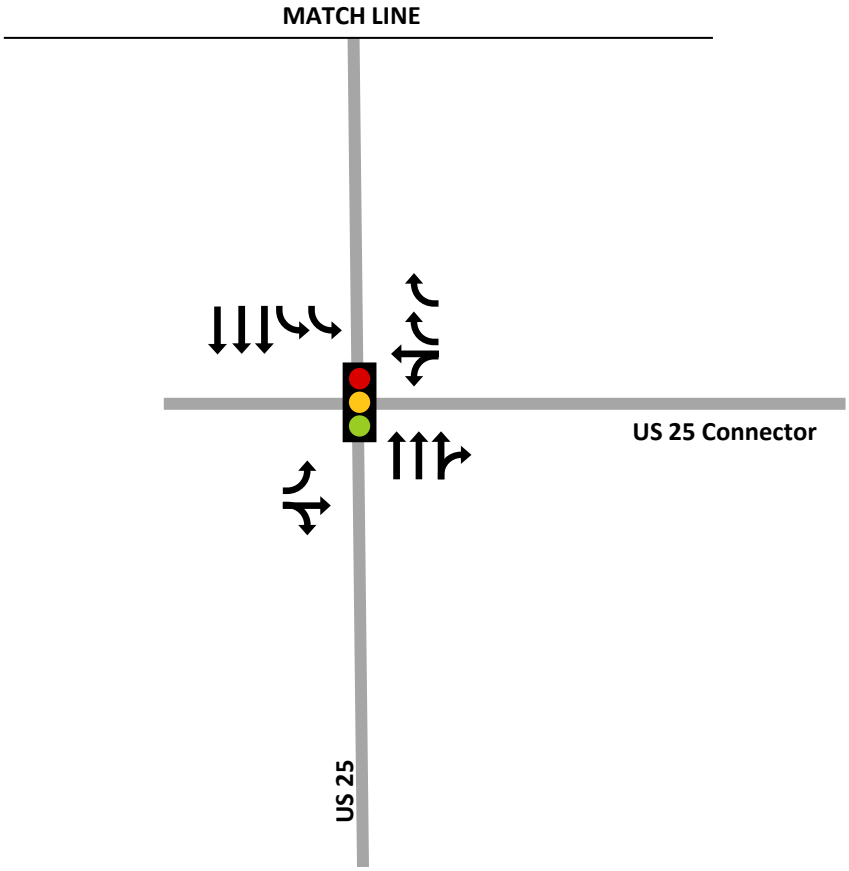


Figure 4: Existing (2021) Traffic Volumes

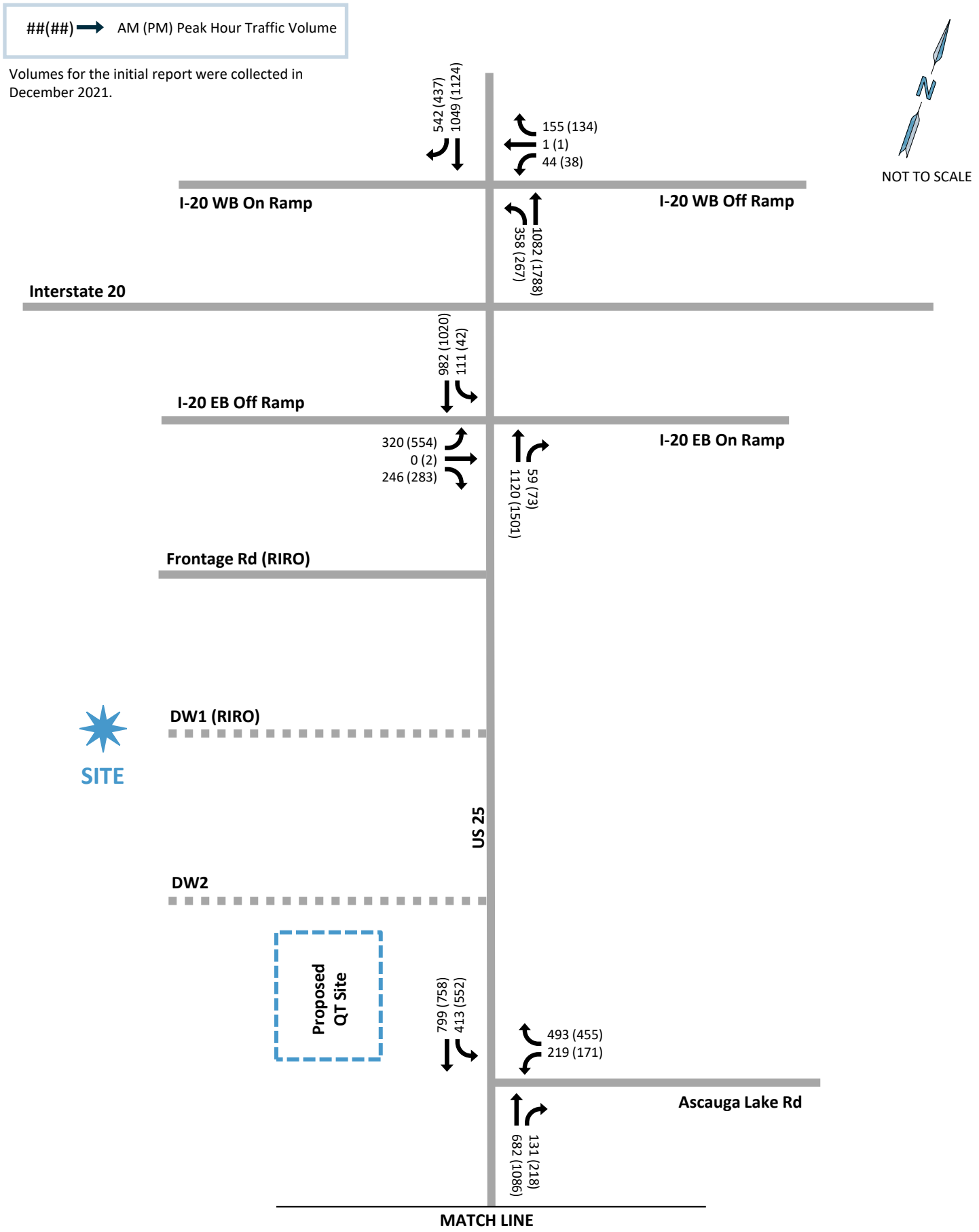
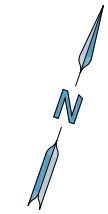


Figure 4A: Existing (2022) Traffic Volumes

##(##) → AM (PM) Peak Hour Traffic Volume

Volumes from the Highland Springs Development TIA collected in April 2022.



NOT TO SCALE

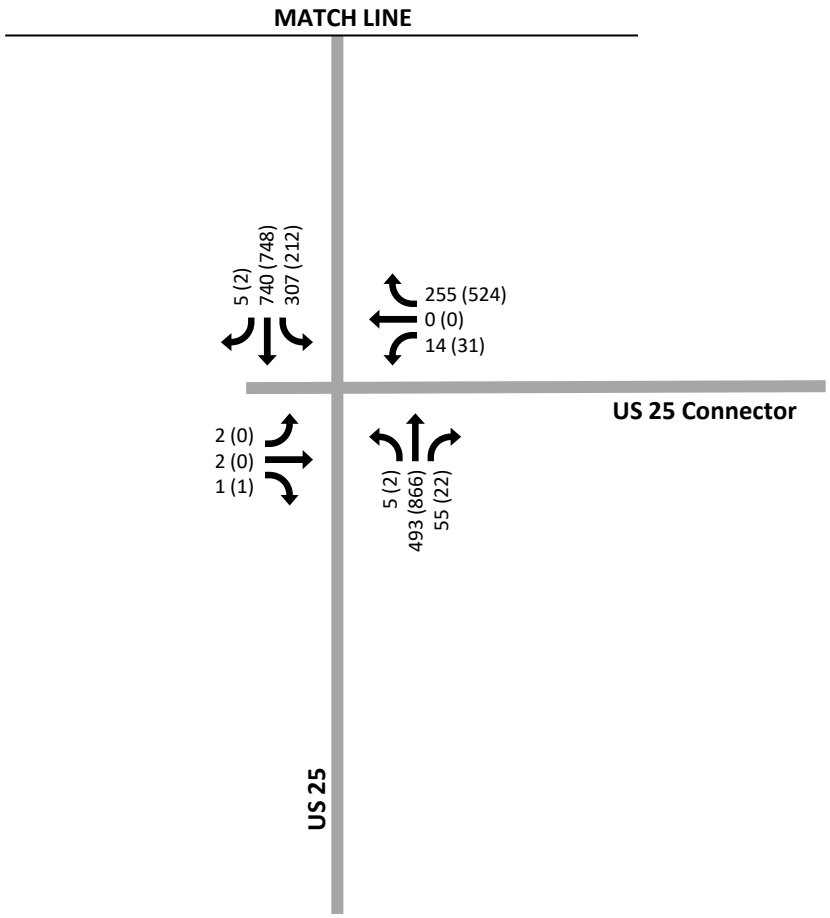


Table 2: Roadway Characteristics

Roadway	# of Lanes	Posted Speed Limit (MPH)	Functional Classification
Edgefield Rd/SR 121/US 25	6	45	Principal Arterial
Ascauga Lake Rd/SR33	2	45	Major Collector
Interstate 20	4	70	Interstate
US 25 Connector	4	45	Minor Arterial

3.2. Traffic Count Data

Traffic counts for the intersection in the study were collected on Tuesday December 14th, 2021. The peak hour volumes are displayed in Figures 4 and 4A, and full traffic counts are attached in Appendix B. There were also 24-hr ADT counts performed on Edgefield Road and Ascauga Lake Road on Tuesday December 14th, 2021. The collected 24-hr ADT counts are provided below:

US 25/SR 121/Edgefield Road

- Daily Traffic Volume North of I-20 WB Ramp
  Total: 38,829 vpd
  - Northbound: 18,641 vpd
  - Southbound: 20,188 vpd

US 25/SR 121/Edgefield Road

- Daily Traffic Volume North of SR 33/Ascauga Lake Rd
  Total: 31,429 vpd
  - Northbound: 15,721 vpd
  - Southbound: 15,708 vpd

US 25/SR 121/Edgefield Road

- Daily Traffic Volume South of SR 33/Ascauga Lake Rd
  Total: 24,565 vpd
  - Eastbound: 12,411 vpd
  - Westbound: 12,154 vpd

SR 33/Ascauga Lake Road

- Daily Traffic Volume East of SR 121/Edgefield Road
  Total: 15,232 vpd
  - Eastbound: 7,815 vpd
  - Westbound: 7,417 vpd

3.3. Existing Conditions Capacity Analysis

Existing traffic volumes were entered into a *Synchro 10* model to perform capacity analysis of existing conditions for the AM and PM peak periods. The results of the capacity analysis are shown by lane group movement in Table 3. Average vehicular delays and level-of service, as defined by the Highway Capacity Manual (HCM) 2000 Edition are presented, and 95th percentile queues from *SimTraffic 10* are shown. Due to non-standard NEMA phasing at the signalized intersection of I-20 EB Ramps at Edgefield Road, HCM 2000 was used for capacity analysis. Signal timings at these locations were provided by SCDOT and are included in Appendix C. Full *Synchro* output reports are also included Appendix C. Results of the capacity analysis are described below.

The existing Frontage Road is shown as a dead-end road with no additional connections or access points along that road. Traffic counts were not collected at this Frontage Road, and it is not included in the analysis for the existing and background conditions.

Table 3: Existing Conditions Capacity Analysis

Intersection	Control	Lane Group Movement	AM Peak Hour			PM Peak Hour		
			Delay (s)	LOS	95th% Queue (ft)	Delay (s)	LOS	95th% Queue (ft)
Edgefield Rd at I-20 WB Ramps	Signal Control	WBL/T	56.6	**E**	70	52.1	D	76
		WBR	60.1	**E**	84	53.8	D	115
		NBL	60.4	**E**	237	38.0	D	165
		NBT	1.9	A	26	1.8	A	81
		SBT	17.6	B	286	20.3	C	291
		SBR	18.1	B	215	19.1	B	148
		Intersection	19.7	B	-	14.3	B	-
Edgefield Rd at I-20 EB Ramps	Signal Control	EBL	62.5	**E**	212	53.1	D	359
		EBT/R	52.4	D	64	41.4	D	134
		NB	12.7	B	92	18.5	B	124
		SBL	86.9	**F**	192	63.2	**E**	81
		SBT	9.1	A	200	0.9	A	85
		Intersection	20.3	C	-	21.3	C	-
Edgefield Rd at Ascauga Lake Rd	Signal Control	WBL	67.8	**E**	294	61.2	**E**	197
		WBR	49.8	D	116	48.6	D	154
		NB	19.9	B	240	24.9	C	340
		SBL	62.8	**E**	285	55.7	**E**	311
		SBT	6.1	A	128	4.9	A	120
		Intersection	31.6	C	-	30.7	C	-
Edgefield Rd at US 25 Connector	Signal Control	EBL	70.5	**E**	11	63.4	**E**	-
		EBT/R	70.7	**E**	26	63.4	**E**	-
		WBT/L	62.9	**E**	37	61.7	**E**	86
		WBR	31.3	C	62	24.6	C	133
		NBL	21.1	C	14	25.9	C	-
		NBT/R	23.9	C	125	32.8	C	200
		SBL	54.3	D	189	48.9	D	183
		SBT	6.8	A	25	11.9	B	25
		Intersection	23.5	C	-	26.3	C	-

Edgefield Road at I-20 WB Ramps
This intersection is part of a coordinated system included in the traffic signal timings provided by the SCDOT. During the existing conditions the signalized intersection operates at LOS B during both the AM and PM peak periods. The WB approaches operate at LOS E in the AM peak period and LOS D in the PM peak period. The NBL approach also operates at LOS E in the AM peak period and LOS D in the PM peak period. These associated delays are a result of the intersection being in a coordinated system.

There is considerably normal 95th percentile queueing associated with the approaches of this intersection during both peak periods.

Edgefield Road at I-20 EB Ramps
This intersection is also part of a coordinated system included in the traffic signal timings provided by the SCDOT. During the existing conditions the signalized intersection operates at LOS C during both the AM and PM peak periods. The EBL approach operates at LOS E in the AM peak period and LOS D in the PM peak period. The EBT/R approach lanes operate at LOS D in both the AM and PM peak periods. The SBL approach is shown to operate at LOS F in the AM peak period and LOS E in the PM peak period.

There is considerably normal 95th percentile queueing associated with the approaches of this intersection during both peak periods.

Edgefield Road at Ascauga Lake Road
This intersection is also part of a coordinated system included in the traffic signal timings provided by the SCDOT. During the existing conditions the signalized intersection operates at LOS C during both the AM and PM peak periods. The WBL approach operates at LOS E in both the AM and PM peak periods. The SBL approach is also shown to operate at LOS E in the AM and PM peak periods.

There is considerably normal 95th percentile queueing associated with the approaches of this intersection during both peak periods.

Edgefield Road at US 25 Connector – *Intersection added October 2022 update*
This intersection is also part of a coordinated system included in the traffic signal timings provided by the SCDOT. During the existing conditions the signalized intersection operates at LOS C during both the AM and PM peak periods. The EB and WBL approaches operate at LOS E in both the AM and PM peak periods. The SBL approach is also shown to operate at LOS D in the AM and PM peak periods.

4. Background Growth

4.1. Growth Rate

Background traffic growth is an analysis method used to estimate the growth of traffic that will contribute to the traffic of the roadway network in and around the study area. The background traffic does not include the proposed project that is being studied. The proposed grocery store portion of the development is expected to have a full build out by 2024, with the outparcels expected to be complete by 2025. For the purposes of this analysis the full build-out year of 2025 will be used. A growth rate was estimated for the years between the existing volume counts and the future development build out.

For the growth rate this report has followed the analysis methodology established in the previous TIA report for the proposed adjacent gas station development (QT). The growth rate utilized in the previous report for this area was estimated at 1.5% per year. The growth rate was applied to the existing volumes only and was used for the Background (2025), Build (2025) analysis scenarios. *For the October 2022 update, project volumes from the Highland Springs TIA were also included as background volumes through 2025.*

4.2. Background Conditions Capacity Analysis

Background conditions include a 1.5% growth rate per year, applied to existing traffic volumes grown to the project build year 2025. The growth rates provide a conservative estimate of future traffic growth in the area. The background growth also includes the project trips generated by the adjacent gas station development as provided in the impact analysis report provided for that development. Grown background 2025 traffic volumes, including the adjacent development trips, are shown graphically in Figures 5 and 5A.

The background traffic volumes were entered into a *Synchro 10* model which uses the same lane geometry as existing conditions, with the additions of the shared access driveway with the adjacent gas station development. The results of the capacity analysis are shown by lane group movement in Table 4. Average vehicular delays and level-of service, as defined by the Highway Capacity Manual (HCM) 2000 Edition are presented, and 95th percentile queues from *SimTraffic 10* are shown. Full *Synchro* output reports are included Appendix C.

The signal timings for the existing signals were provided by SCDOT and remain the same as the timings utilized in the existing analysis. The timings for the proposed signal, at the shared driveway for the adjacent gas station, were optimized in *Synchro* within the parameters of the existing coordinated signal system. These estimated timings are provided in Appendix C included with the *Synchro* reports.

Table 4: Background (2025) Conditions Capacity Analysis

Intersection	Control	Lane Group Movement	AM Peak Hour			PM Peak Hour		
			Delay (s)	LOS	95th% Queue (ft)	Delay (s)	LOS	95th% Queue (ft)
Edgefield Rd at I-20 WB Ramps	Signal Control	WBL/T	58.2	**E**	135	53.9	D	118
		WBR	61.1	**E**	91	54.0	D	113
		NBL	62.6	**E**	263	37.2	D	162
		NBT	1.9	A	34	1.8	A	87
		SBT	18.5	A	312	21.4	C	333
		SBR	18.7	B	238	19.7	B	166
		Intersection	21.0	C	-	15.0	B	-
Edgefield Rd at I-20 EB Ramps	Signal Control	EBL	62.0	**E**	239	53.5	D	383
		EBT/R	53.5	D	160	42.4	D	151
		NB	14.0	B	101	20.4	C	123
		SBL	96.3	**F**	188	64.7	**E**	106
		SBT	0.4	A	200	1.6	A	85
		Intersection	20.9	C	-	22.2	C	-
Edgefield Rd at Driveway 2 (shared access)	Signal Control	EBL	66.8	**E**	160	60.6	**E**	144
		EBR	56.8	**E**	19	53.8	D	17
		NBL	6.6	A	58	1.3	A	52
		NBT	5.5	A	109	1.1	A	87
		SBT	8.9	A	241	8.0	A	232
		SBR	6.5	A	46	5.6	A	34
		Intersection	9.6	A	-	5.9	A	-
Edgefield Rd at Ascauga Lake Rd	Signal Control	WBL	67.9	**E**	279	60.8	**E**	22
		WBR	49.4	D	164	48.2	D	201
		NB	12.8	B	176	17.7	C	297
		SBL	82.8	**F**	309	41.6	D	395
		SBT	3.9	A	113	6.5	A	153
		Intersection	32.5	C	-	26.3	C	-
Edgefield Rd at US 25 Connector	Signal Control	EBL	70.5	**E**	15	63.4	**E**	-
		EBT/R	70.7	**E**	22	63.4	**E**	12
		WBT/L	62.4	**E**	54	63.9	**E**	62
		WBR	30.9	C	63	24.4	C	136
		NBL	21.6	C	22	9.8	A	5
		NBT/R	24.7	C	153	33.9	C	211
		SBL	49.7	D	191	52.5	D	136
		SBT	5.4	A	26	16.0	B	20
		Intersection	22.2	C	-	28.2	C	-

Edgefield Road at I-20 WB Ramps
During the background conditions the signalized intersection continues to operate at LOS B during the PM peak period. The intersection degrades to LOS C in the AM peak period. The WB approaches operate at LOS E in the AM peak period and LOS D in the PM peak period. The NBL approach also continues to operate at LOS E in the AM peak period and LOS D in the PM peak period.

There continues to be considerably normal 95th percentile queueing associated with the approaches of this intersection during both peak periods.

Edgefield Road at I-20 EB Ramps
During the background conditions the signalized intersection continues to operate at LOS C during both the AM and PM peak periods. The EBL approach continues to operate at LOS E in the AM peak period and LOS D in the PM peak period. The EBT/R approach lanes continue to operate at LOS D in both the AM and PM peak periods. The SBL approach is shown to operate at LOS F in the AM peak period and LOS E in the PM peak period in the background conditions.

There is considerably normal 95th percentile queueing associated with the approaches of this intersection during both peak periods.

Edgefield Road at Driveway 2 (Shared Access with QT – Proposed Signal)
During the background conditions this proposed signalized intersection is shown to operate at LOS A during both the AM and PM peak periods. The EBL approach is shown to operate at LOS E in the AM and PM peak periods. The EBR approach is shown to operate at LOS E in the AM and LOS D in the PM with 53.8 seconds of approach delay.

The EBL approach lane shows approximately 160-ft of 95th percentile queueing during the AM peak period and 144-ft in the PM peak period. The NBL approach operates at LOS A in both the AM and PM peak periods.

Edgefield Road at Ascauga Lake Road
During the background conditions the signalized intersection continues to operate at LOS C during both the AM and PM peak periods. The WBL approach continues to operate at LOS E in both the AM and PM peak periods. The SBL approach is shown to degrade to LOS F in the AM peak for the background conditions. The SBL operates at LOS D in the PM with 41.6 seconds approach delay.

There is considerably normal 95th percentile queueing associated with the approaches of this intersection during both peak periods.

Edgefield Road at US 25 Connector – *Intersection added October 2022 update*
This intersection is also part of a coordinated system included in the traffic signal timings provided by the SCDOT. During the background conditions the signalized intersection operates at LOS C during both the AM and PM peak periods. The EB and WBL approaches operate at LOS E in both the AM and PM peak periods. The SBL approach is also shown to operate at LOS D in the AM and PM peak periods.

Figure 5: Background (2025) Traffic Volumes

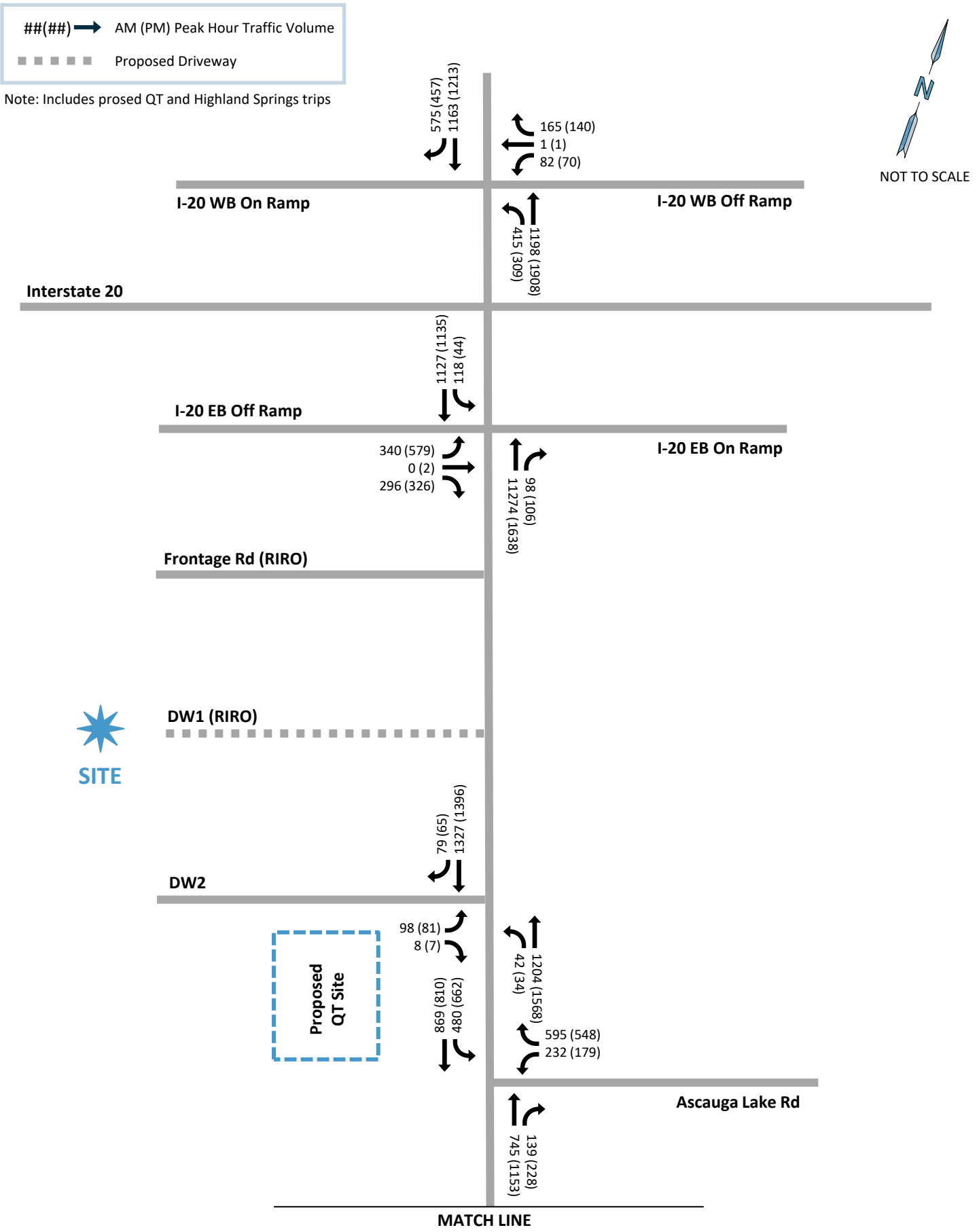


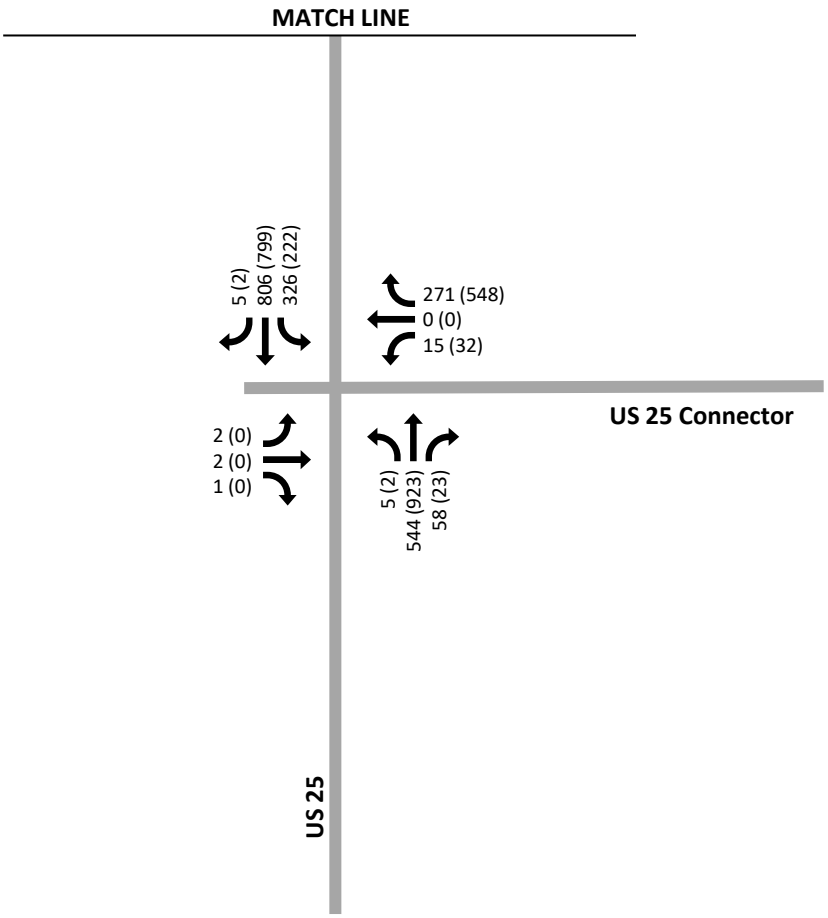
Figure 5A: Background (2025) Traffic Volumes

##(##) → AM (PM) Peak Hour Traffic Volume

Proposed Driveway

Note: Includes prosed QT and Highland Springs trips

NOT TO SCALE



5. Future Conditions

5.1. Trip Generation

Project trips for the commercial development were estimated using the equations presented in the Institute of Transportation Engineers' (ITE) latest Trip Generation Manual, 11th Ed., 2021 for the following commercial retail development, expected to have full build-out in 2025. The ITE land use codes utilized for this development are listed below:

- Supermarket (ITE code 850) – 51,908-SF
- Variety Store (ITE code 814) – 21,530-SF
- Coffee Shop with Drive-Through Window (ITE code 937) – 3,500-SF
- Fast-Food Restaurant with Drive-Through Window (ITE code 934) – 5,000-SF
- Medical/Dental Office (ITE code 720) – 7,000-SF
- High Turnover/Sit Down Restaurant (ITE code 932) – 5,000-SF
- Fast Food Restaurant with Drive-Through Window (ITE code 934) – 2,875-SF
- Multifamily Housing (Mid-Rise) (ITE code 221) – 306 Dwelling Units

Table 5 summarizes the trip generation for the proposed development for the appropriate land use codes. The full trip generation worksheets are presented in Appendix D.

Table 5: Project Trip Generation

Project Land Use	Density	ITE LUC	Daily			AM Peak Hour			PM Peak Hour		
			Total	In	Out	Total	In	Out	Total	In	Out
Supermarket	51,908 S.F.	850	4,868	2,434	2,434	148	87	61	454	227	227
Variety Store	21,530 S.F.	814	1,371	686	685	65	36	29	144	73	71
Fast-Food Restaurant with Drive-Through Window	5,000 S.F.	934	2,337	1,169	1,168	223	114	109	165	86	79
Coffee/Doughnut Shop with Drive-Through Window	3,500 S.F.	937	2,871	1,436	1,435	301	154	147	136	68	68
Medical/Dental Office	7,000 S.F.	720	193	97	96	22	17	5	25	8	17
High Turnover/Sit Down Restaurant	5,000 S.F.	932	536	268	268	0	26	22	45	28	17
Multifamily Housing (Mid-Rise)	306 D.U.	221	1,413	707	706	123	28	95	120	73	47
Total Trips			13,589	6,797	6,792	930	462	468	1,089	563	526
Reductions for Internal Capture			1,362	681	681	95	47	48	111	57	54
Reductions for Modal Split			0	0	0	0	0	0	0	0	0
Reductions for Pass-By Trips			4,189	2,095	2,094	288	150	138	381	197	184
Total Net New Project Trips			8,361	4,183	4,178	605	302	303	653	343	310

This commercial development with the residential development is anticipated to generate 13,589 new daily trips (6,797 inbound and 6,792 outbound). This development will also account for 4,189 pass-by trips (2,095 inbound, 2,094 outbound). The highest peak hour volume, for the driveway access locations, is expected during the PM peak hour (net new + pass-by) with 1,089 peak hour vehicle trips (460 inbound and 526 outbound). The AM peak will generate 930 peak hour vehicle trips (462 inbound, 468 outbound). A general 10% reduction for internal capture rate is applied to identify trips that may be combined, internal to the site development, between the supermarket, residential retail, and the outparcels. There will likely also be internal capture trips generated between the gas station and the various other land uses on this development that are not accounted for in this analysis.

5.2. Distribution

The assignment and directional distribution of new project trips is based on residential area densities, existing traffic patterns, the proximity to Interstate 20 and trip destination densities (job centers, schools, and retail developments) in the surrounding area. The allocation of trips to the development driveways has also been distributed based on the land use location of the main supermarket and retail parcel and the outparcels that will contain the fast-food restaurant and other land uses. The fast-food restaurant and coffee shop distribution follows the trip distribution established in the previous TIA for the adjacent gas station, with an assumed larger distribution assigned to and from the interstate. The supermarket, retail and outparcels with the sit-down restaurant and medical office assume a more balanced distribution for the area more closely following the existing traffic pattern distribution. The directional distribution for the new trips is shown in Figures 6-6A, 7-7A and 8-8A. The pass-by distribution rates are shown in Figures 9, 10 and 11.

5.3. Future Traffic Volumes

Project trips estimated in the trip generation and distributed to the roadway network are shown graphically in Figures 12 and 12A. Future traffic volumes including the proposed development and background traffic growth are shown in Figures 13 and 13A.

5.4. Turn Lane Analysis

The turn lane warrants for this development were assessed per *SCDOT Roadway Design Manual section 9.5.1. Turn Lane Guidelines* and *Access & Roadside Management Manual*. Turn lane warrants that were analyzed were right turn from a major road. The left turn lane at Driveway 2 (shared access) is being installed as part of the proposed adjacent development and signalized intersection. Turn lane warrant worksheets are provided in Appendix E.

Frontage Road at Edgefield Road:

- Right turn lane: ***WARRANTED***
- No Left turn lane: *Right-in Right-out access only*

This right turn lane may be required per the peak hourly traffic southbound on Edgefield Road. This location is expected to be the preferred access for delivery trucks and will have relatively low inbound volumes when this development is at full build, but it may have much higher volumes in the future if the property behind this site is developed. The lack of space available for a full length turn lane, because of the proximity to the I-20 EB off ramp, should also be considered when evaluating this turn lane requirement.

Driveway 1 at Edgefield Road:

- Right turn lane: ***WARRANTED***
- No Left turn lane: *Right-in Right-out access only*

The SB right turn lane has 176-ft of storage and a 50-ft taper. This turn lane is physically restricted by the existing outparcel property located to the north, that is not part of this overall development.

Driveway 2 (shared access with gas station development) at Edgefield Road:

- Right turn lane: ***WARRANTED***
- Left turn lane: ***WARRANTED*** *(provided in previous TIA report for adjacent property)*
- The left turn lane should be long enough to accommodate Storage (L4) + Deceleration (L3) + Taper (L2).
- Per previous updates to the study, the southbound left turn lane at the signal is being incorporated into the plans to allow for a permissive SBL turn movement. This may also serve a left turn lane for future development on the east side of US 25 at this intersection.

The left and right turn lanes at this intersection are warranted and provided in the intersection signal design for the adjacent gas station development. The storage lengths and capacity for both turn lanes are being coordinated with the proposed intersection project for the adjacent gas station development.

Figure 3: Existing Lane Geometry

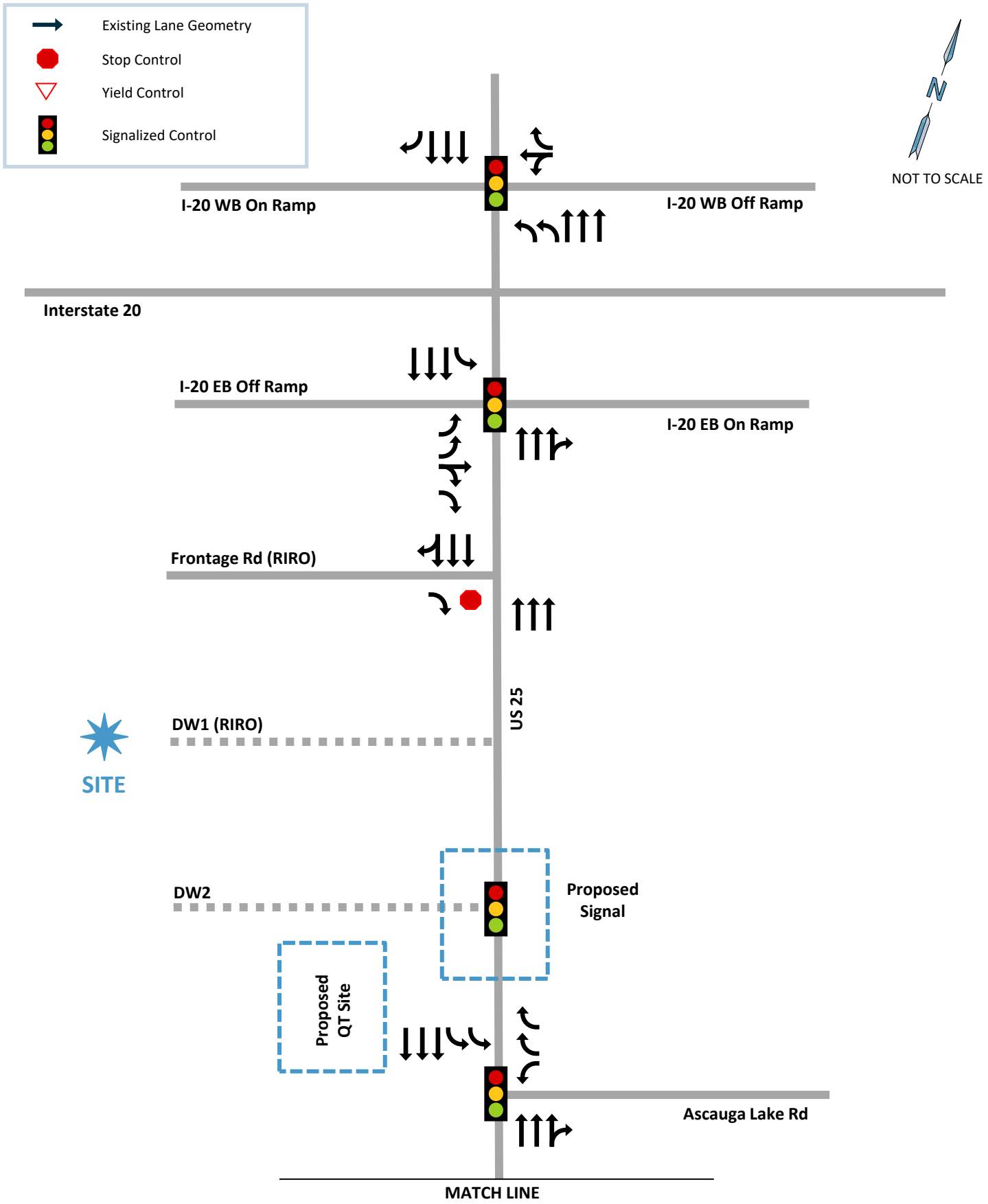


Figure 3A: Existing Lane Geometry

Existing Lane Geometry

Stop Control

Yield Control

Signalized Control

Intersection added to report October 2022 per City request.

NOT TO SCALE

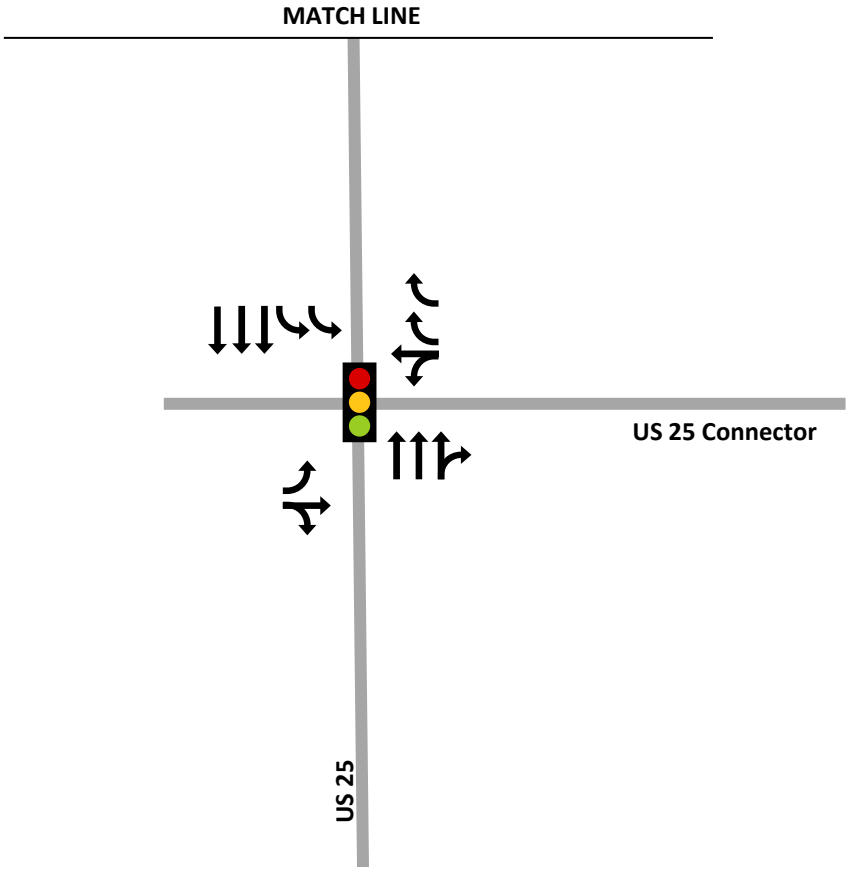


Figure 4: Existing (2021) Traffic Volumes

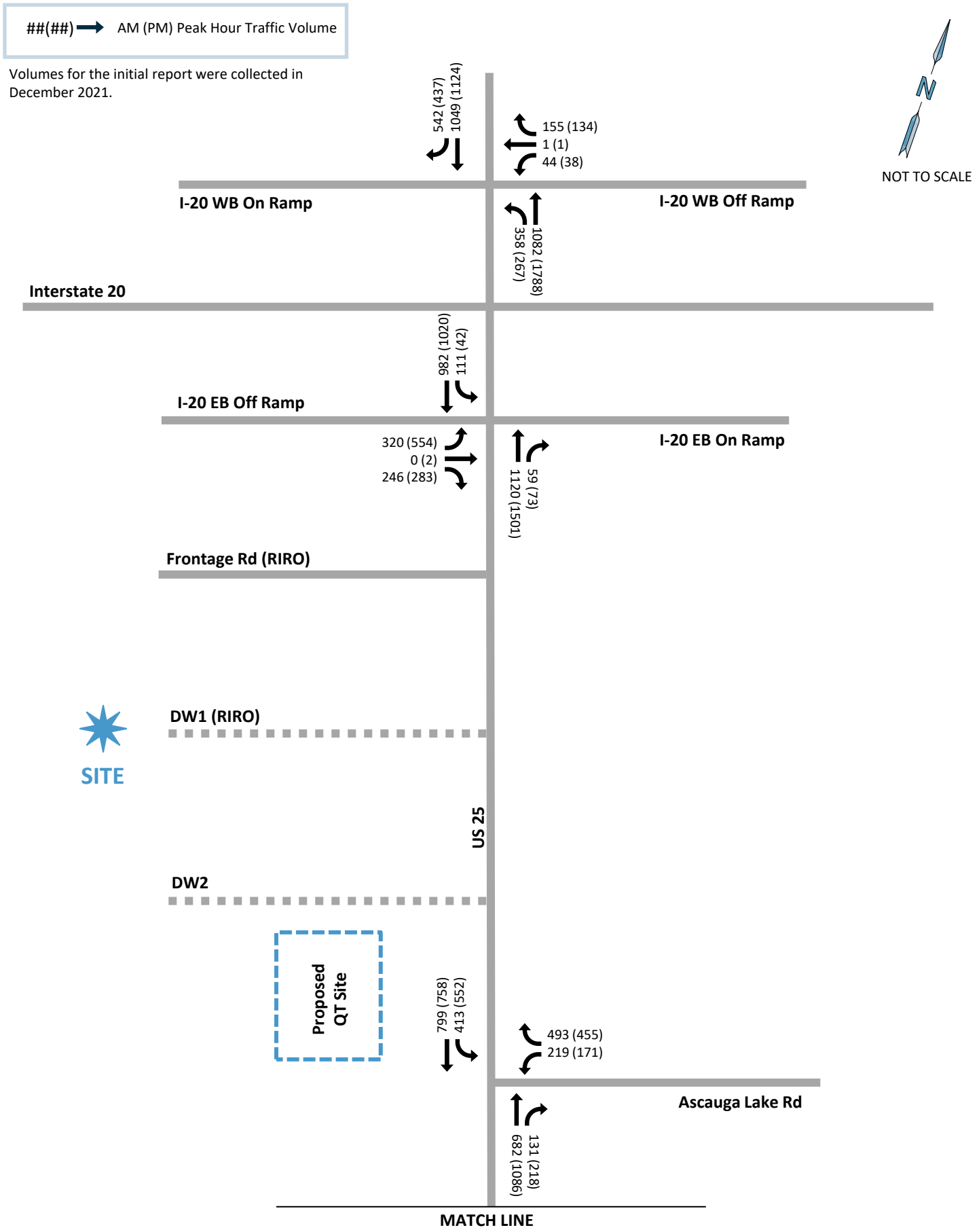
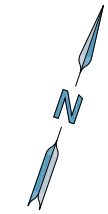


Figure 4A: Existing (2022) Traffic Volumes

##(##) → AM (PM) Peak Hour Traffic Volume

Volumes from the Highland Springs Development TIA collected in April 2022.



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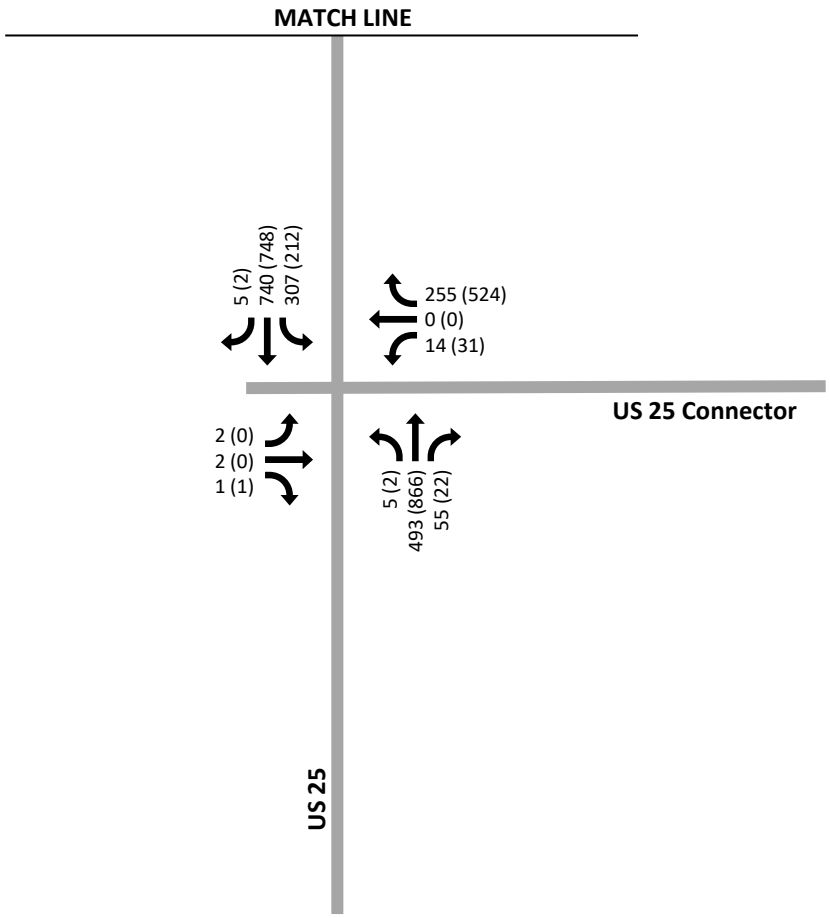


Figure 5: Background (2025) Traffic Volumes

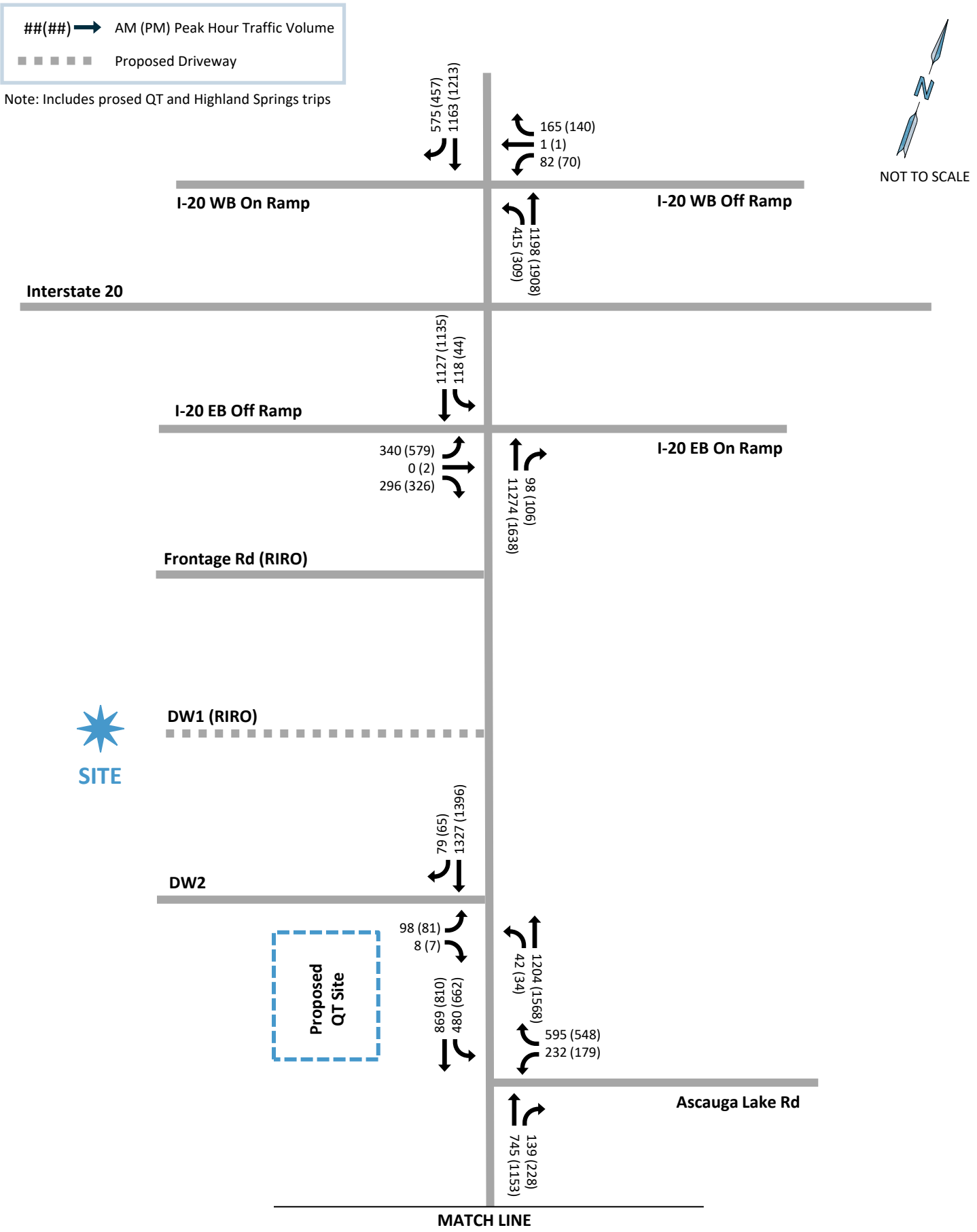


Figure 5A: Background (2025) Traffic Volumes

##(##) → AM (PM) Peak Hour Traffic Volume

Proposed Driveway

Note: Includes prosed QT and Highland Springs trips

NOT TO SCALE

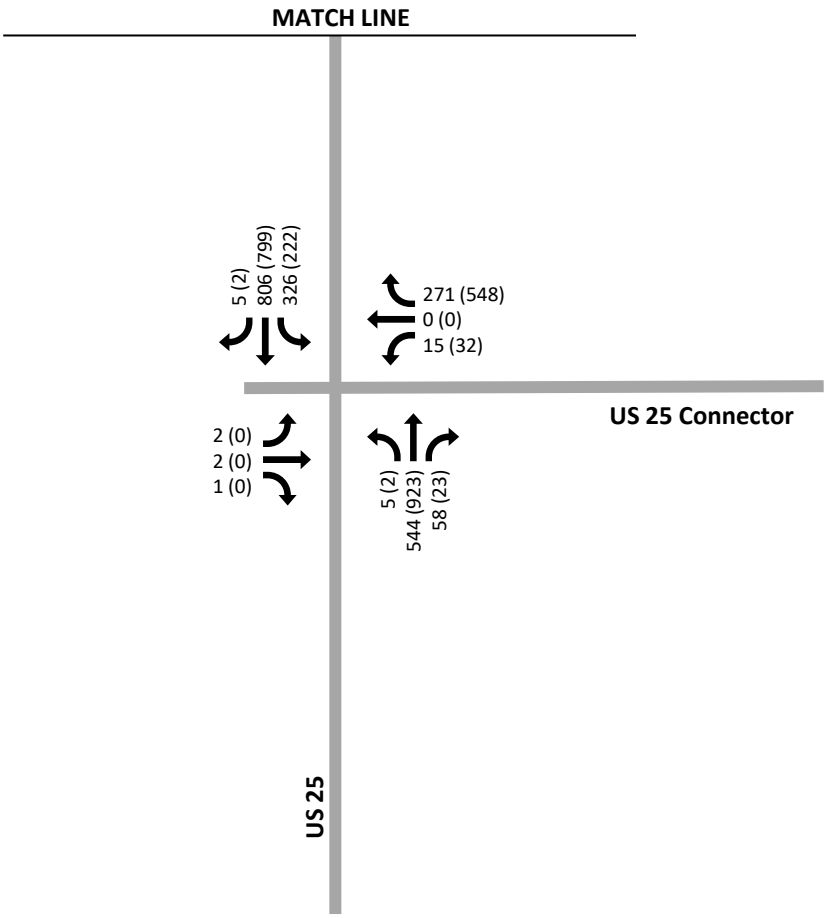


Figure 6: Trip Distribution for Supermarket

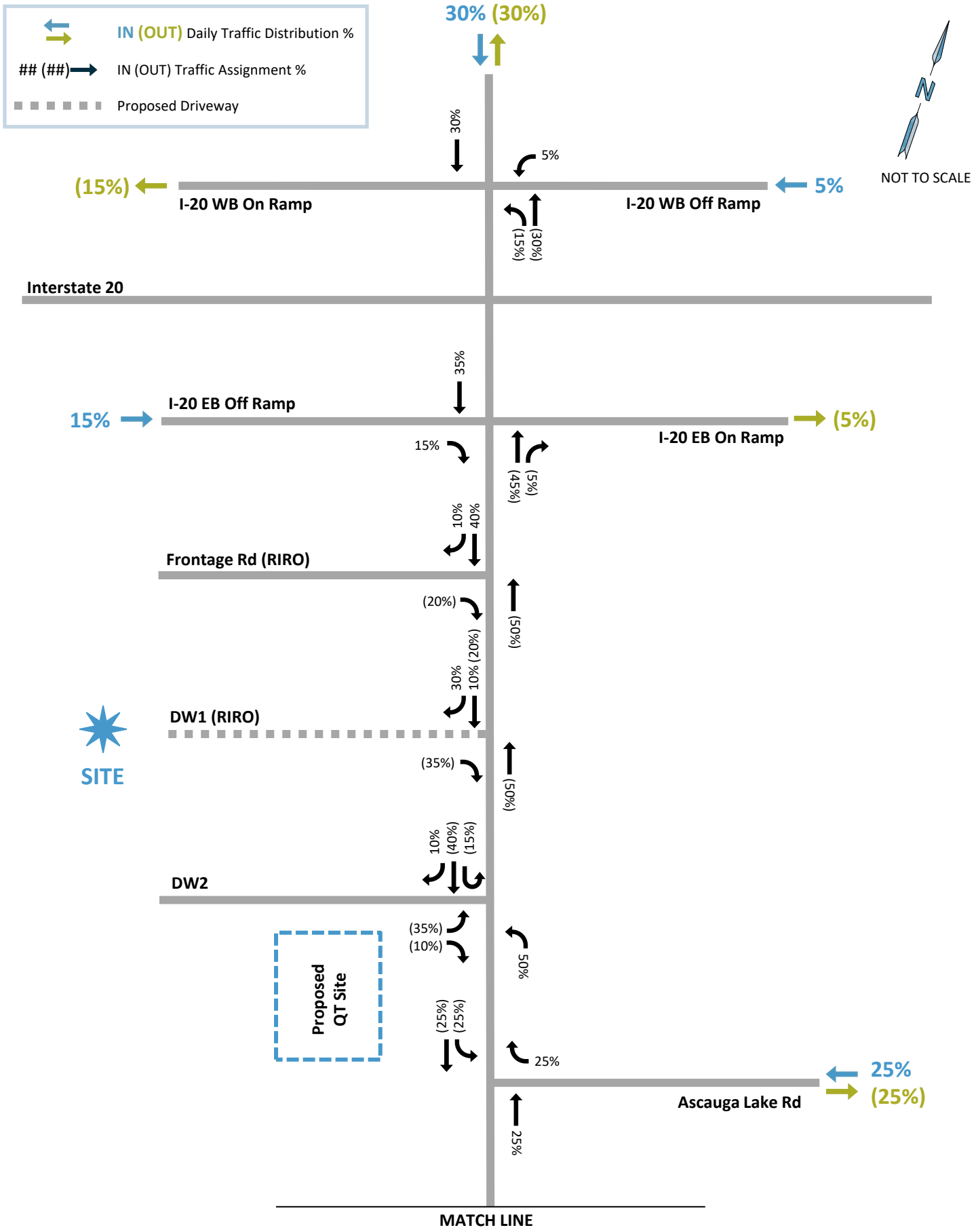


Figure 6A: Trip Distribution for Supermarket

IN (OUT) Daily Traffic Distribution %

(##) IN (OUT) Traffic Assignment %

Proposed Driveway

Figure added October 2022

NOT TO SCALE

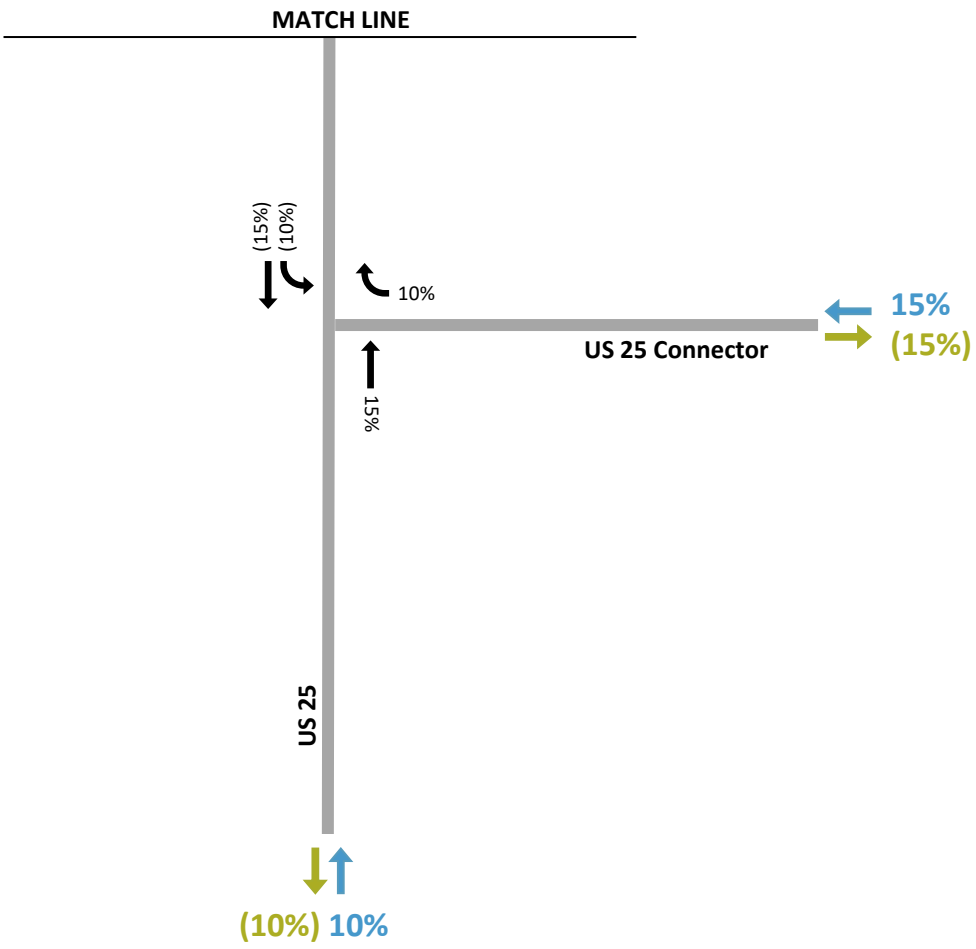


Figure 7: Trip Distribution for Outparcels 1 & 2

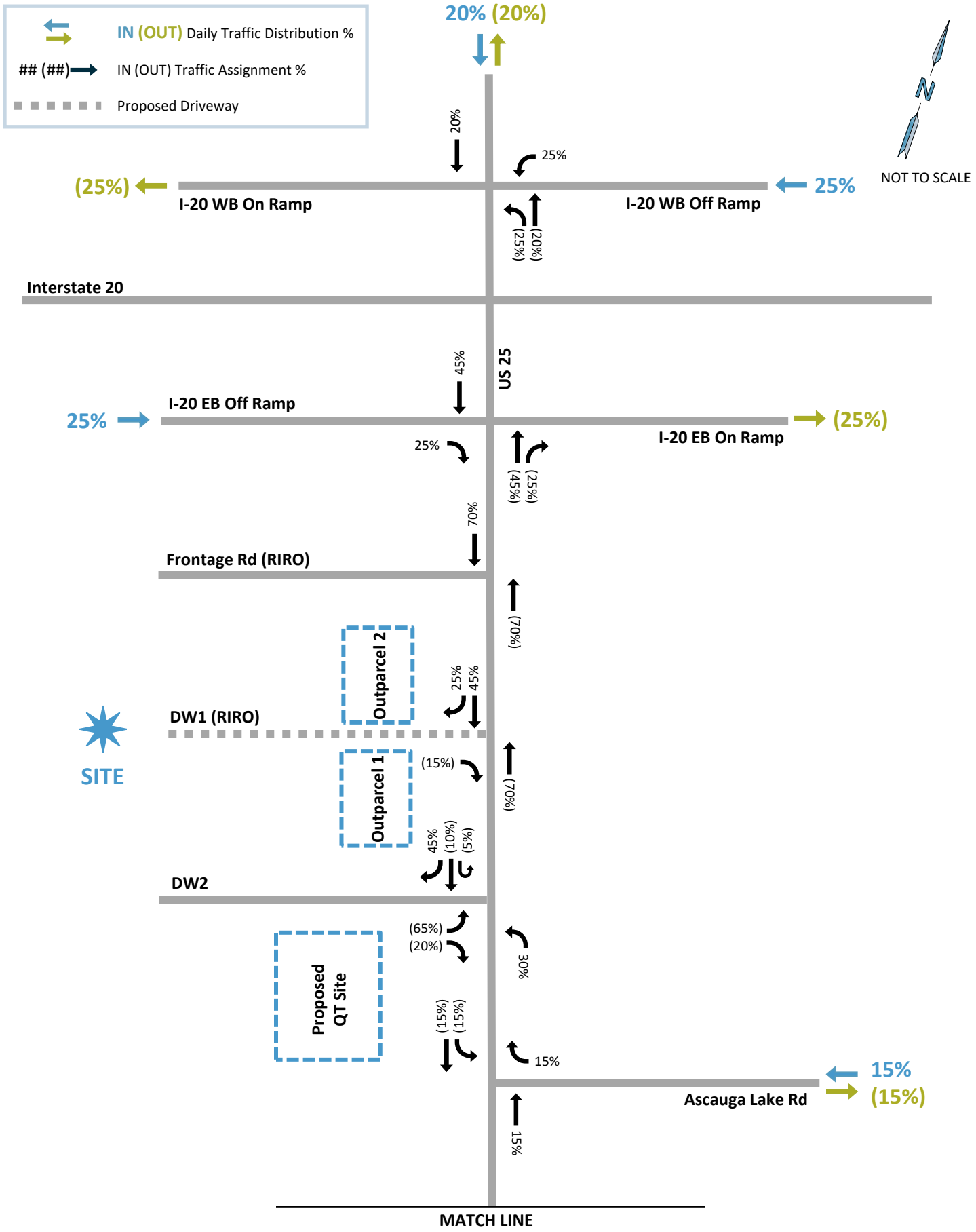


Figure 7A: Trip Distribution for Outparcels 1 & 2

IN (OUT) Daily Traffic Distribution %

(##) IN (OUT) Traffic Assignment %

Proposed Driveway

Figure added October 2022

NOT TO SCALE

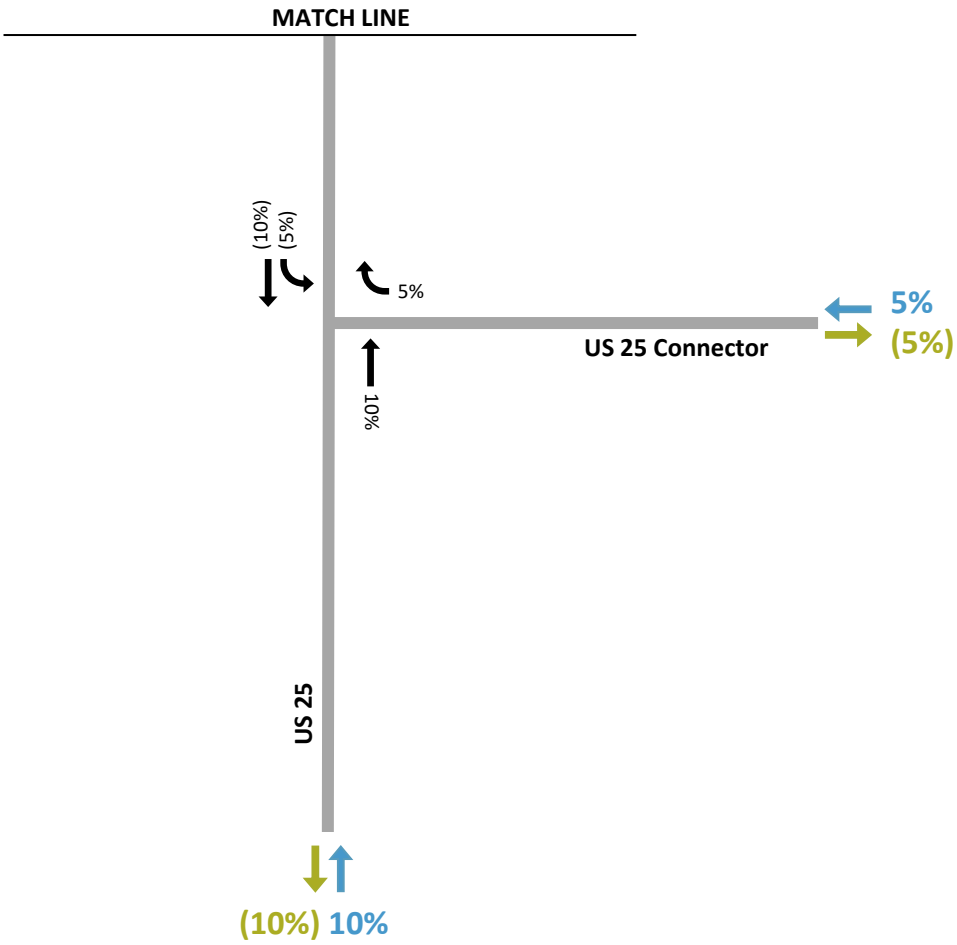


Figure 8: Trip Distribution for Outparcels 3 & 4

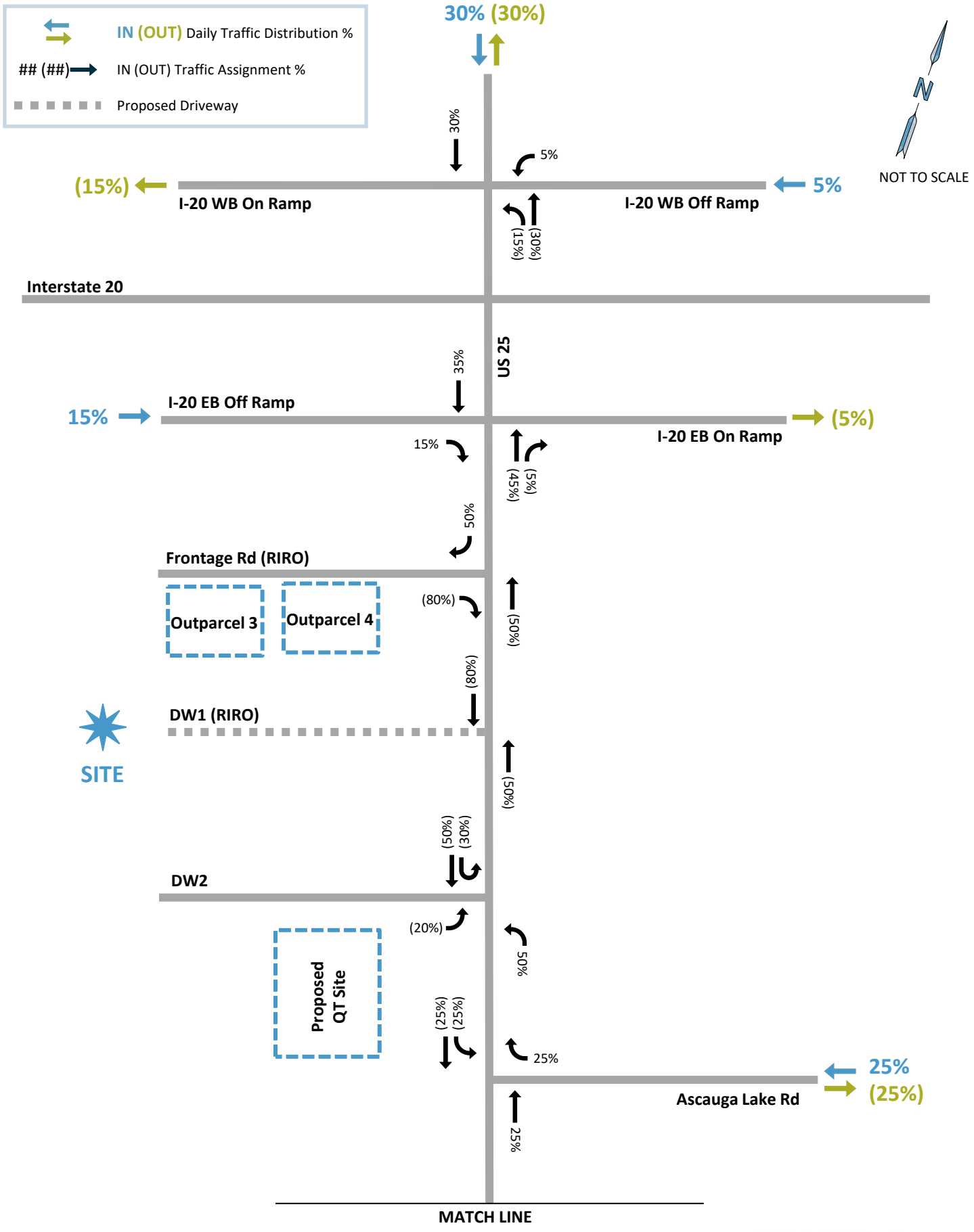


Figure 8A: Trip Distribution for Outparcels 3 & 4

IN (OUT) Daily Traffic Distribution %

(##) IN (OUT) Traffic Assignment %

Proposed Driveway

Figure added October 2022

NOT TO SCALE

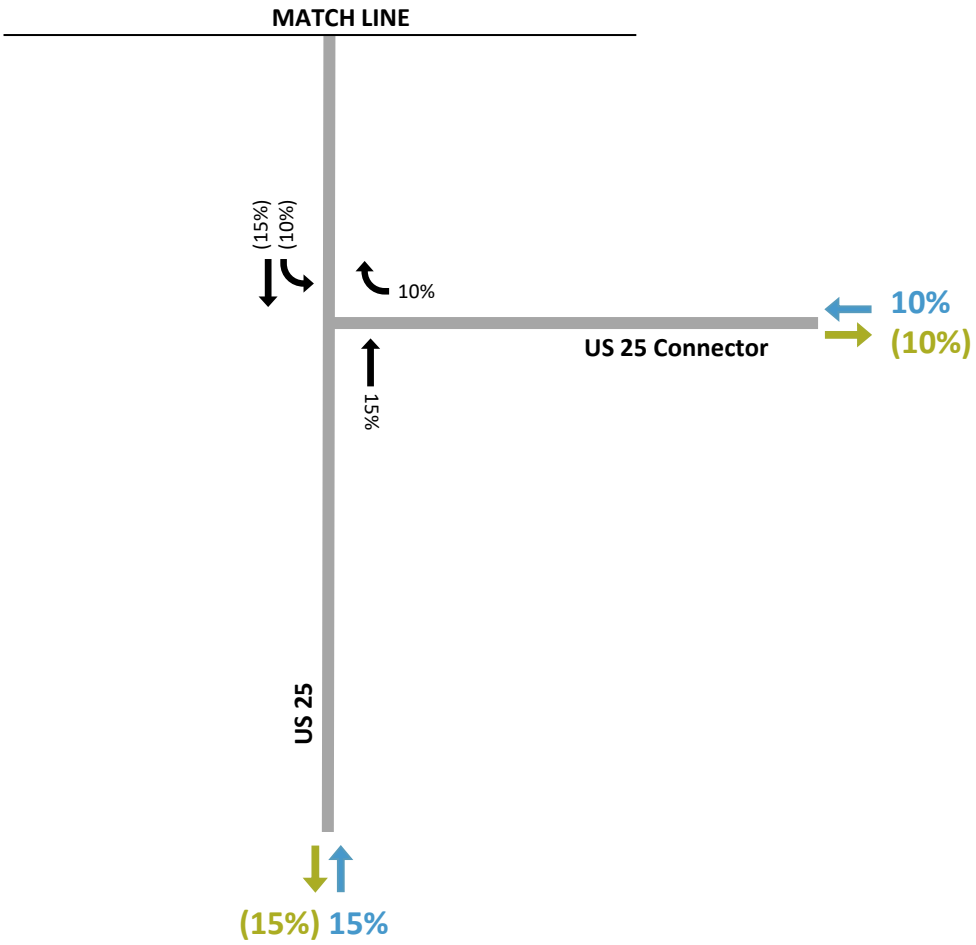


Figure 9: Supermarket Pass-By Distribution

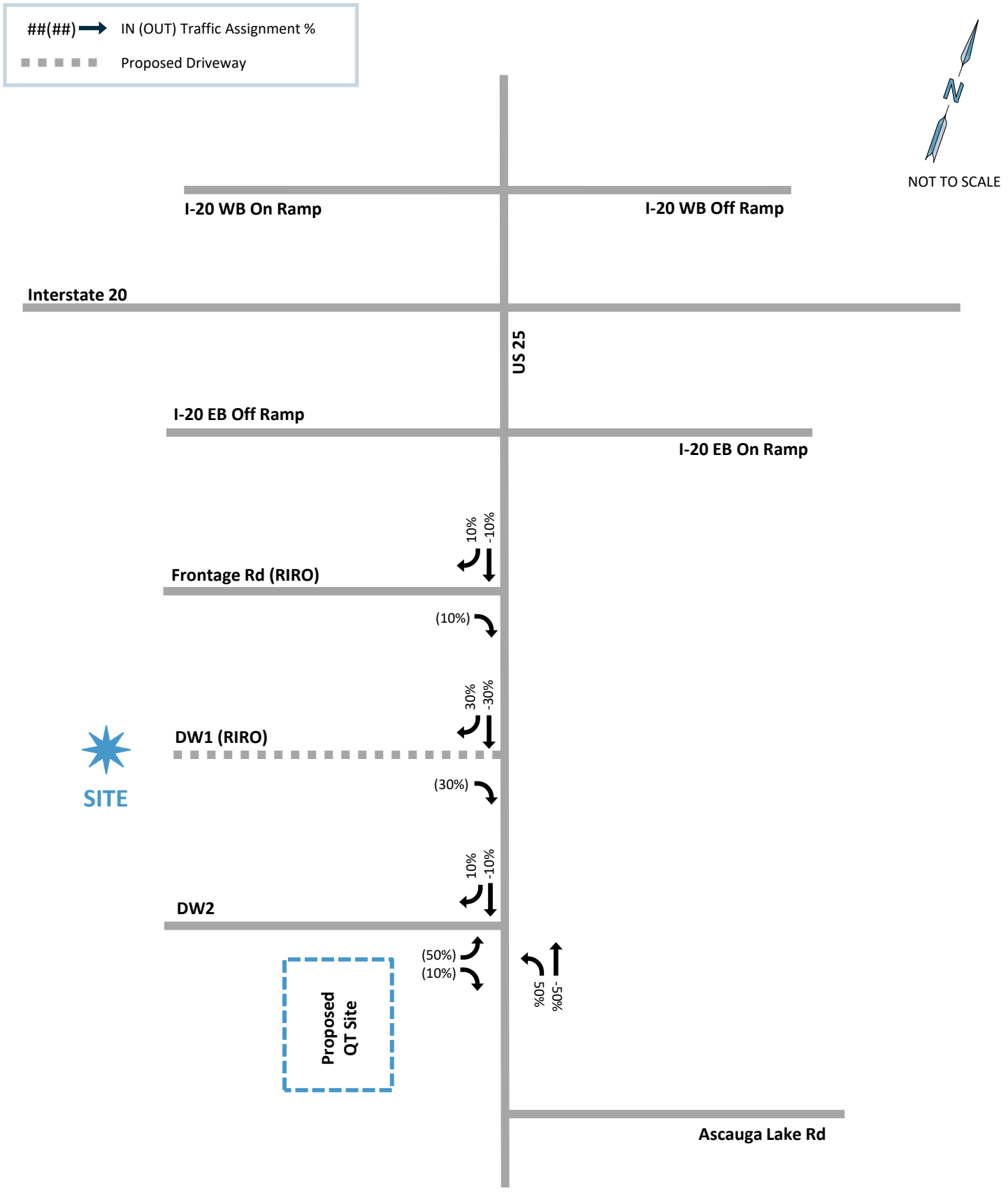


Figure 10: Outparcels 1 & 2 Pass-By Distribution

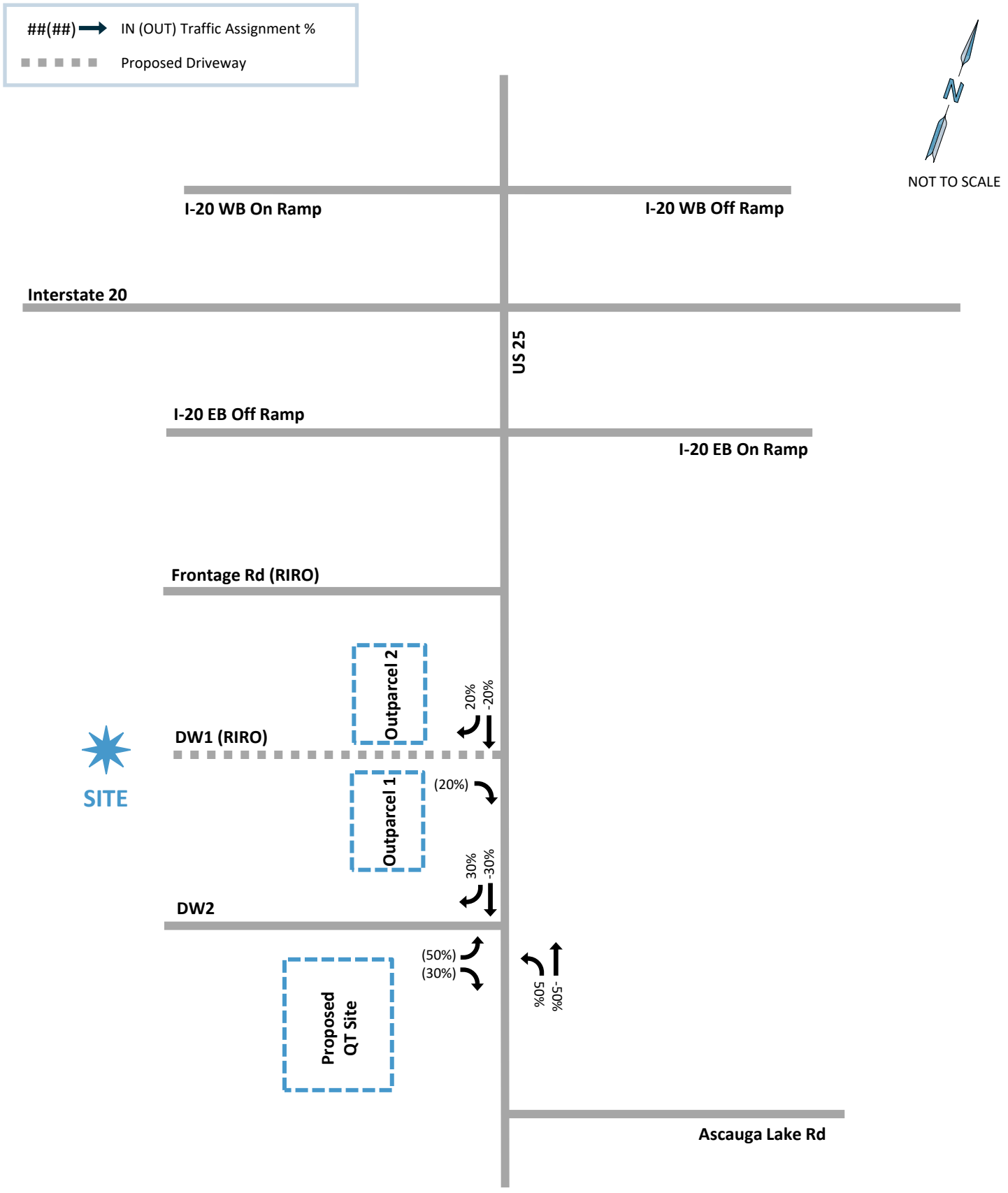


Figure 11: Outparcels 3 & 4 Pass-By Distribution

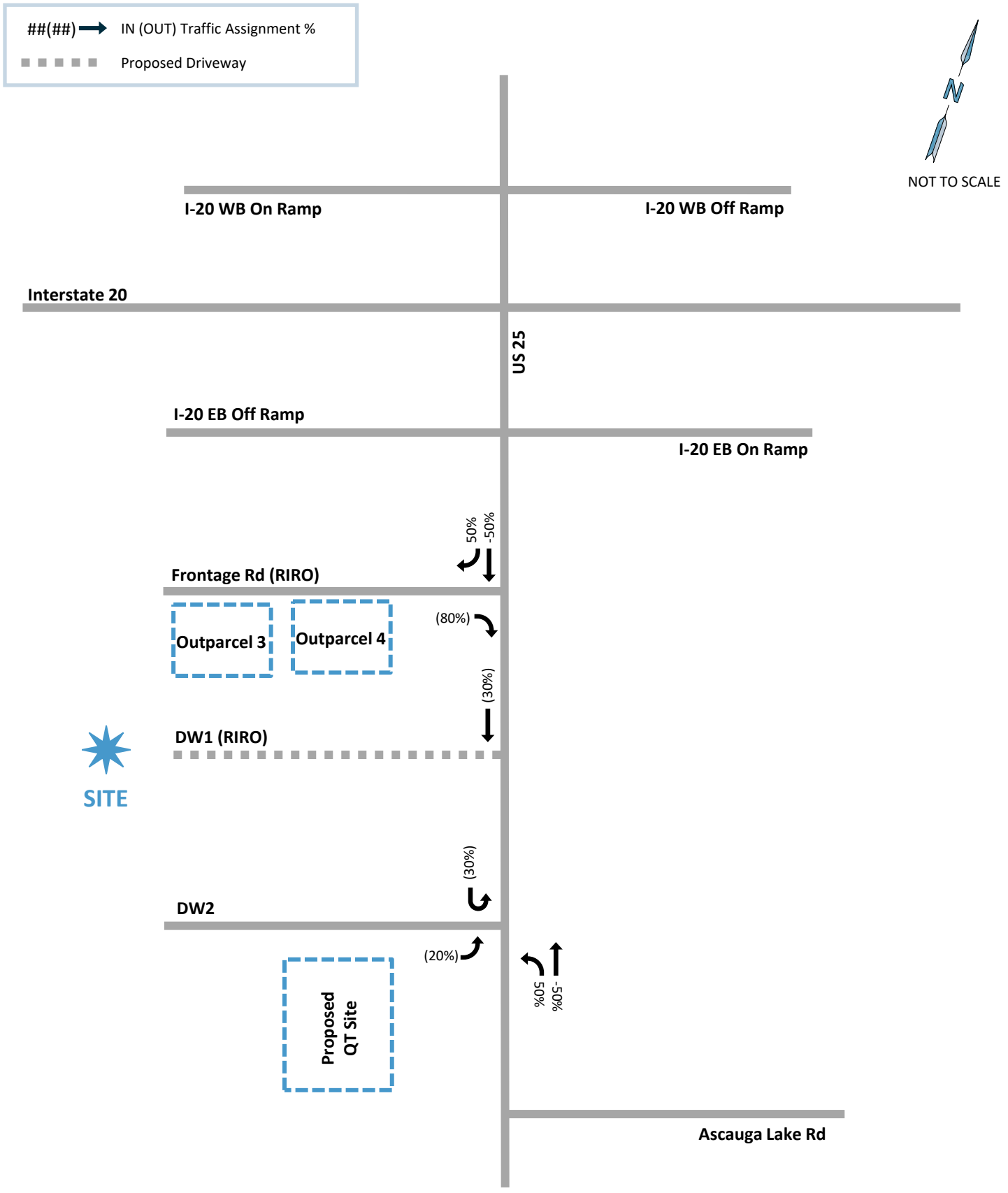


Figure 12: Project Trips

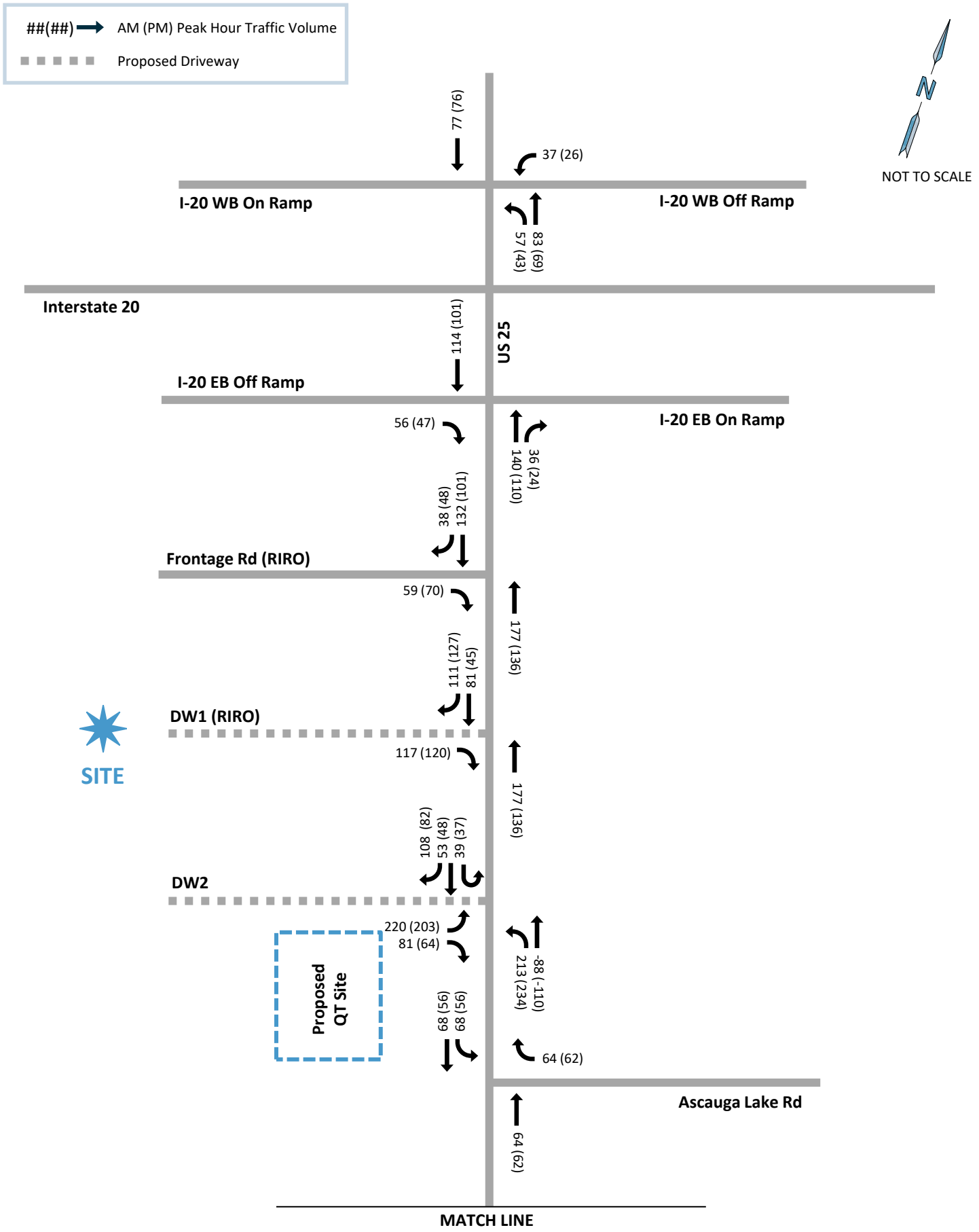


Figure 12A: Project Trips

##(##) → AM (PM) Peak Hour Traffic Volume

■ ■ ■ ■ ■ Proposed Driveway

Figure added October 2022

NOT TO SCALE

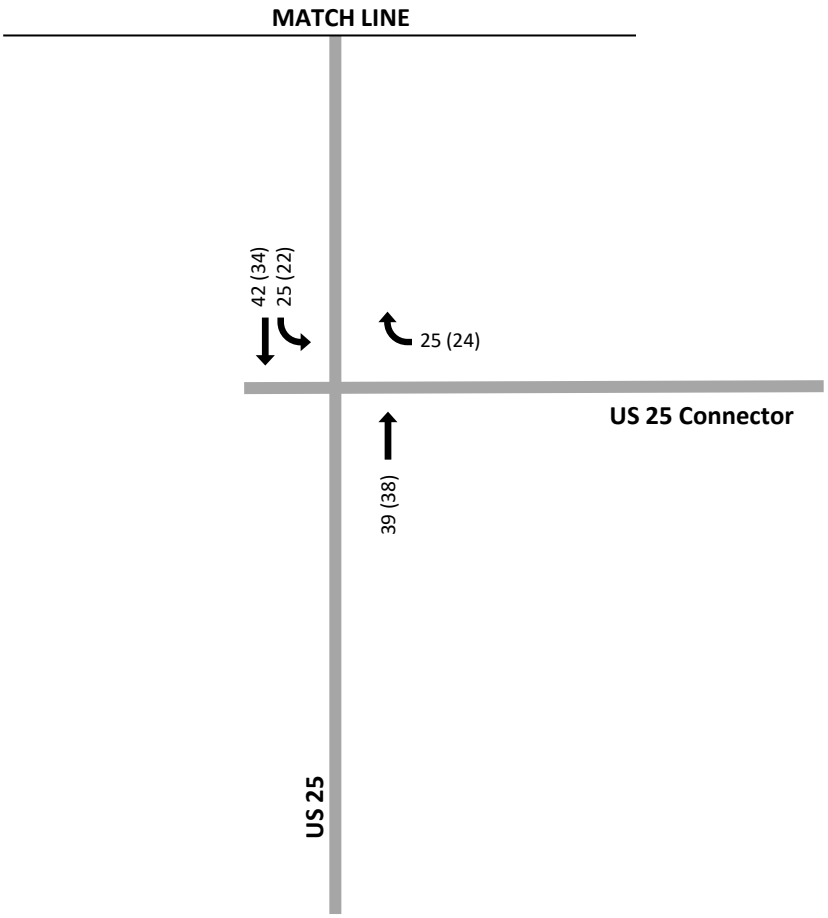


Figure 13: Future (2025) Traffic Volumes

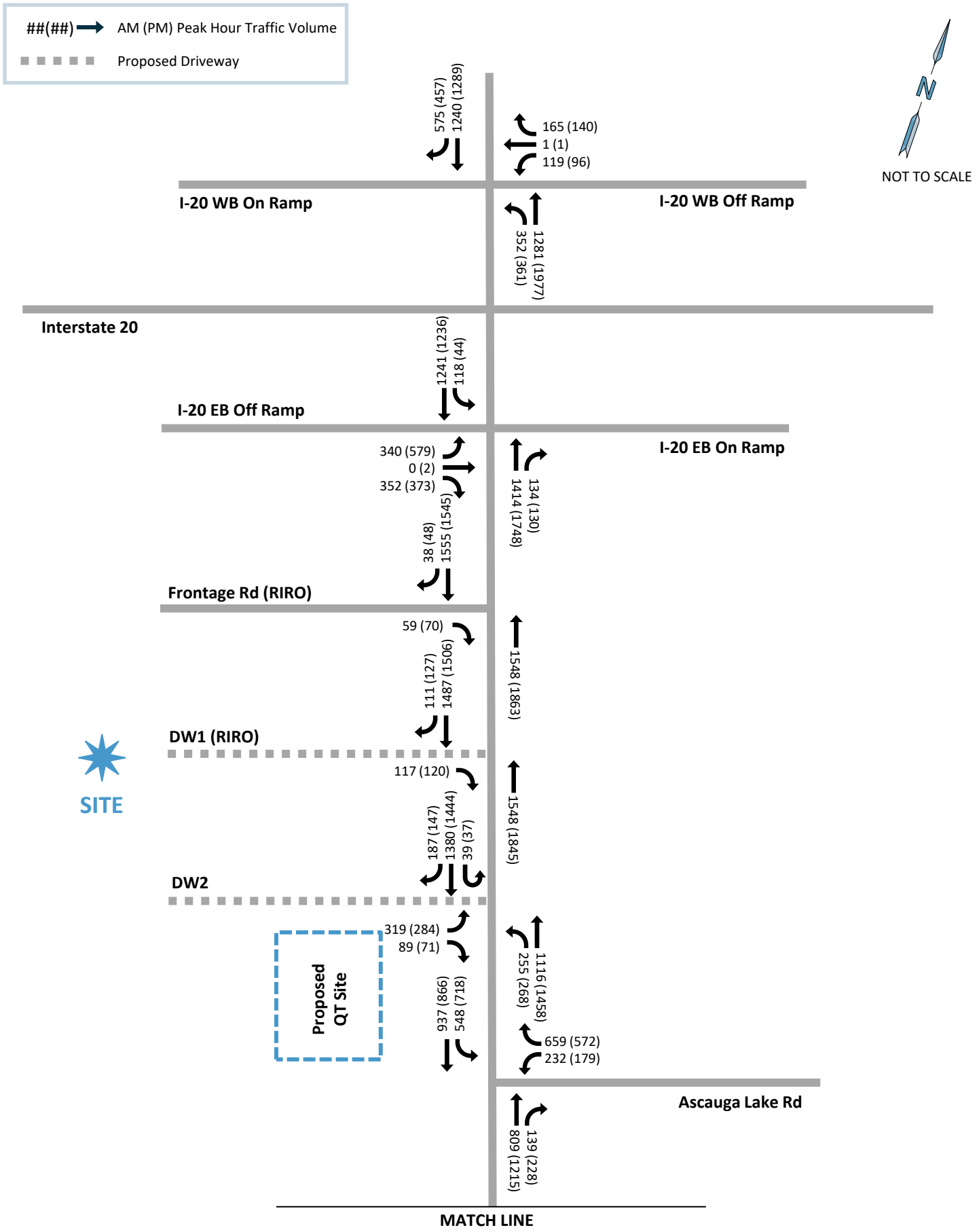


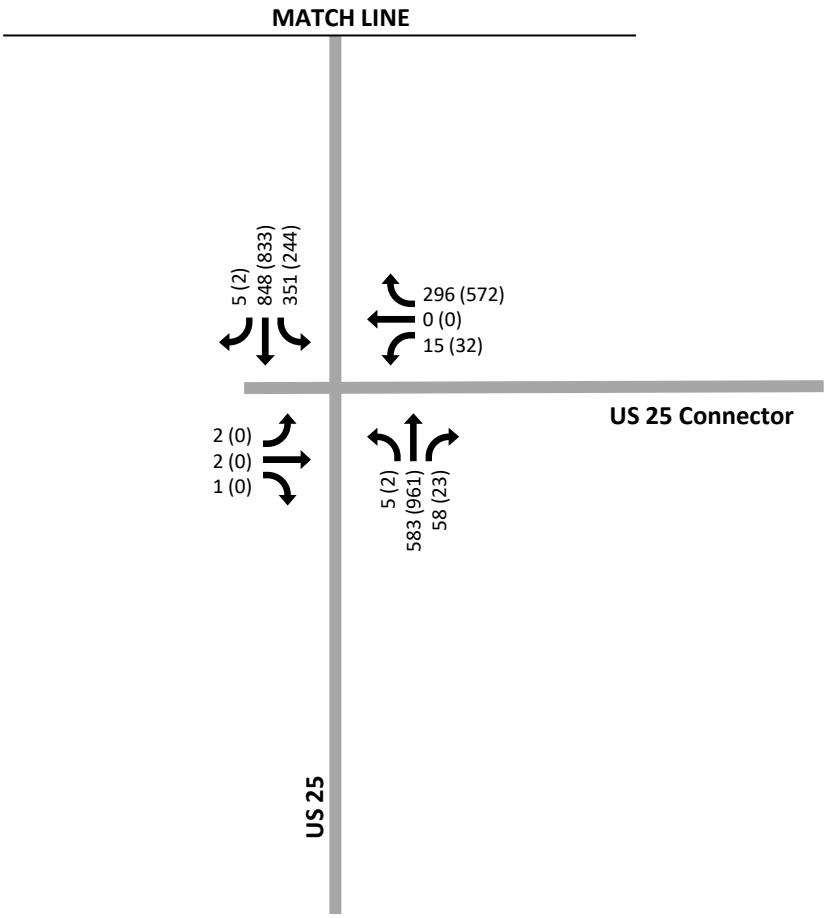
Figure 13A: Future (2025) Traffic Volumes

##(##) → AM (PM) Peak Hour Traffic Volume

Proposed Driveway

Figure added October 2022

NOT TO SCALE



5.5. Future Conditions Capacity Analysis

Future build conditions were analyzed for capacity and queueing using the methodology set for existing and background conditions. Build conditions (2025) are shown in Table 6. The signal timings utilized in the background (2025) analysis are also used for the analysis of the build (2025) conditions. The timings at Driveway 2 were modified per new configuration.

Table 6: Build (2025) Conditions Capacity Analysis

Intersection	Control	Lane Group Movement	AM Peak Hour			PM Peak Hour		
			Delay (s)	LOS	95th% Queue (ft)	Delay (s)	LOS	95th% Queue (ft)
Edgefield Rd at I-20 WB Ramps	Signal Control	WBL/T	62.5	**E**	164	55.3	**E**	144
		WBR	60.8	**E**	100	54.0	D	148
		NBL	61.2	**E**	236	35.6	D	181
		NBT	1.8	A	43	1.1	A	102
		SBT	19.1	B	284	22.0	C	349
		SBR	19.2	B	230	20.0	B	158
		Intersection	21.7	C	-	15.1	B	-
Edgefield Rd at I-20 EB Ramps	Signal Control	EBL	61.5	**E**	225	53.5	D	343
		EBT/R	56.3	**E**	184	44.0	D	192
		NB	10.8	B	184	15.9	B	186
		SBL	96.8	**F**	210	64.1	**E**	79
		SBT	0.4	A	384	2.0	A	85
		Intersection	19.2	C	-	20.1	C	-
Edgefield Rd at Frontage Rd (RIRO)	Side-Street Stop Control	EBR	23.8	C	43	25.0	D	53
		NB	-	-	35	-	-	53
		SBT	-	-	4	-	-	8
		SBR	-	-	4	-	-	13
		Intersection	0.4	-	-	0.5	-	-
Edgefield Rd at Driveway 1 (RIRO)	Side-Street Stop Control	EBR	28.4	D	161	29.7	D	208
		NB	-	-	-	-	-	-
		SBT	-	-	118	-	-	122
		SBR	-	-	37	-	-	-
		Intersection	1.0	-	-	1.0	-	-
Edgefield Rd at Driveway 2 (shared access)	Signal Control	EBL	63.5	**E**	251	58.7	**E**	226
		EBR	52.5	D	71	49.6	D	86
		NBL	24.7	C	219	46.7	D	243
		NBT	5.9	A	120	1.4	A	72
		SBL/U	15.7	B	66	11.2	B	96
		SBT	20.3	C	386	9.7	A	364
		SBR	25.1	C	106	3.7	A	64
		Intersection	21.0	C	-	13.4	B	-

Table 7: Build (2025) Conditions Capacity Analysis (continued)

Intersection	Control	Lane Group Movement	AM Peak Hour			PM Peak Hour		
			Delay (s)	LOS	95th% Queue (ft)	Delay (s)	LOS	95th% Queue (ft)
Edgefield Rd at Ascauga Lake Rd	Signal Control	WBL	67.6	**E**	273	60.0	**E**	229
		WBR	49.9	D	218	48.9	D	230
		NB	14.0	B	211	18.7	B	298
		SBL	43.3	D	288	31.4	C	554
		SBT	12.9	A	194	9.3	B	309
		Intersection	29.4	C	-	25.6	C	-
Edgefield Rd at US 25 Connector	Signal Control	EBL	70.5	**E**	11	63.4	**E**	10
		EBT/R	70.7	**E**	17	63.4	**E**	-
		WBT/L	62.4	**E**	34	63.9	**E**	77
		WBR	31.0	C	75	24.5	C	155
		NBL	21.6	C	18	26.3	C	13
		NBT/R	25.0	C	156	34.3	C	210
		SBL	68.4	**E**	221	59.8	**E**	154
		SBT	8.9	A	17	13.6	B	9
		Intersection	26.9	C	-	28.4	C	-

Edgefield Road at I-20 WB Ramps

During the build conditions the signalized intersection operates at LOS C in the AM peak period with 21.7 seconds of intersection delay. The signal continues to operate at LOS B during the PM peak period. The WBL/T also degrades to LOS E in the PM with 55.3 seconds of approach delay.

The 95th percentile queueing for the approaches of this intersection continue to operate at acceptable levels during both peak periods.

Edgefield Road at I-20 EB Ramps

During the build conditions at the signalized intersection continues to operate at LOS C during both the AM and PM peak periods. The EBL approach continues to operate at LOS E in the AM peak period and LOS D in the PM peak period. The EBT/R approach degrades to LOS E with 56.3 seconds of delay in the AM peak period. The SBL approach continues to operate at LOS F in the AM peak period and LOS E in the PM peak period in the build conditions.

The 95th percentile queueing for the approaches of this intersection continue to operate at acceptable levels during both peak periods.

Edgefield Road at Frontage Road (RIRO)

This Frontage Road is an existing intersection that currently is a dead-end road and has no other access to land uses that currently generates trips. In the build conditions the EB approach operates at LOS C in the AM peak period with 23.8 seconds of approach delay and LOS D in the PM peak period with 25.0 seconds of approach delay. There is minor 95th percentile queueing for this EB approach in both peak periods.

Edgefield Road at Driveway 1 (RIRO)
During the build conditions for this stop-controlled driveway, the EB approach operates at LOS D in the AM peak period with 28.4 seconds of approach delay and LOS D in the PM peak period with 29.7 seconds of approach delay. There is minor 95th percentile queueing for this EB approach in both peak periods.

Edgefield Road at Driveway 2 (Shared Access with QT – Proposed Signal)
During the build conditions this proposed signalized intersection is shown to operate at LOS C during the AM peak period and LOS B during the PM peak period. The EBL approach is shown to operate at LOS E in the AM peak period with 273-ft of 95th percentile queuing. The EBL operates at LOS E in the PM peak with 229-ft of 95th percentile queuing. The EBR approach is shown to operate at LOS D in both the AM and PM peak periods.

The NBL operates at LOS C in the AM peak period with 24.7 seconds of approach delay and 219-ft of 95th percentile queuing. The NBL operates at LOS D in the PM peak period with 46.7 seconds of approach delay and 243-ft of 95th percentile queuing.

Edgefield Road at Ascauga Lake Road
During the build conditions the signalized intersection degrades to LOS C during the AM peak period with 29.4 seconds of overall intersection delay. The intersection continues to operate at LOS C in the PM peak period with 25.6 seconds of intersection delay. The WBL approach continues to operate at LOS E in both the AM and PM peak periods. The SBL approach is shown to continue to LOS D in the AM peak period. The SBL may show improvement in the AM with less delay waiting at this signal but instead stopped at the signal upstream with the opposing NBL at Driveway 2.

The delay is being distributed to the signal upstream. The SBL lanes show 554-ft of 95th percentile queuing with the inclusion of the trips generated by the Highlands Springs Development. This movement may eventually require that the turn lane storage bay be extended.

Edgefield Road at US 25 Connector
During the build conditions the signalized intersection operates at LOS C during both the AM and PM peak periods. The EB and WBL approaches operate at LOS E in both the AM and PM peak periods. The SBL approach is also shown to operate at LOS E in the AM and PM peak periods.

5.6. Future Lane Geometry

The development is planned to have access to the external roadway network via two limited access (RIRO) stop-controlled driveway locations and one full access signalized location. The future lane geometry required for the mitigated Build conditions are presented in Figures 14 and 14A.

Figure 14: Future Lane Geometry

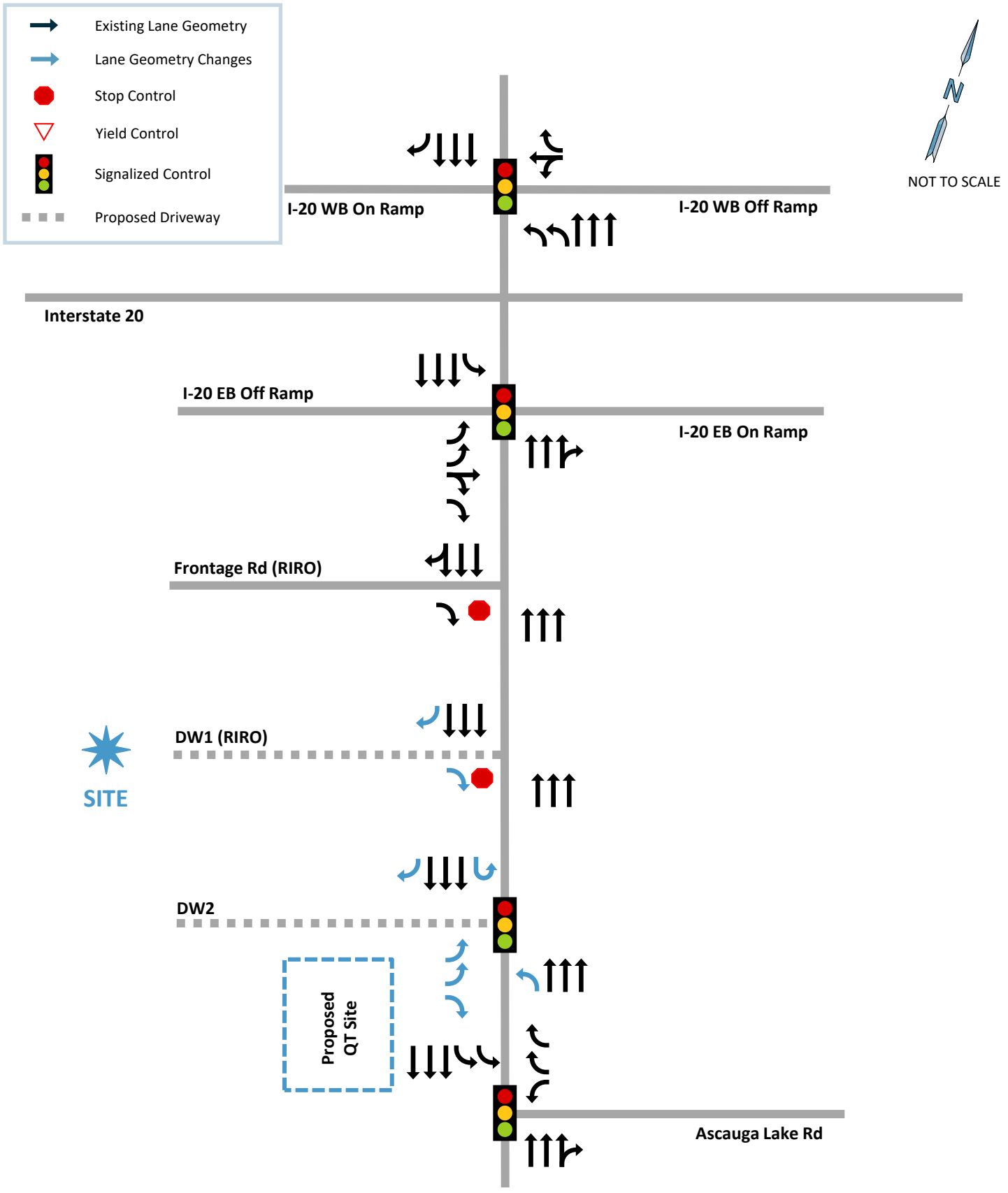


Figure 14A: Future Lane Geometry

Existing Lane Geometry

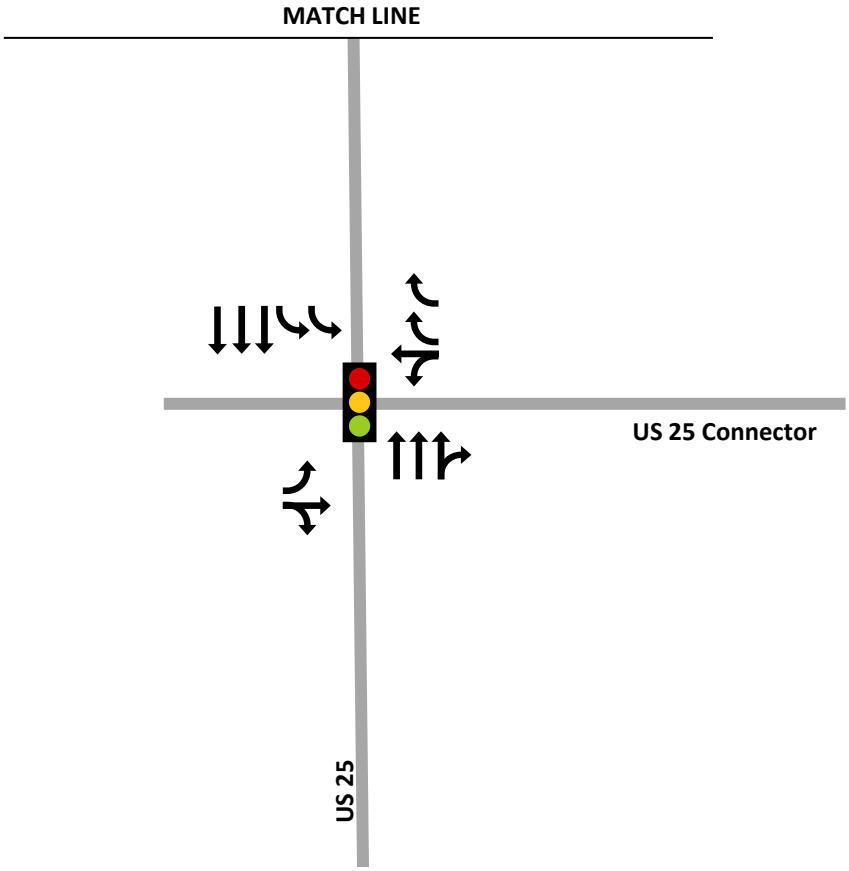
Stop Control

Yield Control

Signalized Control

NOT TO SCALE

Figure added October 2022



6. Conclusions and Recommendations

The proposed site, at full build-out, will consist of a supermarket with additional various adjacent in-line retail uses and four outparcel developments with a fast-food restaurant, coffee shop with drive-through window, sit-down restaurant, and an urgent care/outpatient medical office. The development will also share a full access signalized intersection location with an adjacent gas station development and adjacent residential development. The conclusions and recommendations separated by intersection are as follows:

Some of the Conclusions and recommendations provided after the TIA update analysis for 06-15-2022 have been coordinated with the previously proposed QT signalized intersection. SCDOT approved the lane assignments for the proposed signal.

Edgefield Road at I-20 WB Ramps

- The additional traffic through the intersection generated by the development has minor impacts on the delay and queuing at the signalized intersection.
- This intersection continues to operate at an acceptable level of service during the future build conditions.
- No mitigation is required at this intersection as part of this development.

Edgefield Road at I-20 EB Ramps

- The additional traffic through the intersection generated by the development has minor impacts on the delay and queuing at the signalized intersection.
- This intersection continues to operate at an acceptable level of service during the future build conditions.
- No mitigation is required at this intersection as part of this development.

Edgefield Road at Frontage Road (RIRO)

- This intersection will operate at an acceptable level of service during the future build conditions.
- Volumes do indicate that a right turn lane is warranted, there may only be approximately 75-ft of space available to provide a taper towards the EB off ramp. This taper may not be beneficial to the operation of the intersection but can be provided if required by SCDOT.

Edgefield Road at Driveway 1 (RIRO)

- This intersection will operate at an acceptable level of service during the future build conditions. A right turn deceleration lane should be provided to the maximum feasible length available.

- The SB right turn lane has 176-ft of storage and a 50-ft taper. This turn lane is physically restricted by the existing outparcel property located to the north, that is not part of this overall development.
- No mitigation is required at this intersection as part of this development.

Edgefield Road at Driveway 2 (Shared Access with QT – Proposed Signal)

- This intersection will operate as the only full access entrance and exit to this site and the adjacent gas station development.
- The eastbound lanes at the intersection should be considered as dual left turn lanes with a separate right turn lane. The additional right turn lane will be needed in the future with a planned 306-unit residential development that will be developed do the west of this project.
    - *The right turn was included to the update to the signal plans agreed upon by SCDOT and provided in the signal permit update. The apartment volumes for 306 units were included in the TIA update analysis for 06-15-2022.*
- The signal timings should be optimized to reduce the delay and queuing at the intersection.
- Full-length storage for the left-turn lane is estimated at 250-feet (*ARMS Table 5-9*) with a taper of 180-feet (*ARMS Fig. 5-21*). This is an addition of 50-ft of length to the left turn lane proposed in the previous TIA for the adjacent development.
    - *The 06-15-2022 updated analysis indicates 95th percentile queuing for the NBL as 266-ft in the AM and 278-ft in the PM peak. Additional storage capacity may be needed for the northbound left turn lane to meet the lengths shown in this queuing simulation.*
    - *The 10-11-2022 updated analysis indicates 95th percentile queuing for the NBL as 219-ft in the AM and 243-ft in the PM peak. The planned additional storage capacity from the previous updater iteration should be sufficient.*
- A southbound right turn deceleration lane should be provided to the maximum feasible length available. This turn lane is being provided as part of the proposed signal for the adjacent development.
- A southbound left-turn lane is also recommended to allow for a U-turn movement to head back northbound on Edgefield Road. Allowing a U-turn at this location will help redistribute some of the outbound left movements from the site to be right turn out volumes with a U-turn at the signalized intersection. The U-turn movement will help allow for better future usage of the Frontage Road.
    - *The U-turn lane was included to the update to the signal plans agreed upon by SCDOT and included in the TIA update analysis for 06-15-2022.*

- If a southbound U-turn lane is constructed at the intersection, it is recommended to be provided a protected only U-turn phase at the proposed signalized intersection at Driveway 2. This U-turn phase was simulated as a protected only lagging left turn(U-turn) phase.
    - *The update to signal plans show this a permissive only phase. The analysis of the intersection with the southbound U-turn lane as a permissive only movement indicates reduced delays, when compared to a protected only phase, at the intersection per the 06-15-2022 TIA update.*
- The SB U-turn lane should provide 150-ft of storage minimum, 100-ft deceleration, and 210-ft straight taper (total 460-ft turn lane).
- Providing the U-turn/left turn lane at this time will provide the lanes that will be necessary if the east side of this intersection were to develop in the future.

Edgefield Road at Ascauga Lake Road

- The additional traffic through the intersection generated by the development has minor impacts on the delay and queuing at the signalized intersection.
- This intersection continues to operate at an acceptable level of service during the future build conditions.
- With the addition of the Highland Springs Development trips the southbound left turn lanes may need to be extended to provide additional storage capacity in the future.
- No mitigation is required at this intersection as part of this development.

Edgefield Road at US 25 Connector

- *This intersection was added to the analysis as part of the 10-11-2022 TIA update.*
- No mitigation is required at this intersection as part of this development.

Appendix A: Site Plan

PROJECT DATA

980 EDGEFIELD RD
NORTH AUGUSTA, SC

SITE DATA

TOTAL SITE AREA (BEFORE R/W DEDICATION)	31.59 AC.
R/W DEDICATION AREA	0.05 AC.
GROCERY AREA	11.52 AC.
OUTPARCEL 1 AREA	1.47 AC.
OUTPARCEL 2 AREA	0.94 AC.
OUTPARCEL 3 AREA	1.07 AC.
OUTPARCEL 4 AREA	1.06 AC.
REMAINING MARSH AREA	15.03 AC. (47.6%)
GROCERY IMPERVIOUS SURFACE AREA MAXIMUM (%)	8.062 AC. (70.0%)
GROCERY IMPERVIOUS SURFACE AREA PROPOSED (%)	8.325 AC. (72.3%)*
OUTPARCEL 2 IMPERVIOUS SURFACE AREA MAXIMUM (%)	0.660 AC. (70.0%)
OUTPARCEL 2 IMPERVIOUS SURFACE AREA PROPOSED (%)	0.583 AC. (59.7%)

BUILDING DATA

GROCERY BUILDING AREA	47,240 SF
RETAIL A BUILDING AREA	12,600 SF
RETAIL B BUILDING AREA	8,050 SF
QSR BUILDING AREA	2,200 SF

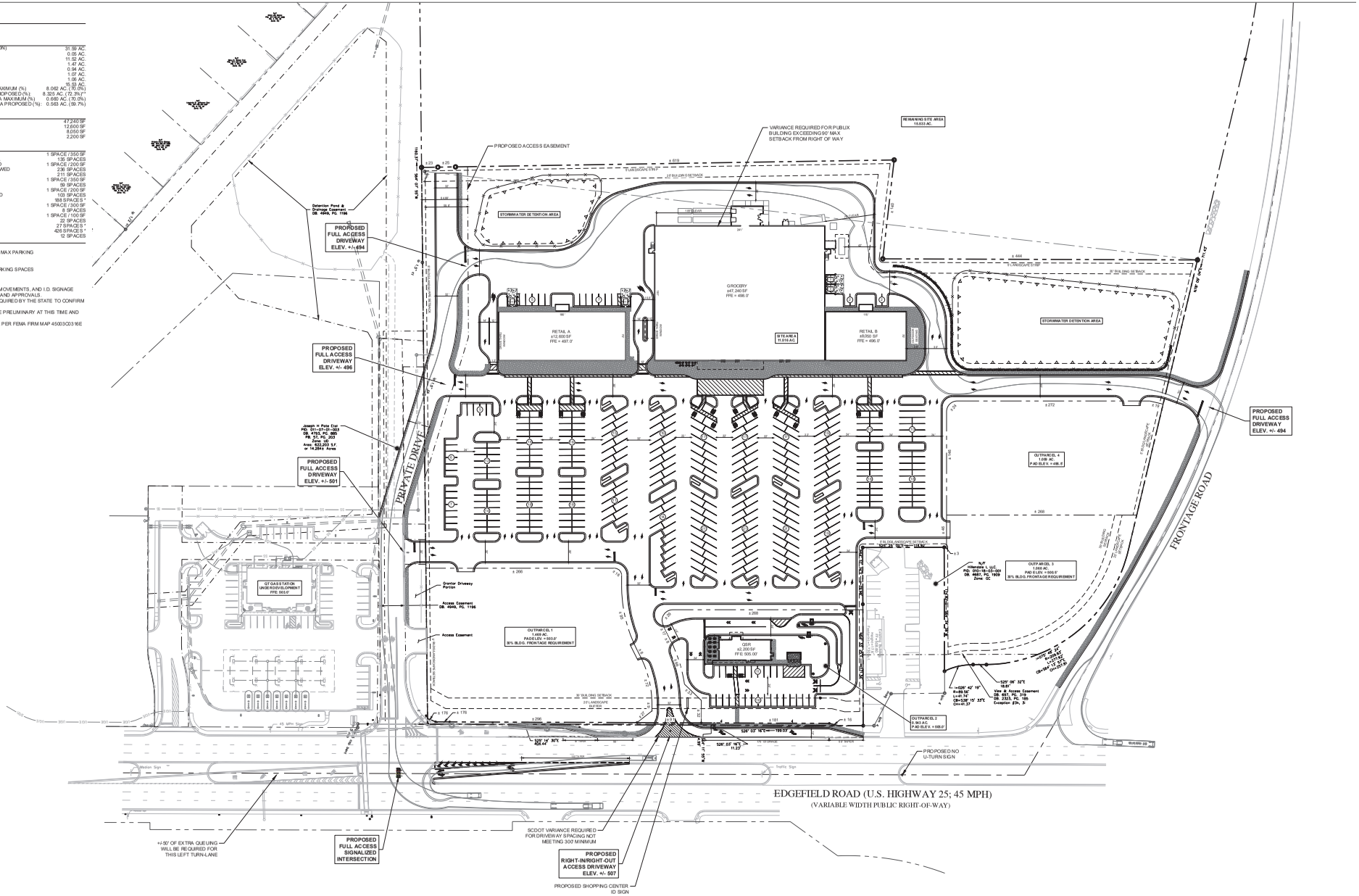
PARKING DATA

GROCERY PARKING REQUIRED MIN. RATIO	1 SPACE / 350 SF
GROCERY PARKING REQUIRED MIN. REQD.	135 SPACES
GROCERY PARKING REQUIRED MAX. RATIO	1 SPACE / 200 SF
GROCERY PARKING REQUIRED MAX. ALLOWED	236 SPACES
GROCERY PARKING PROVIDED	211 SPACES
RETAIL PARKING REQUIRED MIN. RATIO	1 SPACE / 350 SF
RETAIL PARKING REQUIRED MIN. REQD.	59 SPACES
RETAIL PARKING REQUIRED MAX. RATIO	1 SPACE / 200 SF
RETAIL PARKING REQUIRED MAX. ALLOWED	103 SPACES
RETAIL PARKING PROVIDED	188 SPACES *
QSR PARKING REQUIRED MIN. RATIO	1 SPACE / 100 SF
QSR PARKING REQUIRED MIN. REQD.	0 SPACES
QSR PARKING REQUIRED MAX. RATIO	1 SPACE / 100 SF
QSR PARKING REQUIRED MAX. ALLOWED	22 SPACES
QSR PARKING PROVIDED	27 SPACES *
TOTAL PARKING PROVIDED	426 SPACES *
BIKE PARKING PROVIDED	12 SPACES

* PARKING WAIVER REQUIRED TO EXCEED MAX PARKING REQUIREMENT

** PROVIDE PERVIOUS PAVEMENT FOR PARKING SPACES

NOTES:
1) ALL PROPOSED DRIVEWAYS, TURNING MOVEMENTS, AND I.D. SIGNAGE SUBJECT TO JURISDICTIONAL PERMITS AND APPROVALS.
2) FINAL TRAFFIC STUDY APPROVAL IS REQUIRED BY THE STATE TO CONFIRM ACCESS.
3) FINISHED FLOOR ELEVATIONS (FFE) ARE PRELIMINARY AT THIS TIME AND SUBJECT TO FINAL GRADING PLAN.
4) THE SITE IS LOCATED IN FLOOD ZONE X PER FEMA FIRM MAP 45003C0316E AND 45003C0312E DATED 6/19/2012.



980 EDGEFEILD RD - NORTH AUGUSTA, SC
PRELIM SITE PLAN - 2

FORESITE group

1" = 60'
60 30 0 60 120
SCALE IN FEET

374.006 | 2022-02-28

NEW SIGNAL EQUIPMENT

1 EA. - MODEL 2070 CONTROLLER W/BASE MOUNTED 332 CABINET.
6 EA. - ORACLE, (2)-CHANNEL
7 EA. - 12" 3 SECTION SIGNAL HEADS
1 EA. - 12" 3 SECTION SIGNAL HEAD W/FYA
1 EA. - 12" 4 SECTION SIGNAL HEAD W/FYA
1 EA. - 12" 4 SECTION SIGNAL HEAD
1 EA. - 12" 5 SECTION SIGNAL HEAD
4 EA. - 16" PEDESTRIAN SIGNAL HEADS W/PUSHBUTTONS & SIGNS
4 EA. - 6x30 QUADRUPOLE WIRE LOOPS
6 EA. - 6x6 WIRE LOOPS

	1,2F	2	6	6F	8A	8B	8C	P2, 8
	R Y FY G	R Y G	R Y FY G	R Y FY G	R Y G G	R Y G G	R Y G G	
PHASE	OLA	2	6	OLC	8	8	1	P2, 8
SIZE	12"	12"	12"	12"	12"	12"	12"	16"
QUANTITY	1	3	3	1	1	1	1	4

Ⓢ - NEW 32' STEEL POLE

Ⓐ
LEFT TURN YIELD ON FLASHING
Sign R10-12a-30
2 EA.

Ⓑ
SIGN W3-3-48
2 EA.

R10 - 3E (L)
2 EA.

R10 - 3E (R)
2 EA.

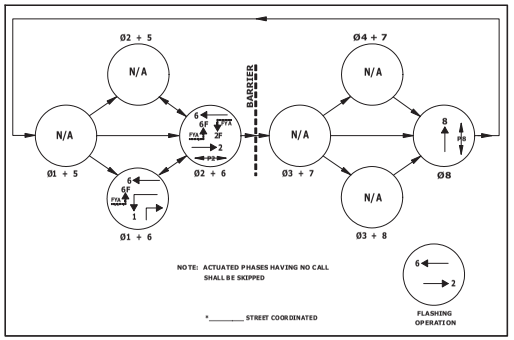
LOOP DETECTOR INSTALLATION CHART

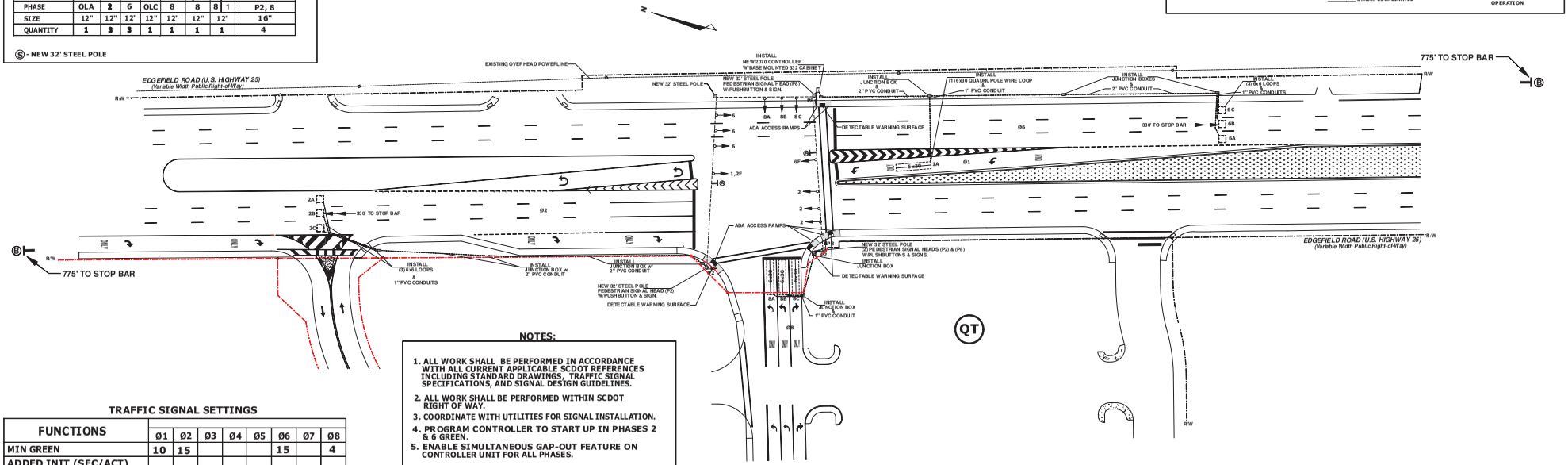
LOOP	DESIGN SIZE (FT)	DESIGN TURNS	DESIGN DIST. FROM STOPBAR (FT)	DESIGN NEW	OPERATION PHASE	OPERATION LOCK	OPERATION CALL	OPERATION EXTEND	OPERATION DELAY
1A	6x30 QUAD	2-4-2	50'	X	1	---	X	X	---
2A	6x6	4	330	X	2	X	X	X	---
2B	6x6	4	330	X	2	X	X	X	---
2C	6x6	4	330	X	2	X	X	X	---
6A	6x6	4	330	X	6	X	X	X	---
6B	6x6	4	330	X	6	X	X	X	---
6C	6x6	4	330	X	6	X	X	X	---
8A	6x30 QUAD	2-4-2	0	X	8	---	X	X	---
8B	6x30 QUAD	2-4-2	0	X	8	---	X	X	---
8C	6x30 QUAD	2-4-2	0	X	8	---	X	X	10

TABLE OF OPERATION

TABLE OF OPERATION / SIGNAL HEAD #	PHASE IN OPERATION Ø1 + Ø6	Ø2 + Ø6	Ø8		FLASH
1,2F	◀G	FYA	◀R		◀Y
2	R	G	R		Y
6	G	G	R		Y
6F	FYA	FYA	◀R		◀Y
8A	R	R	◀G		R
8B	R	R	◀G		R
8C	G▶	R	G		R

PHASING DIAGRAM





NOTES:

1. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH ALL CURRENT APPLICABLE SCDOT REFERENCES INCLUDING STANDARD DRAWINGS, TRAFFIC SIGNAL SPECIFICATIONS, AND SIGNAL DESIGN GUIDELINES.
2. ALL WORK SHALL BE PERFORMED WITHIN SCDOT RIGHT OF WAY.
3. COORDINATE WITH UTILITIES FOR SIGNAL INSTALLATION.
4. PROGRAM CONTROLLER TO START UP IN PHASES 2 & 6 GREEN.
5. ENABLE SIMULTANEOUS GAP-OUT FEATURE ON CONTROLLER UNIT FOR ALL PHASES.
6. PROGRAM PHASES 1,2, AND 6 WITH DUAL ENTRY ON AND PHASE 8 OFF.
7. PROGRAM PHASES 2 & 8 FOR 'STARTUP PED CALL'.
8. SET ALL DETECTOR UNITS TO PRESENCE MODE.
9. INSTALL BACKPLATES ON ALL SIGNAL HEADS.
10. PHASE 1 MAY BE LAGGED
11. PROGRAM PEDESTRIAN HEADS TO COUNTDOWN THE FLASHING "DON'T WALK" TIME ONLY.
12. "WALK" TIME AND "DON'T WALK TIME SHALL INITIATE DURING CORRESPONDING THROUGH GREEN TIME AND SHALL COMPLETE PRIOR TO START OF YELLOW TIME FOR CORRESPONDING THROUGH MOVEMENT.
13. PERMISSION BY OWNER IS GRANTED FOR SCDOT TO PERFORM MAINTENANCE TO ALL SIGNAL EQUIPMENT TO INCLUDE SIGNAL POLES, PEDESTRIAN BUTTONS, TRAFFIC LOOPS, ETC. AS NEEDED AND DETERMINED BY SCDOT.
14. ALL POLES WITH PEDESTRIAN BUTTONS MUST BE PLACED IMMEDIATELY ADJACENT TO THE SIDEWALK OR HAVE A SIDEWALK PAD/EXTENSION CREATED TO CONNECT THEM.
15. POLE LOCATIONS ARE APPROXIMATE. FINAL LOCATIONS TO BE DETERMINED BY CONTRACTOR AFTER UTILITY LOCATES ARE COMPLETED.

TRAFFIC SIGNAL SETTINGS

FUNCTIONS	Ø1	Ø2	Ø3	Ø4	Ø5	Ø6	Ø7	Ø8
MIN GREEN	10	15				15		4
ADDED INIT (SEC/ACT)								
MAX INITIAL								
PASSAGE	3	3				3		4
TIME BEFORE REDUCE								
TIME TO REDUCE								
MIN GAP								
MAXIMUM I	20	45				45		20
MAXIMUM II								
YELLOW CHANGE	3.0	4.5				4.5		3.0
RED CLEAR	3.8	3.8				3.8		3.7
RECALL		MIN				MIN		
DET. MEMORY	N	L				L		N
L=LOCK, N=NON-LOCK								
DET. DELAY								
DET. MODE	PR	PR				PR		PR
P=PULSE PR=PRESENCE								
WALK		7						7
PEDESTRIAN CLEAR		23						30

OVERLAP SETTINGS

OLA= 1,2(FYA) OLC= 6(FYA)

STREET	APPROACH	SPEED	GRADE
(US-25) EDGEFIELD RD.	NB	45	-1%
(US-25) EDGEFIELD RD.	SB	45	1%
QT DRIVEWAY	EB	25	1%

NOTE

ALL SIGNAL EQUIPMENT AND WORK MUST MEET APPLICABLE SCDOT TRAFFIC SIGNAL SPECIFICATIONS AND MUTCD STANDARDS

EPC, LLC
1144 Woodcraft Dr.
Easton, SC 29853
(803) 429-5591

SOUTH CAROLINA ENCROACHMENT POINT CLEARINGHOUSE, LLC No. 5755 CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA PROFESSIONAL ENGINEER No. 31545 DAVID D. BREWER

5-27-22

DATE	REVISIONS

SCDOT
SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION
DISTRICT #7 TRAFFIC ENGINEERING
ORANGEBURG, S.C.

SUBJECT TITLE: **TRAFFIC SIGNAL PLAN**

SPECIFIC LOCATION: US HWY 25 (Edgefield Rd.) @ Quik-Trip Driveway Between I-20 and S-33 (Ascauga Road)

CITY | COUNTY: AIKEN

DESIGNED	APPROVED BY	APPROVED BY	
DRAWN	DISTRICT #7 TRAFFIC ENGINEER		ENGINEER
RECOMMENDED	SCALE	DATE	SHEET NO. / INDEX NO.
CONSTRUCTED	1" = 40'	5-27-22	1 OF 1

Appendix B: Traffic Counts

National Data & Surveying Services Intersection Turning Movement Count

Location: US 25/SR 121/Edgefield Rd & I-20/CR 6 EB Ramps
City: North Augusta
Control: Signalized

Project ID: 21-150077-002
Date: 12/14/2021

Data - Total

NS/EW Streets:	US 25/SR 121/Edgefield Rd				US 25/SR 121/Edgefield Rd				I-20/CR 6 EB Ramps				I-20/CR 6 EB Ramps				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	3	0	0	1	3	0	0	2	0.5	1.5	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
6:30 AM	0	139	15	0	33	146	0	0	58	0	21	0	0	0	0	0	412
6:45 AM	0	162	10	0	24	161	0	0	58	0	29	0	0	0	0	0	444
7:00 AM	0	191	11	0	35	187	0	0	66	0	46	0	0	0	0	0	536
7:15 AM	0	265	14	0	27	233	0	0	60	0	59	0	0	0	0	0	658
7:30 AM	0	267	17	0	25	277	0	0	94	0	69	0	0	0	0	0	749
7:45 AM	0	309	16	0	29	246	0	0	101	0	60	0	0	0	0	0	761
8:00 AM	0	283	12	0	30	230	0	0	65	0	58	0	0	0	0	0	678
8:15 AM	0	201	9	0	34	184	0	0	73	0	56	0	0	0	0	0	557
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	1817	104	0	237	1664	0	0	575	0	398	0	0	0	0	0	4795
APPROACH %'s :	0.00%	94.59%	5.41%	0.00%	12.47%	87.53%	0.00%	0.00%	59.10%	0.00%	40.90%	0.00%					
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	0	1124	59	0	111	986	0	0	320	0	246	0	0	0	0	0	2846
PEAK HR FACTOR :	0.000	0.909	0.868	0.000	0.925	0.890	0.000	0.000	0.792	0.000	0.891	0.000	0.000	0.000	0.000	0.000	0.935
	0.910				0.908				0.868								

	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
PM	0	3	0	0	1	3	0	0	2	0.5	1.5	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	268	15	0	24	230	0	0	107	0	86	0	0	0	0	0	730
4:15 PM	0	311	19	0	28	238	0	0	111	0	68	0	0	0	0	0	775
4:30 PM	0	356	13	0	34	221	0	0	102	2	73	0	0	0	0	0	801
4:45 PM	0	368	18	0	39	184	0	0	97	0	80	0	0	0	0	0	786
5:00 PM	0	372	12	0	31	244	0	0	136	1	89	0	0	0	0	0	885
5:15 PM	0	394	21	0	28	268	0	0	146	0	80	0	0	0	0	0	937
5:30 PM	0	367	18	0	40	275	0	0	126	0	73	0	0	0	0	0	899
5:45 PM	0	368	22	0	43	238	0	0	149	1	41	0	0	0	0	0	862
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	2804	138	0	267	1898	0	0	974	4	590	0	0	0	0	0	6675
APPROACH %'s :	0.00%	95.31%	4.69%	0.00%	12.33%	87.67%	0.00%	0.00%	62.12%	0.26%	37.63%	0.00%					
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	0	1501	73	0	142	1025	0	0	557	2	283	0	0	0	0	0	3583
PEAK HR FACTOR :	0.000	0.952	0.830	0.000	0.826	0.932	0.000	0.000	0.935	0.500	0.795	0.000	0.000	0.000	0.000	0.000	0.956
	0.948				0.926				0.931								

National Data & Surveying Services Intersection Turning Movement Count

Location: US 25/SR 121/Edgefield Rd & I-20/CR 6 WB Ramps
City: North Augusta
Control: Signalized

Project ID: 21-150077-001
Date: 12/14/2021

Data - Total

NS/EW Streets:	US 25/SR 121/Edgefield Rd				US 25/SR 121/Edgefield Rd				I-20/CR 6 WB Ramps				I-20/CR 6 WB Ramps				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	2	3	0	0	0	3	1	0	0	0	0	0	0.5	0.5	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
6:30 AM	49	151	0	0	0	176	86	0	0	0	0	0	6	0	13	0	481
6:45 AM	59	158	0	0	0	175	75	0	0	0	0	0	14	0	29	0	510
7:00 AM	56	203	0	0	0	220	103	0	0	0	0	0	7	0	34	0	623
7:15 AM	84	237	0	0	0	231	129	0	0	0	0	0	20	0	34	0	735
7:30 AM	92	274	0	0	0	298	152	0	0	0	0	0	9	1	42	0	868
7:45 AM	111	290	0	0	0	271	116	0	0	0	0	0	4	0	42	0	834
8:00 AM	71	281	0	0	0	249	145	0	0	0	0	0	11	0	37	0	794
8:15 AM	87	191	0	0	0	200	114	0	0	0	0	0	16	0	34	0	642
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	609	1785	0	0	0	1820	920	0	0	0	0	0	87	1	265	0	5487
APPROACH %'s :	25.44%	74.56%	0.00%	0.00%	0.00%	66.42%	33.58%	0.00%					24.65%	0.28%	75.07%	0.00%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	358	1082	0	0	0	1049	542	0	0	0	0	0	44	1	155	0	3231
PEAK HR FACTOR :	0.806	0.933	0.000	0.000	0.000	0.880	0.891	0.000	0.000	0.000	0.000	0.000	0.550	0.250	0.923	0.000	0.931
	0.898				0.884								0.926				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	2	3	0	0	0	3	1	0	0	0	0	0	0.5	0.5	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	58	323	0	0	0	241	86	0	0	0	0	0	12	0	33	0	753
4:15 PM	68	347	0	0	0	257	95	0	0	0	0	0	17	0	34	0	818
4:30 PM	71	393	0	0	0	241	110	0	0	0	0	0	9	0	35	0	859
4:45 PM	58	405	0	0	0	219	87	0	0	0	0	0	7	0	41	0	817
5:00 PM	83	426	0	0	0	263	119	0	0	0	0	0	7	1	30	0	929
5:15 PM	51	480	0	0	0	293	98	1	0	0	0	0	10	0	39	0	972
5:30 PM	69	434	0	0	0	293	128	0	0	0	0	0	15	0	37	0	976
5:45 PM	64	448	0	0	0	275	92	0	0	0	0	0	6	0	28	0	913
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	522	3256	0	0	0	2082	815	1	0	0	0	0	83	1	277	0	7037
APPROACH %'s :	13.82%	86.18%	0.00%	0.00%	0.00%	71.84%	28.12%	0.03%					22.99%	0.28%	76.73%	0.00%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	267	1788	0	0	0	1124	437	1	0	0	0	0	38	1	134	0	3790
PEAK HR FACTOR :	0.804	0.931	0.000	0.000	0.000	0.959	0.854	0.250	0.000	0.000	0.000	0.000	0.633	0.250	0.859	0.000	0.971
	0.968				0.928								0.832				

National Data & Surveying Services Intersection Turning Movement Count

Location: US 25/SR 121/Edgefield Rd & SR 33/Ascauga Lake Rd
City: North Augusta
Project ID: 21-150077-003
Date: 12/14/2021

Data - Pedestrians (Crosswalks)

NS/EW Streets:	US 25/SR 121/Edgefield Rd		US 25/SR 121/Edgefield Rd		SR 33/Ascauga Lake Rd		SR 33/Ascauga Lake Rd		
AM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
6:30 AM	0	0	0	0	0	0	0	0	0
6:45 AM	0	0	0	0	0	0	0	0	0
7:00 AM	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0
APPROACH %'s :									
PEAK HR :	07:15 AM - 08:15 AM								TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :									

PM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
4:00 PM	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0
APPROACH %'s :									
PEAK HR :	05:00 PM - 06:00 PM								TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :									

Prepared by National Data & Surveying Services

VOLUME

US 25/SR 121/Edgefield Rd N/O SR 33/Ascauga Lake Rd

Day: Tuesday
Date: 12/14/2021

City: North Augusta
Project #: SC21_150078_001

DAILY TOTALS	NB	SB	EB	WB	Total
	15,721	15,708	0	0	31,429

AM Period	NB		SB		EB	WB	TOTAL		PM Period	NB		SB		EB	WB	TOTAL	
00:00	26		30				56		12:00	247		225				472	
00:15	20		22				42		12:15	274		256				530	
00:30	15		23				38		12:30	245		243				488	
00:45	10	71	15	90			25	161	12:45	231	997	256	980			487	1977
01:00	13		22				35		13:00	248		203				451	
01:15	7		15				22		13:15	228		234				462	
01:30	7		8				15		13:30	230		245				475	
01:45	12	39	10	55			22	94	13:45	265	971	241	923			506	1894
02:00	9		15				24		14:00	269		227				496	
02:15	8		8				16		14:15	254		233				487	
02:30	11		14				25		14:30	273		249				522	
02:45	11	39	10	47			21	86	14:45	290	1086	226	935			516	2021
03:00	18		14				32		15:00	277		276				553	
03:15	15		19				34		15:15	313		316				629	
03:30	29		31				60		15:30	311		284				595	
03:45	16	78	30	94			46	172	15:45	316	1217	295	1171			611	2388
04:00	19		27				46		16:00	301		302				603	
04:15	43		37				80		16:15	335		304				639	
04:30	40		59				99		16:30	368		281				649	
04:45	62	164	76	199			138	363	16:45	371	1375	302	1189			673	2564
05:00	64		86				150		17:00	365		321				686	
05:15	79		103				182		17:15	411		343				754	
05:30	91		110				201		17:30	369		319				688	
05:45	92	326	88	387			180	713	17:45	362	1507	329	1312			691	2819
06:00	79		121				200		18:00	317		277				594	
06:15	115		151				266		18:15	297		296				593	
06:30	154		166				320		18:30	227		252				479	
06:45	179	527	189	627			368	1154	18:45	212	1053	213	1038			425	2091
07:00	207		241				448		19:00	215		182				397	
07:15	268		274				542		19:15	176		201				377	
07:30	282		319				601		19:30	142		138				280	
07:45	316	1073	322	1156			638	2229	19:45	128	661	153	674			281	1335
08:00	286		254				540		20:00	135		151				286	
08:15	217		264				481		20:15	144		124				268	
08:30	235		181				416		20:30	123		120				243	
08:45	181	919	237	936			418	1855	20:45	115	517	114	509			229	1026
09:00	195		205				400		21:00	96		123				219	
09:15	171		224				395		21:15	98		99				197	
09:30	188		163				351		21:30	82		99				181	
09:45	200	754	210	802			410	1556	21:45	81	357	74	395			155	752
10:00	186		229				415		22:00	71		81				152	
10:15	197		232				429		22:15	55		69				124	
10:30	198		193				391		22:30	46		50				96	
10:45	216	797	204	858			420	1655	22:45	36	208	50	250			86	458
11:00	202		203				405		23:00	29		65				94	
11:15	219		215				434		23:15	35		56				91	
11:30	233		240				473		23:30	31		51				82	
11:45	206	860	207	865			413	1725	23:45	30	125	44	216			74	341
TOTALS		5647		6116				11763	TOTALS		10074		9592				19666
SPLIT %		48.0%		52.0%				37.4%	SPLIT %		51.2%		48.8%				62.6%

DAILY TOTALS	NB	SB	EB	WB	Total
	15,721	15,708	0	0	31,429

AM Peak Hour	07:15	07:15				07:15	PM Peak Hour	16:45	17:00				17:00
AM Pk Volume	1152	1169				2321	PM Pk Volume	1516	1312				2819
Pk Hr Factor	0.911	0.908				0.909	Pk Hr Factor	0.922	0.956				0.935
7 - 9 Volume	1992	2092	0	0		4084	4 - 6 Volume	2882	2501	0	0		5383
7 - 9 Peak Hour	07:15	07:15				07:15	4 - 6 Peak Hour	16:45	17:00				17:00
7 - 9 Pk Volume	1152	1169	0	0		2321	4 - 6 Pk Volume	1516	1312	0	0		2819
Pk Hr Factor	0.911	0.908	0.000	0.000		0.909	Pk Hr Factor	0.922	0.956	0.000	0.000		0.935

Prepared by National Data & Surveying Services

VOLUME

US 25/SR 121/Edgefield Rd N/O Zaxby's Chicken Fingers & Buffalo Wings Dwy

Day: Tuesday
Date: 12/14/2021

City: North Augusta
Project #: SC21_150078_002

DAILY TOTALS	NB	SB	EB	WB	Total
	18,641	20,188	0	0	38,829

AM Period	NB		SB		EB	WB	TOTAL		PM Period	NB		SB		EB	WB	TOTAL	
00:00	30		34				64		12:00	284		288				572	
00:15	27		33				60		12:15	334		346				680	
00:30	21		18				39		12:30	269		334				603	
00:45	22	100	22	107			44	207	12:45	279	1166	313	1281			592	2447
01:00	26		18				44		13:00	296		312				608	
01:15	29		30				59		13:15	270		311				581	
01:30	16		18				34		13:30	274		325				599	
01:45	21	92	9	75			30	167	13:45	294	1134	316	1264			610	2398
02:00	24		22				46		14:00	284		296				580	
02:15	20		22				42		14:15	275		286				561	
02:30	20		35				55		14:30	334		319				653	
02:45	21	85	25	104			46	189	14:45	342	1235	301	1202			643	2437
03:00	21		24				45		15:00	358		292				650	
03:15	19		33				52		15:15	396		353				749	
03:30	50		52				102		15:30	362		352				714	
03:45	22	112	43	152			65	264	15:45	403	1519	383	1380			786	2899
04:00	31		47				78		16:00	391		328				719	
04:15	45		52				97		16:15	398		398				796	
04:30	48		90				138		16:30	419		342				761	
04:45	77	201	92	281			169	482	16:45	430	1638	342	1410			772	3048
05:00	70		137				207		17:00	442		394				836	
05:15	72		142				214		17:15	479		429				908	
05:30	91		160				251		17:30	447		423				870	
05:45	91	324	136	575			227	899	17:45	434	1802	398	1644			832	3446
06:00	67		183				250		18:00	388		359				747	
06:15	82		231				313		18:15	308		333				641	
06:30	151		259				410		18:30	299		293				592	
06:45	151	451	243	916			394	1367	18:45	298	1293	245	1230			543	2523
07:00	195		331				526		19:00	313		201				514	
07:15	262		393				655		19:15	256		207				463	
07:30	283		438				721		19:30	226		165				391	
07:45	336	1076	451	1613			787	2689	19:45	192	987	204	777			396	1764
08:00	279		368				647		20:00	171		162				333	
08:15	224		312				536		20:15	223		131				354	
08:30	202		299				501		20:30	174		133				307	
08:45	230	935	279	1258			509	2193	20:45	161	729	133	559			294	1288
09:00	174		257				431		21:00	142		117				259	
09:15	185		267				452		21:15	143		107				250	
09:30	184		285				469		21:30	126		123				249	
09:45	215	758	282	1091			497	1849	21:45	114	525	99	446			213	971
10:00	213		341				554		22:00	124		113				237	
10:15	215		258				473		22:15	102		95				197	
10:30	230		277				507		22:30	88		80				168	
10:45	216	874	271	1147			487	2021	22:45	73	387	77	365			150	752
11:00	212		274				486		23:00	66		61				127	
11:15	234		253				487		23:15	60		55				115	
11:30	270		304				574		23:30	52		48				100	
11:45	279	995	272	1103			551	2098	23:45	45	223	44	208			89	431
TOTALS		6003		8422				14425	TOTALS		12638		11766				24404
SPLIT %		41.6%		58.4%				37.2%	SPLIT %		51.8%		48.2%				62.8%

DAILY TOTALS	NB	SB	EB	WB	Total
	18,641	20,188	0	0	38,829

AM Peak Hour	11:30	07:15					07:15		PM Peak Hour	17:00	17:00					17:00		
AM Pk Volume	1167	1650					2810		PM Pk Volume	1802	1644					3446		
Pk Hr Factor	0.874	0.915					0.893		Pk Hr Factor	0.941	0.958					0.949		
7 - 9 Volume	2011	2871	0	0			4882		4 - 6 Volume	3440	3054	0	0			6494		
7 - 9 Peak Hour	07:15	07:15					07:15		4 - 6 Peak Hour	17:00	17:00					17:00		
7 - 9 Pk Volume	1160	1650	0	0			2810		4 - 6 Pk Volume	1802	1644	0	0			3446		
Pk Hr Factor	0.863	0.915	0.000	0.000			0.893		Pk Hr Factor	0.941	0.958	0.000	0.000			0.949		

Prepared by NDS/ATD

VOLUME

US 25/SR 121/Edgefield Rd S/O SR 33/Ascauga Lake Rd

Day: Tuesday
Date: 12/14/2021

City: North Augusta
Project #: SC21_150078_003

DAILY TOTALS	NB	SB	EB	WB	Total
	12,411	12,154	0	0	24,565

AM Period	NB		SB		EB	WB	TOTAL		PM Period	NB		SB		EB	WB	TOTAL	
00:00	17		21				38		12:00	199		180				379	
00:15	13		15				28		12:15	219		214				433	
00:30	10		14				24		12:30	155		184				339	
00:45	7	47	9	59			16	106	12:45	209	782	210	788			419	1570
01:00	9		15				24		13:00	192		167				359	
01:15	5		10				15		13:15	208		213				421	
01:30	6		5				11		13:30	169		205				374	
01:45	8	28	7	37			15	65	13:45	197	766	191	776			388	1542
02:00	6		10				16		14:00	228		199				427	
02:15	5		5				10		14:15	205		196				401	
02:30	7		8				15		14:30	237		187				424	
02:45	7	25	6	29			13	54	14:45	224	894	166	748			390	1642
03:00	12		9				21		15:00	228		220				448	
03:15	10		13				23		15:15	294		241				535	
03:30	21		27				48		15:30	249		213				462	
03:45	12	55	31	80			43	135	15:45	279	1050	228	902			507	1952
04:00	14		28				42		16:00	271		213				484	
04:15	30		37				67		16:15	288		246				534	
04:30	26		56				82		16:30	336		219				555	
04:45	45	115	72	193			117	308	16:45	329	1224	199	877			528	2101
05:00	37		89				126		17:00	312		253				565	
05:15	52		108				160		17:15	360		230				590	
05:30	61		112				173		17:30	316		244				560	
05:45	59	209	87	396			146	605	17:45	317	1305	203	930			520	2235
06:00	55		99				154		18:00	284		200				484	
06:15	62		135				197		18:15	243		215				458	
06:30	97		169				266		18:30	186		173				359	
06:45	112	326	161	564			273	890	18:45	187	900	142	730			329	1630
07:00	136		192				328		19:00	184		129				313	
07:15	185		241				426		19:15	153		114				267	
07:30	201		257				458		19:30	119		88				207	
07:45	210	732	312	1002			522	1734	19:45	105	561	93	424			198	985
08:00	218		209				427		20:00	111		100				211	
08:15	152		190				342		20:15	111		82				193	
08:30	144		151				295		20:30	100		62				162	
08:45	139	653	191	741			330	1394	20:45	91	413	61	305			152	718
09:00	127		174				301		21:00	96		76				172	
09:15	115		189				304		21:15	64		58				122	
09:30	131		133				264		21:30	64		52				116	
09:45	140	513	181	677			321	1190	21:45	69	293	51	237			120	530
10:00	151		185				336		22:00	53		50				103	
10:15	136		180				316		22:15	45		39				84	
10:30	150		166				316		22:30	38		25				63	
10:45	151	588	166	697			317	1285	22:45	35	171	34	148			69	319
11:00	160		169				329		23:00	22		35				57	
11:15	158		175				333		23:15	27		37				64	
11:30	171		198				369		23:30	31		22				53	
11:45	170	659	158	700			328	1359	23:45	22	102	20	114			42	216
TOTALS		3950		5175				9125	TOTALS		8461		6979				15440
SPLIT %		43.3%		56.7%				37.1%	SPLIT %		54.8%		45.2%				62.9%

DAILY TOTALS	NB	SB	EB	WB	Total
	12,411	12,154	0	0	24,565

AM Peak Hour	07:15	07:15					07:15		PM Peak Hour	16:30	17:00					16:45		
AM Pk Volume	814	1019					1833		PM Pk Volume	1337	930					2243		
Pk Hr Factor	0.933	0.817					0.878		Pk Hr Factor	0.928	0.919					0.950		
7 - 9 Volume	1385	1743	0	0			3128		4 - 6 Volume	2529	1807	0	0			4336		
7 - 9 Peak Hour	07:15	07:15					07:15		4 - 6 Peak Hour	16:30	17:00					16:45		
7 - 9 Pk Volume	814	1019	0	0			1833		4 - 6 Pk Volume	1337	930	0	0			2243		
Pk Hr Factor	0.933	0.817	0.000	0.000			0.878		Pk Hr Factor	0.928	0.919	0.000	0.000			0.950		

Prepared by NDS/ATD

VOLUME

SR 33/Ascauga Lake Rd E/O US 25/SR 121/Edgefield Rd

Day: Tuesday
Date: 12/14/2021

City: North Augusta
Project #: SC21_150078_004

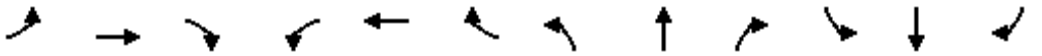
DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	7,815	7,417	15,232

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			14		12		26		12:00			114		116		230	
00:15			9		8		17		12:15			115		121		236	
00:30			5		10		15		12:30			109		120		229	
00:45			4	32	5	35	9	67	12:45			128	466	113	470	241	936
01:00			2		3		5		13:00			117		106		223	
01:15			1		2		3		13:15			106		100		206	
01:30			1		2		3		13:30			106		124		230	
01:45			1	5	1	8	2	13	13:45			105	434	120	450	225	884
02:00			0		1		1		14:00			126		130		256	
02:15			1		0		1		14:15			123		111		234	
02:30			1		1		2		14:30			116		104		220	
02:45			2	4	0	2	2	6	14:45			130	495	118	463	248	958
03:00			1		1		2		15:00			132		133		265	
03:15			1		3		4		15:15			185		128		313	
03:30			5		5		10		15:30			147		147		294	
03:45			3	10	8	17	11	27	15:45			175	639	144	552	319	1191
04:00			2		8		10		16:00			191		121		312	
04:15			8		17		25		16:15			180		148		328	
04:30			9		16		25		16:30			161		146		307	
04:45			10	29	22	63	32	92	16:45			179	711	149	564	328	1275
05:00			11		36		47		17:00			169		152		321	
05:15			12		40		52		17:15			239		156		395	
05:30			22		48		70		17:30			177		176		353	
05:45			21	66	49	173	70	239	17:45			177	762	142	626	319	1388
06:00			24		40		64		18:00			188		138		326	
06:15			41		70		111		18:15			158		126		284	
06:30			50		102		152		18:30			135		101		236	
06:45			77	192	122	334	199	526	18:45			132	613	77	442	209	1055
07:00			91		132		223		19:00			114		79		193	
07:15			128		163		291		19:15			131		65		196	
07:30			151		189		340		19:30			96		66		162	
07:45			136	506	220	704	356	1210	19:45			99	440	56	266	155	706
08:00			128		140		268		20:00			79		61		140	
08:15			129		119		248		20:15			78		48		126	
08:30			97		144		241		20:30			83		46		129	
08:45			96	450	99	502	195	952	20:45			75	315	45	200	120	515
09:00			80		116		196		21:00			82		35		117	
09:15			90		104		194		21:15			59		45		104	
09:30			77		106		183		21:30			58		31		89	
09:45			95	342	107	433	202	775	21:45			39	238	24	135	63	373
10:00			118		105		223		22:00			40		24		64	
10:15			107		106		213		22:15			36		13		49	
10:30			101		110		211		22:30			38		14		52	
10:45			93	419	111	432	204	851	22:45			28	142	15	66	43	208
11:00			96		111		207		23:00			37		13		50	
11:15			103		113		216		23:15			26		15		41	
11:30			102		119		221		23:30			14		10		24	
11:45			109	410	88	431	197	841	23:45			18	95	11	49	29	144
TOTALS				2465		3134		5599	TOTALS				5350		4283		9633
SPLIT %				44.0%		56.0%		36.8%	SPLIT %				55.5%		44.5%		63.2%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	7,815	7,417	15,232

AM Peak Hour			07:30	07:15	07:15	PM Peak Hour			17:15	16:45	16:45
AM Pk Volume			544	712	1255	PM Pk Volume			781	633	1397
Pk Hr Factor			0.901	0.809	0.881	Pk Hr Factor			0.817	0.899	0.884
7 - 9 Volume	0	0	956	1206	2162	4 - 6 Volume	0	0	1473	1190	2663
7 - 9 Peak Hour			07:30	07:15	07:15	4 - 6 Peak Hour			16:45	16:45	16:45
7 - 9 Pk Volume	0	0	544	712	1255	4 - 6 Pk Volume	0	0	764	633	1397
Pk Hr Factor	0.000	0.000	0.901	0.809	0.881	Pk Hr Factor	0.000	0.000	0.799	0.899	0.884

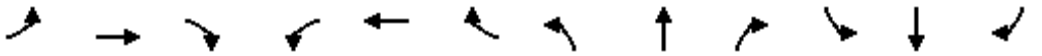
Appendix C: Synchro Capacity Analysis and Queuing Reports



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	44	1	155	358	1082	0	0	1049	542
Future Volume (vph)	0	0	0	44	1	155	358	1082	0	0	1049	542
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					6.8	6.8	6.8	7.0			6.8	6.8
Lane Util. Factor					1.00	1.00	0.97	0.91			0.91	1.00
Frt					1.00	0.85	1.00	1.00			1.00	0.85
Flt Protected					0.95	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)					1776	1583	3433	5085			5085	1583
Flt Permitted					0.95	1.00	0.95	1.00			1.00	1.00
Satd. Flow (perm)					1776	1583	3433	5085			5085	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	48	1	168	389	1176	0	0	1140	589
RTOR Reduction (vph)	0	0	0	0	0	74	0	0	0	0	0	257
Lane Group Flow (vph)	0	0	0	0	49	94	389	1176	0	0	1140	332
Turn Type				Perm	NA	Perm	Prot	NA			NA	Perm
Protected Phases					4		1	6			2	
Permitted Phases				4		4						2
Actuated Green, G (s)					16.5	16.5	24.2	109.7			78.9	78.9
Effective Green, g (s)					16.5	16.5	24.2	109.7			78.9	78.9
Actuated g/C Ratio					0.12	0.12	0.17	0.78			0.56	0.56
Clearance Time (s)					6.8	6.8	6.8	7.0			6.8	6.8
Vehicle Extension (s)					3.0	3.0	3.0	3.0			3.0	3.0
Lane Grp Cap (vph)					209	186	593	3984			2865	892
v/s Ratio Prot							c0.11	0.23			c0.22	
v/s Ratio Perm					0.03	c0.06						0.21
v/c Ratio					0.23	0.50	0.66	0.30			0.40	0.37
Uniform Delay, d1					56.0	57.9	54.0	4.3			17.2	16.9
Progression Factor					1.00	1.00	1.07	0.41			1.00	1.00
Incremental Delay, d2					0.6	2.1	2.4	0.2			0.4	1.2
Delay (s)					56.6	60.1	60.4	1.9			17.6	18.1
Level of Service					E	E	E	A			B	B
Approach Delay (s)		0.0			59.3			16.4			17.8	
Approach LOS		A			E			B			B	

Intersection Summary			
HCM 2000 Control Delay	19.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	20.4
Intersection Capacity Utilization	73.3%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	320	0	246	0	0	0	0	1120	59	111	982	0
Future Volume (vph)	320	0	246	0	0	0	0	1120	59	111	982	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.5	6.5	6.5					6.4		6.5	6.4	
Lane Util. Factor	0.97	0.95	0.95					0.91		1.00	0.91	
Frt	1.00	0.85	0.85					0.99		1.00	1.00	
Flt Protected	0.95	1.00	1.00					1.00		0.95	1.00	
Satd. Flow (prot)	3433	1504	1504					5047		1770	5085	
Flt Permitted	0.95	1.00	1.00					1.00		0.95	1.00	
Satd. Flow (perm)	3433	1504	1504					5047		1770	5085	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	348	0	267	0	0	0	0	1217	64	121	1067	0
RTOR Reduction (vph)	0	115	114	0	0	0	0	4	0	0	0	0
Lane Group Flow (vph)	348	19	19	0	0	0	0	1277	0	121	1067	0
Turn Type	Perm	NA	Perm					NA		Prot	NA	
Protected Phases		8						6		5	2	
Permitted Phases	8		8									
Actuated Green, G (s)	19.8	19.8	19.8					89.3		11.5	107.3	
Effective Green, g (s)	19.8	19.8	19.8					89.3		11.5	107.3	
Actuated g/C Ratio	0.14	0.14	0.14					0.64		0.08	0.77	
Clearance Time (s)	6.5	6.5	6.5					6.4		6.5	6.4	
Vehicle Extension (s)	3.0	3.0	3.0					3.0		3.0	3.0	
Lane Grp Cap (vph)	485	212	212					3219		145	3897	
v/s Ratio Prot		0.01						c0.25		c0.07	0.21	
v/s Ratio Perm	c0.10		0.01									
v/c Ratio	0.72	0.09	0.09					0.40		0.83	0.27	
Uniform Delay, d1	57.4	52.3	52.3					12.3		63.3	4.8	
Progression Factor	1.00	1.00	1.00					1.00		0.89	0.02	
Incremental Delay, d2	5.0	0.2	0.2					0.4		30.4	0.2	
Delay (s)	62.5	52.4	52.4					12.7		86.9	0.3	
Level of Service	E	D	D					B		F	A	
Approach Delay (s)		58.1			0.0			12.7			9.1	
Approach LOS		E			A			B			A	

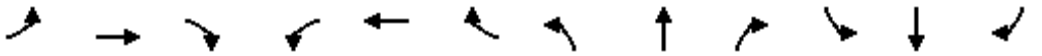
Intersection Summary			
HCM 2000 Control Delay	20.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	19.4
Intersection Capacity Utilization	73.3%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	219	493	682	131	413	799
Future Volume (vph)	219	493	682	131	413	799
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.5	6.5	6.6		6.6	6.6
Lane Util. Factor	1.00	0.88	0.91		0.97	0.91
Frt	1.00	0.85	0.98		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1770	2787	4963		3433	5085
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1770	2787	4963		3433	5085
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	238	536	741	142	449	868
RTOR Reduction (vph)	0	444	17	0	0	0
Lane Group Flow (vph)	238	92	866	0	449	868
Turn Type	Prot	Perm	NA		Prot	NA
Protected Phases	4		6		5	2
Permitted Phases		4				
Actuated Green, G (s)	24.1	24.1	72.8		23.4	102.8
Effective Green, g (s)	24.1	24.1	72.8		23.4	102.8
Actuated g/C Ratio	0.17	0.17	0.52		0.17	0.73
Clearance Time (s)	6.5	6.5	6.6		6.6	6.6
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	304	479	2580		573	3733
v/s Ratio Prot	c0.13		c0.17		c0.13	0.17
v/s Ratio Perm		0.03				
v/c Ratio	0.78	0.19	0.34		0.78	0.23
Uniform Delay, d1	55.4	49.6	19.5		55.9	6.0
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	12.4	0.2	0.4		6.9	0.1
Delay (s)	67.8	49.8	19.9		62.8	6.1
Level of Service	E	D	B		E	A
Approach Delay (s)	55.3		19.9			25.4
Approach LOS	E		B			C

Intersection Summary			
HCM 2000 Control Delay	31.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	19.7
Intersection Capacity Utilization	56.4%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	2	1	14	0	255	5	493	55	307	740	5
Future Volume (vph)	2	2	1	14	0	255	5	493	55	307	740	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.9	6.9			6.9	6.6	6.6	6.6		6.6	6.6	
Lane Util. Factor	1.00	1.00			1.00	0.88	1.00	0.91		0.97	0.91	
Frt	1.00	0.95			1.00	0.85	1.00	0.98		1.00	1.00	
Flt Protected	0.95	1.00			0.95	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1770			1770	2787	1770	5009		3433	5081	
Flt Permitted	1.00	1.00			0.32	1.00	0.33	1.00		0.95	1.00	
Satd. Flow (perm)	1863	1770			601	2787	621	5009		3433	5081	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	2	2	1	15	0	277	5	536	60	334	804	5
RTOR Reduction (vph)	0	1	0	0	0	182	0	6	0	0	0	0
Lane Group Flow (vph)	2	2	0	0	15	95	5	590	0	334	809	0
Turn Type	Perm	NA		Perm	NA	pm+ov	Perm	NA		Prot	NA	
Protected Phases		4			3	5		6		5	2	
Permitted Phases	4			3		3	6					
Actuated Green, G (s)	1.6	1.6			12.4	47.8	63.6	63.6		35.4	105.6	
Effective Green, g (s)	1.6	1.6			12.4	47.8	63.6	63.6		35.4	105.6	
Actuated g/C Ratio	0.01	0.01			0.09	0.34	0.45	0.45		0.25	0.75	
Clearance Time (s)	6.9	6.9			6.9	6.6	6.6	6.6		6.6	6.6	
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	21	20			53	1082	282	2275		868	3832	
v/s Ratio Prot		c0.00				0.02		c0.12		c0.10	0.16	
v/s Ratio Perm	0.00				c0.02	0.01	0.01					
v/c Ratio	0.10	0.10			0.28	0.09	0.02	0.26		0.38	0.21	
Uniform Delay, d1	68.5	68.5			59.6	31.3	21.0	23.6		43.3	5.0	
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00		1.25	1.33	
Incremental Delay, d2	2.0	2.2			2.9	0.0	0.1	0.3		0.3	0.1	
Delay (s)	70.5	70.7			62.6	31.3	21.1	23.9		54.3	6.8	
Level of Service	E	E			E	C	C	C		D	A	
Approach Delay (s)		70.6			32.9			23.9			20.7	
Approach LOS		E			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	23.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	27.0
Intersection Capacity Utilization	51.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Intersection: 1: Edgefield Rd & I-20 WB

Movement	WB	WB	NB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	LT	R	L	L	T	T	T	T	T	T	R
Maximum Queue (ft)	92	100	229	258	42	52	26	311	288	188	258
Average Queue (ft)	33	48	142	166	4	5	2	187	134	54	117
95th Queue (ft)	70	84	212	237	22	26	12	286	247	155	215
Link Distance (ft)	998				1096	1096	1096	797	797	797	
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)		350	500	500							250
Storage Blk Time (%)											0
Queuing Penalty (veh)											1

Intersection: 2: Edgefield Rd & I-20 EB

Movement	EB	EB	EB	EB	NB	NB	NB	SB	SB	SB	SB
Directions Served	L	L	TR	R	T	T	TR	L	T	T	T
Maximum Queue (ft)	209	230	148	110	125	100	97	227	30	16	16
Average Queue (ft)	120	150	64	24	92	60	32	104	2	1	1
95th Queue (ft)	190	212	112	67	106	113	88	192	16	10	9
Link Distance (ft)		1131	1131						1096	1096	1096
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	200			200				325			
Storage Blk Time (%)	0	1									
Queuing Penalty (veh)	0	2									

Intersection: 6: Edgefield Rd/Edgfield Rd & Ascauga Lake Rd

Movement	WB	WB	WB	NB	NB	NB	SB	SB	SB	SB	SB
Directions Served	L	R	R	T	T	TR	L	L	T	T	T
Maximum Queue (ft)	318	135	111	254	226	154	264	301	162	154	112
Average Queue (ft)	182	74	45	169	127	59	171	213	70	68	24
95th Queue (ft)	294	116	79	240	215	124	239	285	137	128	73
Link Distance (ft)	1683	1683		794	794	794					
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)			380				390	390			
Storage Blk Time (%)											
Queuing Penalty (veh)											

Zone Summary

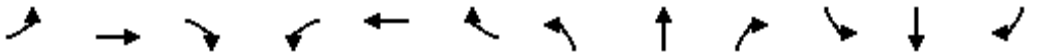
Zone wide Queuing Penalty: 4

Intersection: 7: Edgefield Rd & US 25 Conn

Movement	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	LT	R	R	L	T	T	TR	L	L	T
Maximum Queue (ft)	29	50	50	73	53	30	137	78	96	194	208	34
Average Queue (ft)	2	5	13	40	27	2	72	21	39	104	127	3
95th Queue (ft)	11	26	37	62	47	14	125	62	78	171	189	17
Link Distance (ft)	362	362	1267	1267	1267		749	749	749			1229
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)						190				220	220	
Storage Blk Time (%)											0	
Queuing Penalty (veh)											0	

Intersection: 7: Edgefield Rd & US 25 Conn

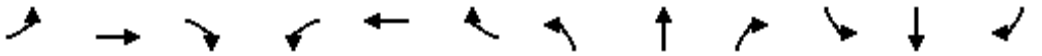
Movement	SB	SB
Directions Served	T	TR
Maximum Queue (ft)	32	47
Average Queue (ft)	7	4
95th Queue (ft)	25	23
Link Distance (ft)	1229	1229
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	38	1	134	267	1788	0	0	1124	437
Future Volume (vph)	0	0	0	38	1	134	267	1788	0	0	1124	437
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					6.8	6.8	6.8	7.0			6.8	6.8
Lane Util. Factor					1.00	1.00	0.97	0.91			0.91	1.00
Frt					1.00	0.85	1.00	1.00			1.00	0.85
Flt Protected					0.95	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)					1776	1583	3433	5085			5085	1583
Flt Permitted					0.95	1.00	0.95	1.00			1.00	1.00
Satd. Flow (perm)					1776	1583	3433	5085			5085	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	41	1	146	290	1943	0	0	1222	475
RTOR Reduction (vph)	0	0	0	0	0	80	0	0	0	0	0	230
Lane Group Flow (vph)	0	0	0	0	42	66	290	1943	0	0	1222	245
Turn Type				Perm	NA	Perm	Prot	NA			NA	Perm
Protected Phases					4		1	6			2	
Permitted Phases				4		4						2
Actuated Green, G (s)					15.5	15.5	27.2	100.7			66.9	66.9
Effective Green, g (s)					15.5	15.5	27.2	100.7			66.9	66.9
Actuated g/C Ratio					0.12	0.12	0.21	0.77			0.51	0.51
Clearance Time (s)					6.8	6.8	6.8	7.0			6.8	6.8
Vehicle Extension (s)					3.0	3.0	3.0	3.0			3.0	3.0
Lane Grp Cap (vph)					211	188	718	3938			2616	814
v/s Ratio Prot							0.08	c0.38			0.24	
v/s Ratio Perm					0.02	c0.04						0.15
v/c Ratio					0.20	0.35	0.40	0.49			0.47	0.30
Uniform Delay, d1					51.6	52.6	44.4	5.3			20.2	18.1
Progression Factor					1.00	1.00	0.85	0.27			1.00	1.00
Incremental Delay, d2					0.5	1.1	0.3	0.4			0.6	1.0
Delay (s)					52.1	53.8	38.0	1.8			20.8	19.1
Level of Service					D	D	D	A			C	B
Approach Delay (s)		0.0			53.4			6.5			20.3	
Approach LOS		A			D			A			C	

Intersection Summary			
HCM 2000 Control Delay	14.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	20.4
Intersection Capacity Utilization	69.3%	ICU Level of Service	C
Analysis Period (min)	15		

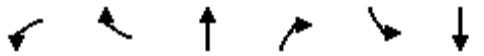
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	554	2	283	0	0	0	0	1501	73	42	1020	0
Future Volume (vph)	554	2	283	0	0	0	0	1501	73	42	1020	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.5	6.5	6.5					6.4		6.5	6.4	
Lane Util. Factor	0.97	0.95	0.95					0.91		1.00	0.91	
Frt	1.00	0.85	0.85					0.99		1.00	1.00	
Flt Protected	0.95	1.00	1.00					1.00		0.95	1.00	
Satd. Flow (prot)	3433	1508	1504					5050		1770	5085	
Flt Permitted	0.95	1.00	1.00					1.00		0.95	1.00	
Satd. Flow (perm)	3433	1508	1504					5050		1770	5085	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	602	2	308	0	0	0	0	1632	79	46	1109	0
RTOR Reduction (vph)	0	89	89	0	0	0	0	4	0	0	0	0
Lane Group Flow (vph)	602	67	65	0	0	0	0	1707	0	46	1109	0
Turn Type	Perm	NA	Perm					NA		Prot	NA	
Protected Phases		8						6		5	2	
Permitted Phases	8		8									
Actuated Green, G (s)	28.9	28.9	28.9					74.9		6.8	88.2	
Effective Green, g (s)	28.9	28.9	28.9					74.9		6.8	88.2	
Actuated g/C Ratio	0.22	0.22	0.22					0.58		0.05	0.68	
Clearance Time (s)	6.5	6.5	6.5					6.4		6.5	6.4	
Vehicle Extension (s)	3.0	3.0	3.0					3.0		3.0	3.0	
Lane Grp Cap (vph)	763	335	334					2909		92	3449	
v/s Ratio Prot		0.04						c0.34		c0.03	0.22	
v/s Ratio Perm	c0.18		0.04									
v/c Ratio	0.79	0.20	0.19					0.59		0.50	0.32	
Uniform Delay, d1	47.7	41.1	41.1					17.6		59.9	8.6	
Progression Factor	1.00	1.00	1.00					1.00		0.99	0.08	
Incremental Delay, d2	5.4	0.3	0.3					0.9		3.8	0.2	
Delay (s)	53.1	41.4	41.4					18.5		63.2	0.9	
Level of Service	D	D	D					B		E	A	
Approach Delay (s)		49.1			0.0			18.5			3.4	
Approach LOS		D			A			B			A	

Intersection Summary			
HCM 2000 Control Delay	21.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	19.4
Intersection Capacity Utilization	69.3%	ICU Level of Service	C
Analysis Period (min)	15		

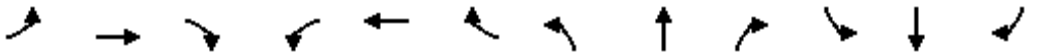
c Critical Lane Group



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	171	455	1086	218	552	758
Future Volume (vph)	171	455	1086	218	552	758
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.5	6.5	6.6		6.6	6.6
Lane Util. Factor	1.00	0.88	0.91		0.97	0.91
Frt	1.00	0.85	0.97		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1770	2787	4958		3433	5085
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1770	2787	4958		3433	5085
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	186	495	1180	237	600	824
RTOR Reduction (vph)	0	422	21	0	0	0
Lane Group Flow (vph)	186	73	1396	0	600	824
Turn Type	Prot	Perm	NA		Prot	NA
Protected Phases	4		6		5	2
Permitted Phases		4				
Actuated Green, G (s)	19.3	19.3	63.2		27.8	97.6
Effective Green, g (s)	19.3	19.3	63.2		27.8	97.6
Actuated g/C Ratio	0.15	0.15	0.49		0.21	0.75
Clearance Time (s)	6.5	6.5	6.6		6.6	6.6
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	262	413	2410		734	3817
v/s Ratio Prot	c0.11		c0.28		c0.17	0.16
v/s Ratio Perm		0.03				
v/c Ratio	0.71	0.18	0.58		0.82	0.22
Uniform Delay, d1	52.7	48.4	23.9		48.7	4.8
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	8.5	0.2	1.0		7.0	0.1
Delay (s)	61.2	48.6	24.9		55.7	4.9
Level of Service	E	D	C		E	A
Approach Delay (s)	52.1		24.9			26.3
Approach LOS	D		C			C

Intersection Summary			
HCM 2000 Control Delay	30.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	19.7
Intersection Capacity Utilization	67.5%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	1	31	0	524	2	866	22	212	748	2
Future Volume (vph)	0	0	1	31	0	524	2	866	22	212	748	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.9			6.9	6.6	6.6	6.6		6.6	6.6	
Lane Util. Factor		1.00			1.00	0.88	1.00	0.91		0.97	0.91	
Frt		0.85			1.00	0.85	1.00	1.00		1.00	1.00	
Flt Protected		1.00			0.95	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1583			1770	2787	1770	5066		3433	5083	
Flt Permitted		1.00			0.14	1.00	0.31	1.00		0.95	1.00	
Satd. Flow (perm)		1583			268	2787	577	5066		3433	5083	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	1	34	0	570	2	941	24	230	813	2
RTOR Reduction (vph)	0	1	0	0	0	337	0	1	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	34	233	2	964	0	230	815	0
Turn Type	Perm	NA		Perm	NA	pm+ov	Perm	NA		Prot	NA	
Protected Phases		4			3	5		6		5	2	
Permitted Phases	4			3		3	6					
Actuated Green, G (s)		1.6			27.8	53.2	48.2	48.2		25.4	80.2	
Effective Green, g (s)		1.6			27.8	53.2	48.2	48.2		25.4	80.2	
Actuated g/C Ratio		0.01			0.21	0.41	0.37	0.37		0.20	0.62	
Clearance Time (s)		6.9			6.9	6.6	6.6	6.6		6.6	6.6	
Vehicle Extension (s)		3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		19			57	1282	213	1878		670	3135	
v/s Ratio Prot		c0.00				0.04		c0.19		c0.07	0.16	
v/s Ratio Perm					c0.13	0.05	0.00					
v/c Ratio		0.00			0.60	0.18	0.01	0.51		0.34	0.26	
Uniform Delay, d1		63.4			46.0	24.5	25.8	31.8		45.1	11.4	
Progression Factor		1.00			1.00	1.00	1.00	1.00		1.08	1.03	
Incremental Delay, d2		0.0			15.6	0.1	0.1	1.0		0.3	0.2	
Delay (s)		63.4			61.7	24.6	25.9	32.8		48.9	11.9	
Level of Service		E			E	C	C	C		D	B	
Approach Delay (s)		63.4			26.7			32.8			20.1	
Approach LOS		E			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	26.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	27.0
Intersection Capacity Utilization	52.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Intersection: 1: Edgefield Rd & I-20 WB

Movement	WB	WB	NB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	LT	R	L	L	T	T	T	T	T	T	R
Maximum Queue (ft)	93	145	174	202	129	112	75	299	291	194	180
Average Queue (ft)	35	62	85	107	41	30	11	200	159	68	81
95th Queue (ft)	76	115	141	165	101	84	46	291	265	171	148
Link Distance (ft)	998				1096	1096	1096	797	797	797	
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)		350	500	500							250
Storage Blk Time (%)											0
Queuing Penalty (veh)											0

Intersection: 2: Edgefield Rd & I-20 EB

Movement	EB	EB	EB	EB	NB	NB	NB	SB	SB	SB	SB
Directions Served	L	L	TR	R	T	T	TR	L	T	T	T
Maximum Queue (ft)	299	407	159	108	113	105	111	97	115	115	135
Average Queue (ft)	196	238	78	31	92	82	62	40	32	24	21
95th Queue (ft)	282	359	134	76	101	114	124	81	81	83	85
Link Distance (ft)		1131	1131						1096	1096	1096
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	200			200				325			
Storage Blk Time (%)	4	18									
Queuing Penalty (veh)	12	48									

Intersection: 6: Edgefield Rd/Edgfield Rd & Ascauga Lake Rd

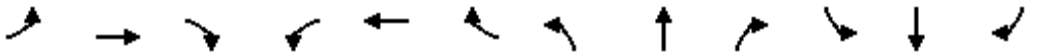
Movement	WB	WB	WB	NB	NB	NB	SB	SB	SB	SB	SB
Directions Served	L	R	R	T	T	TR	L	L	T	T	T
Maximum Queue (ft)	218	161	156	376	334	234	338	397	143	144	94
Average Queue (ft)	119	96	54	248	205	135	208	255	54	64	24
95th Queue (ft)	197	154	111	340	307	228	311	363	111	120	69
Link Distance (ft)	1683	1683		794	794	794					
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)			380				390	390			
Storage Blk Time (%)							0	0			
Queuing Penalty (veh)							0	1			

Zone Summary

Zone wide Queuing Penalty: 61

Intersection: 7: Edgefield Rd & US 25 Conn

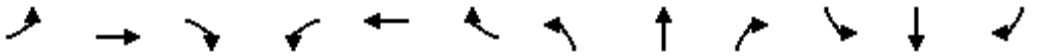
Movement	WB	WB	WB	NB	NB	NB	SB	SB	SB	SB	SB
Directions Served	LT	R	R	T	T	TR	L	L	T	T	TR
Maximum Queue (ft)	132	159	132	268	217	214	218	232	16	35	32
Average Queue (ft)	31	80	51	118	74	50	73	101	3	6	3
95th Queue (ft)	86	133	89	200	156	120	151	183	12	24	16
Link Distance (ft)	1302	1302	1302	852	852	852			1099	1099	1099
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)							220	220			
Storage Blk Time (%)				0			0	0			
Queuing Penalty (veh)				0			0	1			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	82	1	165	415	1196	0	0	1163	575
Future Volume (vph)	0	0	0	82	1	165	415	1196	0	0	1163	575
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					6.8	6.8	6.8	7.0			6.8	6.8
Lane Util. Factor					1.00	1.00	0.97	0.91			0.91	1.00
Frt					1.00	0.85	1.00	1.00			1.00	0.85
Flt Protected					0.95	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)					1775	1583	3433	5085			5085	1583
Flt Permitted					0.95	1.00	0.95	1.00			1.00	1.00
Satd. Flow (perm)					1775	1583	3433	5085			5085	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	89	1	179	451	1300	0	0	1264	625
RTOR Reduction (vph)	0	0	0	0	0	74	0	0	0	0	0	274
Lane Group Flow (vph)	0	0	0	0	90	105	451	1300	0	0	1264	351
Turn Type				Perm	NA	Perm	Prot	NA			NA	Perm
Protected Phases					4		1	6			2	
Permitted Phases				4		4						2
Actuated Green, G (s)					17.0	17.0	24.2	109.2			78.4	78.4
Effective Green, g (s)					17.0	17.0	24.2	109.2			78.4	78.4
Actuated g/C Ratio					0.12	0.12	0.17	0.78			0.56	0.56
Clearance Time (s)					6.8	6.8	6.8	7.0			6.8	6.8
Vehicle Extension (s)					3.0	3.0	3.0	3.0			3.0	3.0
Lane Grp Cap (vph)					215	192	593	3966			2847	886
v/s Ratio Prot							c0.13	0.26			c0.25	
v/s Ratio Perm					0.05	c0.07						0.22
v/c Ratio					0.42	0.55	0.76	0.33			0.44	0.40
Uniform Delay, d1					56.9	57.9	55.1	4.6			18.0	17.4
Progression Factor					1.00	1.00	1.04	0.37			1.00	1.00
Incremental Delay, d2					1.3	3.2	5.0	0.2			0.5	1.3
Delay (s)					58.2	61.1	62.6	1.9			18.5	18.7
Level of Service					E	E	E	A			B	B
Approach Delay (s)		0.0			60.1			17.5			18.6	
Approach LOS		A			E			B			B	

Intersection Summary			
HCM 2000 Control Delay	21.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	20.4
Intersection Capacity Utilization	76.9%	ICU Level of Service	D
Analysis Period (min)	15		

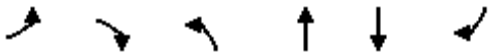
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	340	0	296	0	0	0	0	1274	98	118	1127	0
Future Volume (vph)	340	0	296	0	0	0	0	1274	98	118	1127	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.5	6.5	6.5					6.4		6.5	6.4	
Lane Util. Factor	0.97	0.95	0.95					0.91		1.00	0.91	
Frt	1.00	0.85	0.85					0.99		1.00	1.00	
Flt Protected	0.95	1.00	1.00					1.00		0.95	1.00	
Satd. Flow (prot)	3433	1504	1504					5031		1770	5085	
Flt Permitted	0.95	1.00	1.00					1.00		0.95	1.00	
Satd. Flow (perm)	3433	1504	1504					5031		1770	5085	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	370	0	322	0	0	0	0	1385	107	128	1225	0
RTOR Reduction (vph)	0	102	102	0	0	0	0	6	0	0	0	0
Lane Group Flow (vph)	370	59	59	0	0	0	0	1486	0	128	1225	0
Turn Type	Perm	NA	Perm					NA		Prot	NA	
Protected Phases		8						6		5	2	
Permitted Phases	8		8									
Actuated Green, G (s)	20.8	20.8	20.8					88.3		11.5	106.3	
Effective Green, g (s)	20.8	20.8	20.8					88.3		11.5	106.3	
Actuated g/C Ratio	0.15	0.15	0.15					0.63		0.08	0.76	
Clearance Time (s)	6.5	6.5	6.5					6.4		6.5	6.4	
Vehicle Extension (s)	3.0	3.0	3.0					3.0		3.0	3.0	
Lane Grp Cap (vph)	510	223	223					3173		145	3860	
v/s Ratio Prot		0.04						c0.30		c0.07	0.24	
v/s Ratio Perm	c0.11		0.04									
v/c Ratio	0.73	0.26	0.26					0.47		0.88	0.32	
Uniform Delay, d1	56.9	52.8	52.8					13.5		63.6	5.3	
Progression Factor	1.00	1.00	1.00					1.00		0.89	0.03	
Incremental Delay, d2	5.1	0.6	0.6					0.5		39.7	0.2	
Delay (s)	62.0	53.5	53.5					14.0		96.3	0.4	
Level of Service	E	D	D					B		F	A	
Approach Delay (s)		58.0			0.0			14.0			9.4	
Approach LOS		E			A			B			A	

Intersection Summary			
HCM 2000 Control Delay	20.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	19.4
Intersection Capacity Utilization	76.9%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	99	8	42	1204	1327	79
Future Volume (vph)	99	8	42	1204	1327	79
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.6	6.6	6.5	6.5	6.5	6.5
Lane Util. Factor	1.00	1.00	1.00	0.91	0.91	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1770	1583	1770	5085	5085	1583
Flt Permitted	0.95	1.00	0.14	1.00	1.00	1.00
Satd. Flow (perm)	1770	1583	268	5085	5085	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	108	9	46	1309	1442	86
RTOR Reduction (vph)	0	8	0	0	0	25
Lane Group Flow (vph)	108	1	46	1309	1442	61
Turn Type	Prot	Perm	pm+pt	NA	NA	Perm
Protected Phases	8		1	6	2	
Permitted Phases		8	6			2
Actuated Green, G (s)	13.9	13.9	113.0	113.0	98.5	98.5
Effective Green, g (s)	13.9	13.9	113.0	113.0	98.5	98.5
Actuated g/C Ratio	0.10	0.10	0.81	0.81	0.70	0.70
Clearance Time (s)	6.6	6.6	6.5	6.5	6.5	6.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	175	157	302	4104	3577	1113
v/s Ratio Prot	c0.06		0.01	c0.26	c0.28	
v/s Ratio Perm		0.00	0.11			0.04
v/c Ratio	0.62	0.01	0.15	0.32	0.40	0.05
Uniform Delay, d1	60.5	56.8	3.9	3.5	8.6	6.4
Progression Factor	1.00	1.00	1.64	1.53	1.00	1.00
Incremental Delay, d2	6.3	0.0	0.2	0.2	0.3	0.1
Delay (s)	66.8	56.8	6.6	5.5	8.9	6.5
Level of Service	E	E	A	A	A	A
Approach Delay (s)	66.1			5.6	8.8	
Approach LOS	E			A	A	

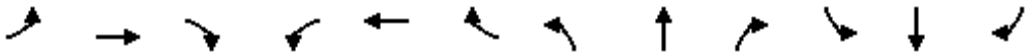
Intersection Summary			
HCM 2000 Control Delay	9.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	19.6
Intersection Capacity Utilization	51.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	232	595	745	139	480	869
Future Volume (vph)	232	595	745	139	480	869
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.5	6.5	6.6		6.6	6.6
Lane Util. Factor	1.00	0.88	0.91		0.97	0.91
Frt	1.00	0.85	0.98		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1770	2787	4965		3433	5085
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1770	2787	4965		3433	5085
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	252	647	810	151	522	945
RTOR Reduction (vph)	0	531	17	0	0	0
Lane Group Flow (vph)	252	116	944	0	522	945
Turn Type	Prot	Perm	NA		Prot	NA
Protected Phases	4		6		5	2
Permitted Phases		4				
Actuated Green, G (s)	25.1	25.1	69.6		25.6	101.8
Effective Green, g (s)	25.1	25.1	69.6		25.6	101.8
Actuated g/C Ratio	0.18	0.18	0.50		0.18	0.73
Clearance Time (s)	6.5	6.5	6.6		6.6	6.6
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	317	499	2468		627	3697
v/s Ratio Prot	c0.14		c0.19		c0.15	0.19
v/s Ratio Perm		0.04				
v/c Ratio	0.79	0.23	0.38		0.83	0.26
Uniform Delay, d1	55.0	49.2	21.9		55.1	6.4
Progression Factor	1.00	1.00	0.57		1.34	0.58
Incremental Delay, d2	12.9	0.2	0.4		8.7	0.2
Delay (s)	67.9	49.4	12.8		82.8	3.9
Level of Service	E	D	B		F	A
Approach Delay (s)	54.6		12.8			32.0
Approach LOS	D		B			C

Intersection Summary			
HCM 2000 Control Delay	32.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	19.7
Intersection Capacity Utilization	60.5%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	2	1	15	0	271	5	544	58	326	806	5
Future Volume (vph)	2	2	1	15	0	271	5	544	58	326	806	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.9	6.9			6.9	6.6	6.6	6.6		6.6	6.6	
Lane Util. Factor	1.00	1.00			1.00	0.88	1.00	0.91		0.97	0.91	
Frt	1.00	0.95			1.00	0.85	1.00	0.99		1.00	1.00	
Flt Protected	0.95	1.00			0.95	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1770			1770	2787	1770	5012		3433	5081	
Flt Permitted	1.00	1.00			0.31	1.00	0.31	1.00		0.95	1.00	
Satd. Flow (perm)	1863	1770			569	2787	568	5012		3433	5081	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	2	2	1	16	0	295	5	591	63	354	876	5
RTOR Reduction (vph)	0	1	0	0	0	193	0	6	0	0	0	0
Lane Group Flow (vph)	2	2	0	0	16	102	5	648	0	354	881	0
Turn Type	Perm	NA		Perm	NA	pm+ov	Perm	NA		Prot	NA	
Protected Phases		4			3	5		6		5	2	
Permitted Phases	4			3		3	6					
Actuated Green, G (s)	1.6	1.6			13.1	48.5	62.9	62.9		35.4	104.9	
Effective Green, g (s)	1.6	1.6			13.1	48.5	62.9	62.9		35.4	104.9	
Actuated g/C Ratio	0.01	0.01			0.09	0.35	0.45	0.45		0.25	0.75	
Clearance Time (s)	6.9	6.9			6.9	6.6	6.6	6.6		6.6	6.6	
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	21	20			53	1096	255	2251		868	3807	
v/s Ratio Prot		c0.00				0.02		c0.13		c0.10	0.17	
v/s Ratio Perm	0.00				c0.03	0.01	0.01					
v/c Ratio	0.10	0.10			0.30	0.09	0.02	0.29		0.41	0.23	
Uniform Delay, d1	68.5	68.5			59.2	30.9	21.4	24.4		43.6	5.3	
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00		1.13	0.99	
Incremental Delay, d2	2.0	2.2			3.2	0.0	0.1	0.3		0.3	0.1	
Delay (s)	70.5	70.7			62.4	30.9	21.6	24.7		49.7	5.4	
Level of Service	E	E			E	C	C	C		D	A	
Approach Delay (s)		70.6			32.6			24.7			18.1	
Approach LOS		E			C			C			B	

Intersection Summary			
HCM 2000 Control Delay	22.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	27.0
Intersection Capacity Utilization	52.4%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Intersection: 1: Edgefield Rd & I-20 WB

Movement	WB	WB	NB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	LT	R	L	L	T	T	T	T	T	T	R
Maximum Queue (ft)	167	102	252	290	57	58	64	339	324	215	278
Average Queue (ft)	70	53	151	174	7	8	4	220	174	84	136
95th Queue (ft)	135	91	237	263	32	34	28	312	273	196	238
Link Distance (ft)	998				1096	1096	1096	797	797	797	
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)		350	500	500							250
Storage Blk Time (%)										0	1
Queuing Penalty (veh)										0	4

Intersection: 2: Edgefield Rd & I-20 EB

Movement	EB	EB	EB	EB	NB	NB	NB	SB	SB
Directions Served	L	L	TR	R	T	T	TR	L	T
Maximum Queue (ft)	237	254	217	190	111	101	117	226	9
Average Queue (ft)	126	155	89	38	92	76	47	109	0
95th Queue (ft)	207	239	160	110	101	115	112	188	5
Link Distance (ft)		1131	1131						1096
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)	200			200				325	
Storage Blk Time (%)	0	4	1	0					
Queuing Penalty (veh)	1	7	1	0					

Intersection: 3: Edgefield Rd & Frontage Rd

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 4: Edgefield Rd & DW1

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 5: Edgfield Rd/Edgefield Rd & DW 2 (Shared QT)

Movement	EB	EB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	L	R	L	T	T	T	T	T	T	R
Maximum Queue (ft)	180	21	68	122	138	138	198	171	104	57
Average Queue (ft)	89	5	25	33	47	52	161	63	16	15
95th Queue (ft)	160	19	58	85	106	109	241	148	59	46
Link Distance (ft)	371	371		1316	1316	1316				
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)			250							250
Storage Blk Time (%)										
Queuing Penalty (veh)										

Intersection: 6: Edgefield Rd/Edgfield Rd & Ascauga Lake Rd

Movement	WB	WB	WB	NB	NB	NB	SB	SB	SB	SB	SB
Directions Served	L	R	R	T	T	TR	L	L	T	T	T
Maximum Queue (ft)	289	187	159	194	174	186	320	335	135	88	62
Average Queue (ft)	174	102	65	98	94	101	201	219	60	37	14
95th Queue (ft)	279	164	125	176	168	171	293	309	113	80	46
Link Distance (ft)	1683	1683		1315	1315	1315			1316	1316	1316
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)			380				390	390			
Storage Blk Time (%)							0	0			
Queuing Penalty (veh)							0	0			

Intersection: 7: Edgefield Rd

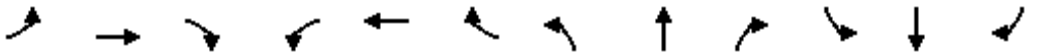
Movement	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	LT	R	R	L	T	T	TR	L	L	T
Maximum Queue (ft)	29	31	79	80	66	35	198	136	116	217	224	33
Average Queue (ft)	3	5	18	38	28	5	81	28	36	104	125	3
95th Queue (ft)	15	22	54	63	56	22	153	78	87	175	191	15
Link Distance (ft)	514	514	1809	1809	1809		623	623	623			1315
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)						190				220	220	
Storage Blk Time (%)							0			0	1	
Queuing Penalty (veh)							0			1	2	

Intersection: 7: Edgefield Rd

Movement	SB	SB
Directions Served	T	TR
Maximum Queue (ft)	50	32
Average Queue (ft)	5	3
95th Queue (ft)	26	18
Link Distance (ft)	1315	1315
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

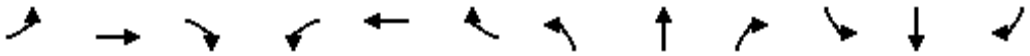
Network wide Queuing Penalty: 15



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	70	1	140	309	1908	0	0	1213	457
Future Volume (vph)	0	0	0	70	1	140	309	1908	0	0	1213	457
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					6.8	6.8	6.8	7.0			6.8	6.8
Lane Util. Factor					1.00	1.00	0.97	0.91			0.91	1.00
Frt					1.00	0.85	1.00	1.00			1.00	0.85
Flt Protected					0.95	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)					1775	1583	3433	5085			5085	1583
Flt Permitted					0.95	1.00	0.95	1.00			1.00	1.00
Satd. Flow (perm)					1775	1583	3433	5085			5085	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	76	1	152	336	2074	0	0	1318	497
RTOR Reduction (vph)	0	0	0	0	0	80	0	0	0	0	0	223
Lane Group Flow (vph)	0	0	0	0	77	72	336	2074	0	0	1318	274
Turn Type				Perm	NA	Perm	Prot	NA			NA	Perm
Protected Phases					4		1	6			2	
Permitted Phases				4		4						2
Actuated Green, G (s)					15.6	15.6	27.2	100.6			66.8	66.8
Effective Green, g (s)					15.6	15.6	27.2	100.6			66.8	66.8
Actuated g/C Ratio					0.12	0.12	0.21	0.77			0.51	0.51
Clearance Time (s)					6.8	6.8	6.8	7.0			6.8	6.8
Vehicle Extension (s)					3.0	3.0	3.0	3.0			3.0	3.0
Lane Grp Cap (vph)					213	189	718	3935			2612	813
v/s Ratio Prot							0.10	c0.41			0.26	
v/s Ratio Perm					0.04	c0.05						0.17
v/c Ratio					0.36	0.38	0.47	0.53			0.50	0.34
Uniform Delay, d1					52.6	52.7	45.1	5.6			20.7	18.6
Progression Factor					1.00	1.00	0.82	0.26			1.00	1.00
Incremental Delay, d2					1.0	1.3	0.4	0.4			0.7	1.1
Delay (s)					53.7	54.0	37.2	1.8			21.4	19.7
Level of Service					D	D	D	A			C	B
Approach Delay (s)		0.0			53.9			6.8			21.0	
Approach LOS		A			D			A			C	

Intersection Summary			
HCM 2000 Control Delay	15.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	20.4
Intersection Capacity Utilization	73.4%	ICU Level of Service	D
Analysis Period (min)	15		

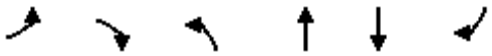
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	579	2	326	0	0	0	0	1638	106	44	1135	0
Future Volume (vph)	579	2	326	0	0	0	0	1638	106	44	1135	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.5	6.5	6.5					6.4		6.5	6.4	
Lane Util. Factor	0.97	0.95	0.95					0.91		1.00	0.91	
Frt	1.00	0.85	0.85					0.99		1.00	1.00	
Flt Protected	0.95	1.00	1.00					1.00		0.95	1.00	
Satd. Flow (prot)	3433	1507	1504					5039		1770	5085	
Flt Permitted	0.95	1.00	1.00					1.00		0.95	1.00	
Satd. Flow (perm)	3433	1507	1504					5039		1770	5085	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	629	2	354	0	0	0	0	1780	115	48	1234	0
RTOR Reduction (vph)	0	68	68	0	0	0	0	5	0	0	0	0
Lane Group Flow (vph)	629	111	109	0	0	0	0	1890	0	48	1234	0
Turn Type	Perm	NA	Perm					NA		Prot	NA	
Protected Phases		8						6		5	2	
Permitted Phases	8		8									
Actuated Green, G (s)	29.6	29.6	29.6					74.2		6.8	87.5	
Effective Green, g (s)	29.6	29.6	29.6					74.2		6.8	87.5	
Actuated g/C Ratio	0.23	0.23	0.23					0.57		0.05	0.67	
Clearance Time (s)	6.5	6.5	6.5					6.4		6.5	6.4	
Vehicle Extension (s)	3.0	3.0	3.0					3.0		3.0	3.0	
Lane Grp Cap (vph)	781	343	342					2876		92	3422	
v/s Ratio Prot		0.07						c0.38		c0.03	0.24	
v/s Ratio Perm	c0.18		0.07									
v/c Ratio	0.81	0.32	0.32					0.66		0.52	0.36	
Uniform Delay, d1	47.5	41.9	41.8					19.2		60.0	9.2	
Progression Factor	1.00	1.00	1.00					1.00		1.00	0.15	
Incremental Delay, d2	6.1	0.6	0.5					1.2		4.7	0.3	
Delay (s)	53.5	42.4	42.3					20.4		64.7	1.6	
Level of Service	D	D	D					C		E	A	
Approach Delay (s)		49.5			0.0			20.4			4.0	
Approach LOS		D			A			C			A	

Intersection Summary			
HCM 2000 Control Delay	22.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	19.4
Intersection Capacity Utilization	73.4%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	81	7	34	1568	1396	65
Future Volume (vph)	81	7	34	1568	1396	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.6	6.6	6.5	6.5	6.5	6.5
Lane Util. Factor	1.00	1.00	1.00	0.91	0.91	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1770	1583	1770	5085	5085	1583
Flt Permitted	0.95	1.00	0.13	1.00	1.00	1.00
Satd. Flow (perm)	1770	1583	247	5085	5085	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	88	8	37	1704	1517	71
RTOR Reduction (vph)	0	7	0	0	0	20
Lane Group Flow (vph)	88	1	37	1704	1517	51
Turn Type	Prot	Perm	pm+pt	NA	NA	Perm
Protected Phases	8		1	6	2	
Permitted Phases		8	6			2
Actuated Green, G (s)	11.8	11.8	105.1	105.1	92.6	92.6
Effective Green, g (s)	11.8	11.8	105.1	105.1	92.6	92.6
Actuated g/C Ratio	0.09	0.09	0.81	0.81	0.71	0.71
Clearance Time (s)	6.6	6.6	6.5	6.5	6.5	6.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	160	143	269	4111	3622	1127
v/s Ratio Prot	c0.05		0.01	c0.34	0.30	
v/s Ratio Perm		0.00	0.10			0.03
v/c Ratio	0.55	0.01	0.14	0.41	0.42	0.04
Uniform Delay, d1	56.6	53.8	3.7	3.6	7.7	5.6
Progression Factor	1.00	1.00	0.30	0.23	1.00	1.00
Incremental Delay, d2	4.0	0.0	0.2	0.2	0.4	0.1
Delay (s)	60.6	53.8	1.3	1.1	8.0	5.6
Level of Service	E	D	A	A	A	A
Approach Delay (s)	60.0			1.1	7.9	
Approach LOS	E			A	A	

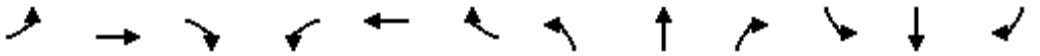
Intersection Summary			
HCM 2000 Control Delay	5.9	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	19.6
Intersection Capacity Utilization	45.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	179	525	1153	228	662	810
Future Volume (vph)	179	525	1153	228	662	810
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.5	6.5	6.6		6.6	6.6
Lane Util. Factor	1.00	0.88	0.91		0.97	0.91
Frt	1.00	0.85	0.98		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1770	2787	4959		3433	5085
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1770	2787	4959		3433	5085
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	195	571	1253	248	720	880
RTOR Reduction (vph)	0	483	23	0	0	0
Lane Group Flow (vph)	195	88	1478	0	720	880
Turn Type	Prot	Perm	NA		Prot	NA
Protected Phases	4		6		5	2
Permitted Phases		4				
Actuated Green, G (s)	20.1	20.1	55.4		34.8	96.8
Effective Green, g (s)	20.1	20.1	55.4		34.8	96.8
Actuated g/C Ratio	0.15	0.15	0.43		0.27	0.74
Clearance Time (s)	6.5	6.5	6.6		6.6	6.6
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	273	430	2113		918	3786
v/s Ratio Prot	c0.11		c0.30		c0.21	0.17
v/s Ratio Perm		0.03				
v/c Ratio	0.71	0.21	0.70		0.78	0.23
Uniform Delay, d1	52.2	48.0	30.5		44.1	5.1
Progression Factor	1.00	1.00	0.52		0.85	1.25
Incremental Delay, d2	8.6	0.2	1.8		4.2	0.1
Delay (s)	60.8	48.2	17.7		41.6	6.5
Level of Service	E	D	B		D	A
Approach Delay (s)	51.4		17.7			22.3
Approach LOS	D		B			C

Intersection Summary			
HCM 2000 Control Delay	26.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	19.7
Intersection Capacity Utilization	72.6%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	1	32	0	548	2	923	23	222	799	2
Future Volume (vph)	0	0	1	32	0	548	2	923	23	222	799	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.9			6.9	6.6	6.6	6.6		6.6	6.6	
Lane Util. Factor		1.00			1.00	0.88	1.00	0.91		0.97	0.91	
Frt		0.85			1.00	0.85	1.00	1.00		1.00	1.00	
Flt Protected		1.00			0.95	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1583			1770	2787	1770	5067		3433	5084	
Flt Permitted		1.00			0.14	1.00	0.30	1.00		0.95	1.00	
Satd. Flow (perm)		1583			263	2787	554	5067		3433	5084	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	1	35	0	596	2	1003	25	241	868	2
RTOR Reduction (vph)	0	1	0	0	0	350	0	1	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	35	246	2	1027	0	241	870	0
Turn Type	Perm	NA		Perm	NA	pm+ov	D.Pm	NA		Prot	NA	
Protected Phases		4			3	5		6		5	2	
Permitted Phases	4			3		3	2					
Actuated Green, G (s)		1.6			28.3	53.7	79.7	47.7		25.4	79.7	
Effective Green, g (s)		1.6			28.3	53.7	79.7	47.7		25.4	79.7	
Actuated g/C Ratio		0.01			0.22	0.41	0.61	0.37		0.20	0.61	
Clearance Time (s)		6.9			6.9	6.6	6.6	6.6		6.6	6.6	
Vehicle Extension (s)		3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		19			57	1292	339	1859		670	3116	
v/s Ratio Prot		c0.00				0.04		c0.20		c0.07	0.17	
v/s Ratio Perm					c0.13	0.05	0.00					
v/c Ratio		0.00			0.61	0.19	0.01	0.55		0.36	0.28	
Uniform Delay, d1		63.4			45.9	24.3	9.8	32.7		45.3	11.7	
Progression Factor		1.00			1.00	1.00	1.00	1.00		1.15	1.34	
Incremental Delay, d2		0.0			18.0	0.1	0.0	1.2		0.3	0.2	
Delay (s)		63.4			63.9	24.4	9.8	33.9		52.5	16.0	
Level of Service		E			E	C	A	C		D	B	
Approach Delay (s)		63.4			26.6			33.8			23.9	
Approach LOS		E			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	28.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	27.0
Intersection Capacity Utilization	53.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Intersection: 1: Edgefield Rd & I-20 WB

Movement	WB	WB	NB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	LT	R	L	L	T	T	T	T	T	T	R
Maximum Queue (ft)	138	140	158	186	128	112	84	371	343	216	212
Average Queue (ft)	58	62	89	107	47	36	14	230	190	87	89
95th Queue (ft)	118	113	142	162	106	87	51	333	304	203	166
Link Distance (ft)	998				1096	1096	1096	797	797	797	
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)		350	500	500							250
Storage Blk Time (%)										0	0
Queuing Penalty (veh)										0	0

Intersection: 2: Edgefield Rd & I-20 EB

Movement	EB	EB	EB	EB	NB	NB	NB	SB	SB	SB	SB
Directions Served	L	L	TR	R	T	T	TR	L	T	T	T
Maximum Queue (ft)	300	539	178	170	113	100	101	121	86	66	74
Average Queue (ft)	193	241	90	38	92	83	69	47	29	20	17
95th Queue (ft)	285	383	151	103	100	113	123	106	64	61	59
Link Distance (ft)		1131	1131						1096	1096	1096
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	200			200				325			
Storage Blk Time (%)	5	19	0	0							
Queuing Penalty (veh)	15	55	0	0							

Intersection: 3: Edgefield Rd & Frontage Rd

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 4: Edgefield Rd & DW1

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 5: Edgfield Rd/Edgefield Rd & DW 2 (Shared QT)

Movement	EB	EB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	L	R	L	T	T	T	T	T	T	R
Maximum Queue (ft)	178	21	66	24	82	109	205	179	77	37
Average Queue (ft)	74	4	21	4	23	37	162	52	11	10
95th Queue (ft)	144	17	52	24	59	87	232	123	47	34
Link Distance (ft)	371	371		1316	1316	1316				
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)			250							250
Storage Blk Time (%)										
Queuing Penalty (veh)										

Intersection: 6: Edgefield Rd/Edgfield Rd & Ascauga Lake Rd

Movement	WB	WB	WB	NB	NB	NB	SB	SB	SB	SB	SB
Directions Served	L	R	R	T	T	TR	L	L	T	T	T
Maximum Queue (ft)	262	217	200	281	282	309	389	422	174	163	129
Average Queue (ft)	127	130	89	169	184	209	249	277	86	70	38
95th Queue (ft)	220	201	173	264	275	297	368	395	153	134	96
Link Distance (ft)	1683	1683		1222	1222	1222			1316	1316	1316
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)			380				390	390			
Storage Blk Time (%)							0	1			
Queuing Penalty (veh)							0	3			

Intersection: 7: Edgefield Rd & US 25 Conn

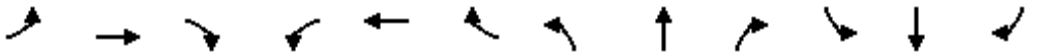
Movement	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	TR	LT	R	R	L	T	T	TR	L	L	T	T
Maximum Queue (ft)	20	64	177	146	8	270	183	126	128	142	23	50
Average Queue (ft)	1	28	82	62	0	125	67	44	64	87	2	4
95th Queue (ft)	12	62	136	114	5	211	154	98	120	136	12	20
Link Distance (ft)	388	1581	1581	1581		609	609	609			1222	1222
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)					190				220	220		
Storage Blk Time (%)						2						
Queuing Penalty (veh)						0						

Intersection: 7: Edgefield Rd & US 25 Conn

Movement	SB
Directions Served	TR
Maximum Queue (ft)	30
Average Queue (ft)	2
95th Queue (ft)	11
Link Distance (ft)	1222
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Network Summary

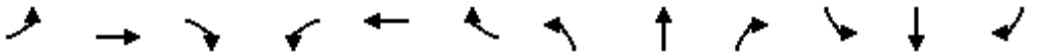
Network wide Queuing Penalty: 74



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	119	1	165	472	1281	0	0	1240	575
Future Volume (vph)	0	0	0	119	1	165	472	1281	0	0	1240	575
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					6.8	6.8	6.8	7.0			6.8	6.8
Lane Util. Factor					1.00	1.00	0.97	0.91			0.91	1.00
Frt					1.00	0.85	1.00	1.00			1.00	0.85
Flt Protected					0.95	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)					1775	1583	3433	5085			5085	1583
Flt Permitted					0.95	1.00	0.95	1.00			1.00	1.00
Satd. Flow (perm)					1775	1583	3433	5085			5085	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	129	1	179	513	1392	0	0	1348	625
RTOR Reduction (vph)	0	0	0	0	0	74	0	0	0	0	0	258
Lane Group Flow (vph)	0	0	0	0	130	105	513	1392	0	0	1348	367
Turn Type				Perm	NA	Perm	Prot	NA			NA	Perm
Protected Phases					4		1	6			2	
Permitted Phases				4		4						2
Actuated Green, G (s)					17.2	17.2	24.2	109.0			78.2	78.2
Effective Green, g (s)					17.2	17.2	24.2	109.0			78.2	78.2
Actuated g/C Ratio					0.12	0.12	0.17	0.78			0.56	0.56
Clearance Time (s)					6.8	6.8	6.8	7.0			6.8	6.8
Vehicle Extension (s)					3.0	3.0	3.0	3.0			3.0	3.0
Lane Grp Cap (vph)					218	194	593	3959			2840	884
v/s Ratio Prot							c0.15	0.27			c0.27	
v/s Ratio Perm					0.07	0.07						0.23
v/c Ratio					0.60	0.54	0.87	0.35			0.47	0.42
Uniform Delay, d1					58.1	57.7	56.3	4.7			18.6	17.8
Progression Factor					1.00	1.00	0.89	0.34			1.00	1.00
Incremental Delay, d2					4.3	3.1	10.8	0.2			0.6	1.4
Delay (s)					62.5	60.8	61.2	1.8			19.1	19.2
Level of Service					E	E	E	A			B	B
Approach Delay (s)		0.0			61.5			17.8			19.2	
Approach LOS		A			E			B			B	

Intersection Summary			
HCM 2000 Control Delay	21.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	20.4
Intersection Capacity Utilization	78.6%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	340	0	352	0	0	0	0	1414	135	118	1241	0
Future Volume (vph)	340	0	352	0	0	0	0	1414	135	118	1241	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.5	6.5	6.5					6.4		6.5	6.4	
Lane Util. Factor	0.97	0.95	0.95					0.91		1.00	0.91	
Frt	1.00	0.85	0.85					0.99		1.00	1.00	
Flt Protected	0.95	1.00	1.00					1.00		0.95	1.00	
Satd. Flow (prot)	3433	1504	1504					5019		1770	5085	
Flt Permitted	0.95	1.00	1.00					1.00		0.95	1.00	
Satd. Flow (perm)	3433	1504	1504					5019		1770	5085	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	370	0	383	0	0	0	0	1537	147	128	1349	0
RTOR Reduction (vph)	0	81	81	0	0	0	0	7	0	0	0	0
Lane Group Flow (vph)	370	111	110	0	0	0	0	1677	0	128	1349	0
Turn Type	Perm	NA	Perm					NA		Prot	NA	
Protected Phases		8						6		5	2	
Permitted Phases	8		8									
Actuated Green, G (s)	21.0	21.0	21.0					88.1		11.5	106.1	
Effective Green, g (s)	21.0	21.0	21.0					88.1		11.5	106.1	
Actuated g/C Ratio	0.15	0.15	0.15					0.63		0.08	0.76	
Clearance Time (s)	6.5	6.5	6.5					6.4		6.5	6.4	
Vehicle Extension (s)	3.0	3.0	3.0					3.0		3.0	3.0	
Lane Grp Cap (vph)	514	225	225					3158		145	3853	
v/s Ratio Prot		0.07						c0.33		c0.07	0.27	
v/s Ratio Perm	c0.11		0.07									
v/c Ratio	0.72	0.49	0.49					0.53		0.88	0.35	
Uniform Delay, d1	56.7	54.6	54.6					14.4		63.6	5.6	
Progression Factor	1.00	1.00	1.00					0.70		0.90	0.03	
Incremental Delay, d2	4.8	1.7	1.7					0.6		39.2	0.2	
Delay (s)	61.5	56.3	56.3					10.8		96.3	0.4	
Level of Service	E	E	E					B		F	A	
Approach Delay (s)		58.9			0.0			10.8			8.7	
Approach LOS		E			A			B			A	

Intersection Summary			
HCM 2000 Control Delay	19.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	19.4
Intersection Capacity Utilization	78.6%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	59	0	1548	1555	38
Future Vol, veh/h	0	59	0	1548	1555	38
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	0	64	0	1683	1690	41

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	866	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.14	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.92	-	-	-	-
Pot Cap-1 Maneuver	0	255	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	255	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	23.8	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	255	-	-
HCM Lane V/C Ratio	-	0.251	-	-
HCM Control Delay (s)	-	23.8	-	-
HCM Lane LOS	-	C	-	-
HCM 95th %tile Q(veh)	-	1	-	-

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	117	0	1548	1487	111
Future Vol, veh/h	0	117	0	1548	1487	111
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	-	-	-	150
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	127	0	1683	1616	121

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	808	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.14	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.92	-	-	-	-
Pot Cap-1 Maneuver	0	278	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	278	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	28.4	0	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	278	-	-
HCM Lane V/C Ratio	-	0.457	-	-
HCM Control Delay (s)	-	28.4	-	-
HCM Lane LOS	-	D	-	-
HCM 95th %tile Q(veh)	-	2.3	-	-

Movement	EBL	EBR	NBL	NBT	SBU	SBT	SBR
Lane Configurations							
Traffic Volume (vph)	319	89	255	1116	39	1380	187
Future Volume (vph)	319	89	255	1116	39	1380	187
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.6	6.6	6.5	6.5	6.5	6.5	6.5
Lane Util. Factor	0.97	1.00	1.00	0.91	1.00	0.91	1.00
Frt	1.00	0.85	1.00	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	1583	1770	5085	1770	5085	1583
Flt Permitted	0.95	1.00	0.11	1.00	0.22	1.00	1.00
Satd. Flow (perm)	3433	1583	213	5085	409	5085	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	347	97	277	1213	42	1500	203
RTOR Reduction (vph)	0	84	0	0	0	0	77
Lane Group Flow (vph)	347	13	277	1213	42	1500	126
Turn Type	Prot	Perm	pm+pt	NA	Perm	NA	Perm
Protected Phases	8		1	6		2	
Permitted Phases		8	6		2		2
Actuated Green, G (s)	19.4	19.4	107.5	107.5	81.3	81.3	81.3
Effective Green, g (s)	19.4	19.4	107.5	107.5	81.3	81.3	81.3
Actuated g/C Ratio	0.14	0.14	0.77	0.77	0.58	0.58	0.58
Clearance Time (s)	6.6	6.6	6.5	6.5	6.5	6.5	6.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	475	219	382	3904	237	2952	919
v/s Ratio Prot	c0.10		c0.10	0.24		0.29	
v/s Ratio Perm		0.01	c0.45		0.10		0.08
v/c Ratio	0.73	0.06	0.73	0.31	0.18	0.51	0.14
Uniform Delay, d1	57.8	52.4	22.9	5.0	13.7	17.5	13.4
Progression Factor	1.00	1.00	0.83	1.16	1.03	1.13	1.85
Incremental Delay, d2	5.7	0.1	5.9	0.2	1.6	0.6	0.3
Delay (s)	63.5	52.5	24.7	5.9	15.7	20.3	25.1
Level of Service	E	D	C	A	B	C	C
Approach Delay (s)	61.1			9.4		20.8	
Approach LOS	E			A		C	

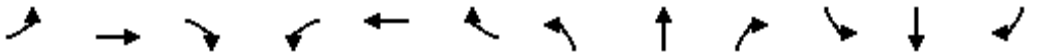
Intersection Summary			
HCM 2000 Control Delay	21.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	19.6
Intersection Capacity Utilization	66.2%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	232	659	809	139	548	937
Future Volume (vph)	232	659	809	139	548	937
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.5	6.5	6.6		6.6	6.6
Lane Util. Factor	1.00	0.88	0.91		0.97	0.91
Frt	1.00	0.85	0.98		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1770	2787	4973		3433	5085
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1770	2787	4973		3433	5085
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	252	716	879	151	596	1018
RTOR Reduction (vph)	0	572	16	0	0	0
Lane Group Flow (vph)	252	144	1014	0	596	1018
Turn Type	Prot	Perm	NA		Prot	NA
Protected Phases	4		6		5	2
Permitted Phases		4				
Actuated Green, G (s)	25.2	25.2	67.5		27.6	101.7
Effective Green, g (s)	25.2	25.2	67.5		27.6	101.7
Actuated g/C Ratio	0.18	0.18	0.48		0.20	0.73
Clearance Time (s)	6.5	6.5	6.6		6.6	6.6
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	318	501	2397		676	3693
v/s Ratio Prot	c0.14		c0.20		c0.17	0.20
v/s Ratio Perm		0.05				
v/c Ratio	0.79	0.29	0.42		0.88	0.28
Uniform Delay, d1	54.9	49.6	23.6		54.6	6.6
Progression Factor	1.00	1.00	0.57		0.58	1.95
Incremental Delay, d2	12.7	0.3	0.5		11.7	0.2
Delay (s)	67.6	49.9	14.0		43.3	12.9
Level of Service	E	D	B		D	B
Approach Delay (s)	54.5		14.0			24.2
Approach LOS	D		B			C

Intersection Summary			
HCM 2000 Control Delay	29.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	19.7
Intersection Capacity Utilization	63.6%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	2	1	15	0	296	5	583	58	351	848	5
Future Volume (vph)	2	2	1	15	0	296	5	583	58	351	848	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.9	6.9			6.9	6.6	6.6	6.6		6.6	6.6	
Lane Util. Factor	1.00	1.00			1.00	0.88	1.00	0.91		0.97	0.91	
Frt	1.00	0.95			1.00	0.85	1.00	0.99		1.00	1.00	
Flt Protected	0.95	1.00			0.95	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1770			1770	2787	1770	5016		3433	5081	
Flt Permitted	1.00	1.00			0.31	1.00	0.29	1.00		0.95	1.00	
Satd. Flow (perm)	1863	1770			569	2787	538	5016		3433	5081	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	2	2	1	16	0	322	5	634	63	382	922	5
RTOR Reduction (vph)	0	1	0	0	0	210	0	6	0	0	0	0
Lane Group Flow (vph)	2	2	0	0	16	112	5	691	0	382	927	0
Turn Type	Perm	NA		Perm	NA	pm+ov	Perm	NA		Prot	NA	
Protected Phases		4			3	5		6		5	2	
Permitted Phases	4			3		3	6					
Actuated Green, G (s)	1.6	1.6			13.1	48.5	62.9	62.9		35.4	104.9	
Effective Green, g (s)	1.6	1.6			13.1	48.5	62.9	62.9		35.4	104.9	
Actuated g/C Ratio	0.01	0.01			0.09	0.35	0.45	0.45		0.25	0.75	
Clearance Time (s)	6.9	6.9			6.9	6.6	6.6	6.6		6.6	6.6	
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	21	20			53	1096	241	2253		868	3807	
v/s Ratio Prot		c0.00				0.03		c0.14		c0.11	0.18	
v/s Ratio Perm	0.00				c0.03	0.01	0.01					
v/c Ratio	0.10	0.10			0.30	0.10	0.02	0.31		0.44	0.24	
Uniform Delay, d1	68.5	68.5			59.2	31.0	21.4	24.6		44.0	5.4	
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00		1.55	1.63	
Incremental Delay, d2	2.0	2.2			3.2	0.0	0.2	0.4		0.3	0.1	
Delay (s)	70.5	70.7			62.4	31.0	21.6	25.0		68.4	8.9	
Level of Service	E	E			E	C	C	C		E	A	
Approach Delay (s)		70.6			32.5			25.0			26.3	
Approach LOS		E			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	26.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.34		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	27.0
Intersection Capacity Utilization	53.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Intersection: 1: Edgefield Rd & I-20 WB

Movement	WB	WB	NB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	LT	R	L	L	T	T	T	T	T	T	R
Maximum Queue (ft)	182	141	274	259	36	66	63	268	306	255	250
Average Queue (ft)	96	54	162	169	6	11	9	155	200	130	132
95th Queue (ft)	164	100	231	236	25	43	38	240	284	231	230
Link Distance (ft)	998				1096	1096	1096	797	797	797	
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)		350	500	500							250
Storage Blk Time (%)										0	0
Queuing Penalty (veh)										1	2

Intersection: 2: Edgefield Rd & I-20 EB

Movement	EB	EB	EB	EB	NB	NB	NB	SB	SB	SB	SB
Directions Served	L	L	TR	R	T	T	TR	L	T	T	T
Maximum Queue (ft)	234	249	205	175	186	173	180	243	362	755	369
Average Queue (ft)	126	152	113	65	115	108	123	120	13	40	13
95th Queue (ft)	203	225	184	135	180	167	184	210	208	384	207
Link Distance (ft)		1131	1131		154	154	154		1096	1096	1096
Upstream Blk Time (%)					2	1	4		0	0	0
Queuing Penalty (veh)					12	7	20		0	0	0
Storage Bay Dist (ft)	200			200				325			
Storage Blk Time (%)	1	3	0	0							
Queuing Penalty (veh)	2	5	1	0							

Intersection: 3: Edgefield Rd & Frontage Rd

Movement	EB	NB	NB	NB	SB	SB
Directions Served	R	T	T	T	T	TR
Maximum Queue (ft)	52	79	28	59	7	7
Average Queue (ft)	20	5	2	6	0	0
95th Queue (ft)	43	35	16	34	4	4
Link Distance (ft)	1298	401	401	401	154	154
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 4: Edgefield Rd & DW1

Movement	EB	SB	SB	SB
Directions Served	R	T	T	R
Maximum Queue (ft)	206	212	184	65
Average Queue (ft)	71	28	8	2
95th Queue (ft)	161	118	65	37
Link Distance (ft)	348	401	401	
Upstream Blk Time (%)	0			
Queuing Penalty (veh)	0			
Storage Bay Dist (ft)				150
Storage Blk Time (%)			0	
Queuing Penalty (veh)			0	

Intersection: 5: Edgfield Rd/Edgefield Rd & DW 2 (Shared QT)

Movement	EB	EB	EB	NB	NB	NB	NB	SB	SB	SB	SB	SB
Directions Served	L	L	R	L	T	T	T	U	T	T	T	R
Maximum Queue (ft)	281	231	79	240	167	164	169	81	354	341	262	134
Average Queue (ft)	184	132	32	138	43	55	62	27	251	176	113	50
95th Queue (ft)	251	214	71	219	104	120	132	66	386	324	232	106
Link Distance (ft)	371	371			1309	1309	1309	333	333	333	333	
Upstream Blk Time (%)									2	0		
Queuing Penalty (veh)									8	1		
Storage Bay Dist (ft)			200	250								250
Storage Blk Time (%)		0		0	0						0	
Queuing Penalty (veh)		0		1	0						0	

Intersection: 6: Edgefield Rd/Edgfield Rd & Ascauga Lake Rd

Movement	WB	WB	WB	NB	NB	NB	SB	SB	SB	SB	SB	
Directions Served	L	R	R	T	T	TR	L	L	T	T	T	
Maximum Queue (ft)	319	267	229	264	237	248	308	320	211	183	199	
Average Queue (ft)	172	138	93	141	117	121	172	187	86	82	90	
95th Queue (ft)	273	218	192	240	208	211	274	288	194	175	189	
Link Distance (ft)	1683	1683		1172	1172	1172			1309	1309	1309	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)			380				390	390				
Storage Blk Time (%)												
Queuing Penalty (veh)												

Intersection: 7: Edgefield Rd & US 25 Conn

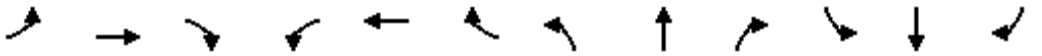
Movement	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	LT	R	R	L	T	T	TR	L	L	T
Maximum Queue (ft)	30	30	42	100	61	27	175	134	129	239	249	18
Average Queue (ft)	1	3	11	46	32	4	85	36	47	133	154	1
95th Queue (ft)	11	17	34	75	53	18	156	97	109	205	221	7
Link Distance (ft)	272	272	1248	1248	1248		965	965	965			1172
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)						190				220	220	
Storage Blk Time (%)							0			0	2	
Queuing Penalty (veh)							0			1	5	

Intersection: 7: Edgefield Rd & US 25 Conn

Movement	SB	SB
Directions Served	T	TR
Maximum Queue (ft)	36	33
Average Queue (ft)	3	2
95th Queue (ft)	17	13
Link Distance (ft)	1172	1172
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

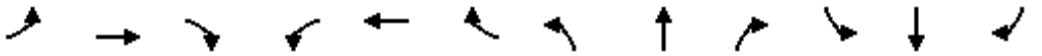
Network wide Queuing Penalty: 67



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	96	1	140	352	1977	0	0	1289	457
Future Volume (vph)	0	0	0	96	1	140	352	1977	0	0	1289	457
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					6.8	6.8	6.8	7.0			6.8	6.8
Lane Util. Factor					1.00	1.00	0.97	0.91			0.91	1.00
Frt					1.00	0.85	1.00	1.00			1.00	0.85
Flt Protected					0.95	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)					1775	1583	3433	5085			5085	1583
Flt Permitted					0.95	1.00	0.95	1.00			1.00	1.00
Satd. Flow (perm)					1775	1583	3433	5085			5085	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	104	1	152	383	2149	0	0	1401	497
RTOR Reduction (vph)	0	0	0	0	0	80	0	0	0	0	0	210
Lane Group Flow (vph)	0	0	0	0	105	72	383	2149	0	0	1401	287
Turn Type				Perm	NA	Perm	Prot	NA			NA	Perm
Protected Phases					4		1	6			2	
Permitted Phases				4		4						2
Actuated Green, G (s)					15.6	15.6	27.2	100.6			66.8	66.8
Effective Green, g (s)					15.6	15.6	27.2	100.6			66.8	66.8
Actuated g/C Ratio					0.12	0.12	0.21	0.77			0.51	0.51
Clearance Time (s)					6.8	6.8	6.8	7.0			6.8	6.8
Vehicle Extension (s)					3.0	3.0	3.0	3.0			3.0	3.0
Lane Grp Cap (vph)					213	189	718	3935			2612	813
v/s Ratio Prot							0.11	c0.42			0.28	
v/s Ratio Perm					0.06	0.05						0.18
v/c Ratio					0.49	0.38	0.53	0.55			0.54	0.35
Uniform Delay, d1					53.5	52.7	45.8	5.8			21.2	18.8
Progression Factor					1.00	1.00	0.77	0.12			1.00	1.00
Incremental Delay, d2					1.8	1.3	0.5	0.4			0.8	1.2
Delay (s)					55.3	54.0	35.6	1.1			22.0	20.0
Level of Service					E	D	D	A			C	B
Approach Delay (s)		0.0			54.5			6.3			21.5	
Approach LOS		A			D			A			C	

Intersection Summary			
HCM 2000 Control Delay	15.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	20.4
Intersection Capacity Utilization	76.0%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	579	2	373	0	0	0	0	1748	130	44	1236	0
Future Volume (vph)	579	2	373	0	0	0	0	1748	130	44	1236	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.5	6.5	6.5					6.4		6.5	6.4	
Lane Util. Factor	0.97	0.95	0.95					0.91		1.00	0.91	
Frt	1.00	0.85	0.85					0.99		1.00	1.00	
Flt Protected	0.95	1.00	1.00					1.00		0.95	1.00	
Satd. Flow (prot)	3433	1507	1504					5033		1770	5085	
Flt Permitted	0.95	1.00	1.00					1.00		0.95	1.00	
Satd. Flow (perm)	3433	1507	1504					5033		1770	5085	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	629	2	405	0	0	0	0	1900	141	48	1343	0
RTOR Reduction (vph)	0	53	64	0	0	0	0	6	0	0	0	0
Lane Group Flow (vph)	629	152	138	0	0	0	0	2035	0	48	1343	0
Turn Type	Perm	NA	Perm					NA		Prot	NA	
Protected Phases		8						6		5	2	
Permitted Phases	8		8									
Actuated Green, G (s)	29.6	29.6	29.6					74.2		6.8	87.5	
Effective Green, g (s)	29.6	29.6	29.6					74.2		6.8	87.5	
Actuated g/C Ratio	0.23	0.23	0.23					0.57		0.05	0.67	
Clearance Time (s)	6.5	6.5	6.5					6.4		6.5	6.4	
Vehicle Extension (s)	3.0	3.0	3.0					3.0		3.0	3.0	
Lane Grp Cap (vph)	781	343	342					2872		92	3422	
v/s Ratio Prot		0.10						c0.40		0.03	c0.26	
v/s Ratio Perm	c0.18		0.09									
v/c Ratio	0.81	0.44	0.40					0.71		0.52	0.39	
Uniform Delay, d1	47.5	43.1	42.7					20.1		60.0	9.4	
Progression Factor	1.00	1.00	1.00					0.72		0.99	0.18	
Incremental Delay, d2	6.1	0.9	0.8					1.4		4.6	0.3	
Delay (s)	53.5	44.0	43.5					15.9		64.1	2.0	
Level of Service	D	D	D					B		E	A	
Approach Delay (s)		49.7			0.0			15.9			4.2	
Approach LOS		D			A			B			A	

Intersection Summary			
HCM 2000 Control Delay	20.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	19.4
Intersection Capacity Utilization	76.0%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	70	0	1863	1545	48
Future Vol, veh/h	0	70	0	1863	1545	48
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	0	76	0	2025	1679	52

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	866	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.14	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.92	-	-	-	-
Pot Cap-1 Maneuver	0	255	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	255	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	25	0	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	255	-	-
HCM Lane V/C Ratio	-	0.298	-	-
HCM Control Delay (s)	-	25	-	-
HCM Lane LOS	-	D	-	-
HCM 95th %tile Q(veh)	-	1.2	-	-

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	120	0	1845	1506	127
Future Vol, veh/h	0	120	0	1845	1506	127
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	-	-	-	150
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	130	0	2005	1637	138

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	819	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.14	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.92	-	-	-	-
Pot Cap-1 Maneuver	0	273	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	273	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	29.7	0	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	273	-	-
HCM Lane V/C Ratio	-	0.478	-	-
HCM Control Delay (s)	-	29.7	-	-
HCM Lane LOS	-	D	-	-
HCM 95th %tile Q(veh)	-	2.4	-	-

Movement	EBL	EBR	NBL	NBT	SBU	SBT	SBR
Lane Configurations							
Traffic Volume (vph)	284	71	268	1458	37	1444	147
Future Volume (vph)	284	71	268	1458	37	1444	147
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.6	6.6	6.5	6.5	6.5	6.5	6.5
Lane Util. Factor	0.97	1.00	1.00	0.91	1.00	0.91	1.00
Frt	1.00	0.85	1.00	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	1583	1770	5085	1770	5085	1583
Flt Permitted	0.95	1.00	0.10	1.00	0.15	1.00	1.00
Satd. Flow (perm)	3433	1583	186	5085	276	5085	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	309	77	291	1585	40	1570	160
RTOR Reduction (vph)	0	67	0	0	0	0	67
Lane Group Flow (vph)	309	10	291	1585	40	1570	93
Turn Type	Prot	Perm	pm+pt	NA	Perm	NA	Perm
Protected Phases	8		1	6		2	
Permitted Phases		8	6		2		2
Actuated Green, G (s)	16.9	16.9	100.0	100.0	73.1	73.1	73.1
Effective Green, g (s)	16.9	16.9	100.0	100.0	73.1	73.1	73.1
Actuated g/C Ratio	0.13	0.13	0.77	0.77	0.56	0.56	0.56
Clearance Time (s)	6.6	6.6	6.5	6.5	6.5	6.5	6.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	446	205	391	3911	155	2859	890
v/s Ratio Prot	c0.09		c0.12	0.31		0.31	
v/s Ratio Perm		0.01	c0.45		0.14		0.06
v/c Ratio	0.69	0.05	0.74	0.41	0.26	0.55	0.11
Uniform Delay, d1	54.1	49.5	26.7	5.0	14.6	18.0	13.2
Progression Factor	1.00	1.00	1.55	0.23	0.51	0.50	0.26
Incremental Delay, d2	4.6	0.1	5.5	0.2	3.8	0.7	0.2
Delay (s)	58.7	49.6	46.7	1.4	11.2	9.7	3.7
Level of Service	E	D	D	A	B	A	A
Approach Delay (s)	56.9			8.4		9.2	
Approach LOS	E			A		A	

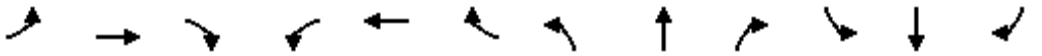
Intersection Summary			
HCM 2000 Control Delay	13.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	19.6
Intersection Capacity Utilization	67.2%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	179	587	1215	228	718	866
Future Volume (vph)	179	587	1215	228	718	866
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.5	6.5	6.6		6.6	6.6
Lane Util. Factor	1.00	0.88	0.91		0.97	0.91
Frt	1.00	0.85	0.98		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1770	2787	4965		3433	5085
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1770	2787	4965		3433	5085
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	195	638	1321	248	780	941
RTOR Reduction (vph)	0	511	21	0	0	0
Lane Group Flow (vph)	195	127	1548	0	780	941
Turn Type	Prot	Perm	NA		Prot	NA
Protected Phases	4		6		5	2
Permitted Phases		4				
Actuated Green, G (s)	20.3	20.3	55.4		34.6	96.6
Effective Green, g (s)	20.3	20.3	55.4		34.6	96.6
Actuated g/C Ratio	0.16	0.16	0.43		0.27	0.74
Clearance Time (s)	6.5	6.5	6.6		6.6	6.6
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	276	435	2115		913	3778
v/s Ratio Prot	c0.11		c0.31		c0.23	0.19
v/s Ratio Perm		0.05				
v/c Ratio	0.71	0.29	0.73		0.85	0.25
Uniform Delay, d1	52.0	48.5	31.1		45.3	5.3
Progression Factor	1.00	1.00	0.54		0.54	1.74
Incremental Delay, d2	8.0	0.4	2.1		6.9	0.1
Delay (s)	60.0	48.9	18.7		31.4	9.3
Level of Service	E	D	B		C	A
Approach Delay (s)	51.5		18.7			19.3
Approach LOS	D		B			B

Intersection Summary			
HCM 2000 Control Delay	25.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	19.7
Intersection Capacity Utilization	75.4%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	1	32	0	572	2	961	23	244	833	2
Future Volume (vph)	0	0	1	32	0	572	2	961	23	244	833	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.9			6.9	6.6	6.6	6.6		6.6	6.6	
Lane Util. Factor		1.00			1.00	0.88	1.00	0.91		0.97	0.91	
Frt		0.85			1.00	0.85	1.00	1.00		1.00	1.00	
Flt Protected		1.00			0.95	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1583			1770	2787	1770	5067		3433	5084	
Flt Permitted		1.00			0.14	1.00	0.27	1.00		0.95	1.00	
Satd. Flow (perm)		1583			263	2787	506	5067		3433	5084	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	1	35	0	622	2	1045	25	265	905	2
RTOR Reduction (vph)	0	1	0	0	0	365	0	1	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	35	257	2	1069	0	265	907	0
Turn Type	Perm	NA		Perm	NA	pm+ov	Perm	NA		Prot	NA	
Protected Phases		4			3	5		6		5	2	
Permitted Phases	4			3		3	6					
Actuated Green, G (s)		1.6			28.3	53.7	47.7	47.7		25.4	79.7	
Effective Green, g (s)		1.6			28.3	53.7	47.7	47.7		25.4	79.7	
Actuated g/C Ratio		0.01			0.22	0.41	0.37	0.37		0.20	0.61	
Clearance Time (s)		6.9			6.9	6.6	6.6	6.6		6.6	6.6	
Vehicle Extension (s)		3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		19			57	1292	185	1859		670	3116	
v/s Ratio Prot		c0.00				0.04		c0.21		c0.08	0.18	
v/s Ratio Perm					c0.13	0.05	0.00					
v/c Ratio		0.00			0.61	0.20	0.01	0.57		0.40	0.29	
Uniform Delay, d1		63.4			45.9	24.4	26.2	33.0		45.6	11.8	
Progression Factor		1.00			1.00	1.00	1.00	1.00		1.30	1.13	
Incremental Delay, d2		0.0			18.0	0.1	0.1	1.3		0.4	0.2	
Delay (s)		63.4			63.9	24.5	26.3	34.3		59.8	13.6	
Level of Service		E			E	C	C	C		E	B	
Approach Delay (s)		63.4			26.6			34.3			24.0	
Approach LOS		E			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	28.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	27.0
Intersection Capacity Utilization	53.8%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Intersection: 1: Edgefield Rd & I-20 WB

Movement	WB	WB	NB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	LT	R	L	L	T	T	T	T	T	T	R
Maximum Queue (ft)	161	170	182	189	86	125	126	386	309	203	169
Average Queue (ft)	80	83	116	119	16	39	43	252	198	111	90
95th Queue (ft)	144	148	181	177	57	98	102	349	300	185	158
Link Distance (ft)	998				1096	1096	1096	797	797	797	
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)		350	500	500							250
Storage Blk Time (%)											
Queuing Penalty (veh)											

Intersection: 2: Edgefield Rd & I-20 EB

Movement	EB	EB	EB	EB	NB	NB	NB	SB	SB	SB	SB
Directions Served	L	L	TR	R	T	T	TR	L	T	T	T
Maximum Queue (ft)	299	402	201	174	179	182	167	100	110	92	126
Average Queue (ft)	191	239	117	53	122	124	98	36	40	18	20
95th Queue (ft)	284	343	192	124	186	184	168	79	85	56	67
Link Distance (ft)		1131	1131		154	154	154		1096	1096	1096
Upstream Blk Time (%)					2	2	1				
Queuing Penalty (veh)					13	14	7				
Storage Bay Dist (ft)	200			200				325			
Storage Blk Time (%)	4	17	1	0							
Queuing Penalty (veh)	12	50	1	0							

Intersection: 3: Edgefield Rd & Frontage Rd

Movement	EB	NB	NB	NB	SB	SB
Directions Served	R	T	T	T	T	TR
Maximum Queue (ft)	88	66	82	110	20	28
Average Queue (ft)	25	11	8	10	1	1
95th Queue (ft)	53	51	43	53	8	13
Link Distance (ft)	1298	401	401	401	154	154
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 4: Edgefield Rd & DW1

Movement	EB	SB	SB	SB
Directions Served	R	T	T	T
Maximum Queue (ft)	254	248	108	17
Average Queue (ft)	74	22	4	1
95th Queue (ft)	203	122	47	12
Link Distance (ft)	340	401	401	401
Upstream Blk Time (%)	2			
Queuing Penalty (veh)	0			
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 5: Edgfield Rd/Edgefield Rd & DW 2 (Shared QT)

Movement	EB	EB	EB	NB	NB	NB	NB	SB	SB	SB	SB	SB
Directions Served	L	L	R	L	T	T	T	U	T	T	T	R
Maximum Queue (ft)	255	199	111	262	88	98	132	174	353	333	260	75
Average Queue (ft)	162	103	39	161	15	30	42	31	242	119	95	29
95th Queue (ft)	226	193	86	243	50	72	91	96	364	258	190	64
Link Distance (ft)	372	372			1309	1309	1309		333	333	333	
Upstream Blk Time (%)								0	5	0	0	
Queuing Penalty (veh)								0	27	2	1	
Storage Bay Dist (ft)			150	250				250				250
Storage Blk Time (%)		1	0	1					13		0	
Queuing Penalty (veh)		0	0	6					5		0	

Intersection: 6: Edgefield Rd/Edgfield Rd & Ascauga Lake Rd

Movement	WB	WB	WB	NB	NB	NB	SB	SB	SB	SB	SB	
Directions Served	L	R	R	T	T	TR	L	L	T	T	T	
Maximum Queue (ft)	270	285	239	306	293	318	439	473	882	449	204	
Average Queue (ft)	128	144	99	205	201	221	338	369	361	99	100	
95th Queue (ft)	229	230	197	285	277	298	509	554	1044	309	172	
Link Distance (ft)	1683	1683		1105	1105	1105			1309	1309	1309	
Upstream Blk Time (%)									0			
Queuing Penalty (veh)									2			
Storage Bay Dist (ft)			380				390	390				
Storage Blk Time (%)							10	23	0			
Queuing Penalty (veh)							30	67	0			

Intersection: 7: Edgefield Rd & US 25 Conn

Movement	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	TR	LT	R	R	L	T	T	TR	L	L	T	T
Maximum Queue (ft)	20	94	167	132	25	222	202	146	170	180	14	21
Average Queue (ft)	1	36	94	62	2	132	83	62	73	98	1	1
95th Queue (ft)	10	77	155	107	13	210	174	122	136	154	7	9
Link Distance (ft)	511	1424	1424	1424		822	822	822			1105	1105
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)					190				220	220		
Storage Blk Time (%)						1						
Queuing Penalty (veh)						0						

Intersection: 7: Edgefield Rd & US 25 Conn

Movement	SB
Directions Served	TR
Maximum Queue (ft)	12
Average Queue (ft)	1
95th Queue (ft)	7
Link Distance (ft)	1105
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Network Summary

Network wide Queuing Penalty: 237

Appendix D: Trip Generation Calculation

Trip Generation

Calculation of Anticipated Project Trips

Based upon methodology from ITE's *Trip Generation Manual*, 10th Edition (2017)

FORESITE group

Project Land Use	Project Density	Project Trips			ITE Code	Variable	Equation Used[1]	In/Out Distribution
		Total	Inbound	Outbound				
Supermarket	51,908 S.F.				850	1000 S.F.		
Daily		**4,868**	2,434	2,434			T = 83.93(X)+539.33	50% / 50%
AM Peak Hour		**148**	87	61			T = 2.86(X)	59% / 41%
PM Peak Hour		**454**	227	227			Ln(T) = 0.81Ln(X)+2.92	50% / 50%
Reductions for Internal Capture								
Daily	10%	**486**	243	243				
AM Peak Hour	10%	**15**	9	6				
PM Peak Hour	10%	**46**	23	23				
Reductions for Modal Split								
Daily	0%	**0**	0	0				
AM Peak Hour	0%	**0**	0	0				
PM Peak Hour	0%	**0**	0	0				
Reductions for Pass-By Trips								
Daily	27%	**1,231**	616	616				
AM Peak Hour	18%	**32**	19	13				
PM Peak Hour	36%	**161**	82	79				
NET NEW EXTERNAL VEHICULAR TRIPS								
Daily		**3,330**	1,665	1,664				
AM Peak Hour		**148**	89	59				
PM Peak Hour		**285**	145	140				
Variety Store	21,530 S.F.				814	1,000 S.F.		
Retail A & B								
Daily		**1,371**	686	685			T = 63.66(X)	50% / 50%
AM Peak Hour		**65**	36	29			T = 3.04(X)	55% / 45%
PM Peak Hour		**144**	73	71			T = 6.70(X)	51% / 49%
Reductions for Internal Capture								
Daily	10%	**138**	69	69				
AM Peak Hour	10%	**7**	4	3				
PM Peak Hour	10%	**14**	7	7				
Reductions for Modal Split								
Daily	0%	**0**	0	0				
AM Peak Hour	0%	**0**	0	0				
PM Peak Hour	0%	**0**	0	0				
Reductions for Pass-By Trips								
Daily	17%	**234**	117	117				
AM Peak Hour	0%	**0**	0	0				
PM Peak Hour	34%	**50**	26	24				
NET NEW EXTERNAL VEHICULAR TRIPS								
Daily		**1,143**	572	571				
AM Peak Hour		**69**	39	30				
PM Peak Hour		**98**	51	47				
Fast-Food Restaurant with Drive-Through Window	5,000 S.F.				934	1,000 S.F.		
Outparcel 1								
Daily		**2,337**	1,169	1,168			T = 467.48(X)	50% / 50%
AM Peak Hour		**223**	114	109			T = 44.61(X)	51% / 49%
PM Peak Hour		**165**	86	79			T = 33.03(X)	52% / 48%
Reductions for Internal Capture								
Daily	10%	**234**	117	117				
AM Peak Hour	10%	**22**	11	11				
PM Peak Hour	10%	**17**	9	8				
Reductions for Modal Split								
Daily	0%	**0**	0	0				
AM Peak Hour	0%	**0**	0	0				
PM Peak Hour	0%	**0**	0	0				
Reductions for Pass-By Trips								
Daily	50%	**1,169**	585	584				
AM Peak Hour	49%	**109**	56	53				
PM Peak Hour	50%	**83**	43	40				
NET NEW EXTERNAL VEHICULAR TRIPS								
Daily		**934**	467	467				
AM Peak Hour		**92**	47	45				
PM Peak Hour		**65**	34	31				
Coffee/Doughnut Shop with Drive-Through Window	3,500 S.F.				937	1,000 S.F.		
Outparcel 2								
Daily		**2,871**	1,436	1,435			T = 533.57(X)	50% / 50%
AM Peak Hour		**301**	154	147			T = 85.88(X)	51% / 49%
PM Peak Hour		**136**	68	68			T = 38.99(X)	50% / 50%
Reductions for Internal Capture								
Daily	10%	**288**	144	144				
AM Peak Hour	10%	**30**	15	15				
PM Peak Hour	10%	**14**	7	7				
Reductions for Modal Split								
Daily	0%	**0**	0	0				
AM Peak Hour	0%	**0**	0	0				
PM Peak Hour	0%	**0**	0	0				
Reductions for Pass-By Trips								
Daily	50%	**1,436**	718	718				
AM Peak Hour	49%	**147**	75	72				
PM Peak Hour	50%	**68**	34	34				
NET NEW EXTERNAL VEHICULAR TRIPS								
Daily		**1,147**	574	573				
AM Peak Hour		**124**	64	60				
PM Peak Hour		**54**	27	27				

Medical/Dental Office	7,000 S.F.				720	1,000 S.F.		
Outparcel 3 Daily		**193**	97	96			T=42.97(X)-108.01	50% / 50%
AM Peak Hour		**22**	17	5			Ln(T) = 0.90Ln(X)+1.34	79% / 21%
PM Peak Hour		**25**	8	17			T=4.07(X)-3.17	30% / 70%
Reductions for Internal Capture								
Daily	10%	**20**	10	10				
AM Peak Hour	10%	**3**	2	1				
PM Peak Hour	10%	**3**	1	2				
Reductions for Modal Split								
Daily	0%	**0**	0	0				
AM Peak Hour	0%	**0**	0	0				
PM Peak Hour	0%	**0**	0	0				
Reductions for Pass-By Trips								
Daily	0%	**0**	0	0				
AM Peak Hour	0%	**0**	0	0				
PM Peak Hour	0%	**0**	0	0				
NET NEW EXTERNAL VEHICULAR TRIPS								
Daily		**173**	87	86				
AM Peak Hour		**19**	15	4				
PM Peak Hour		**22**	7	15				

High Turnover/Sit Down Restaurant	5,000 S.F.				932	1,000 S.F.		
Outparcel 4 Daily		**536**	268	268			T = 107.20(X)	50% / 50%
AM Peak Hour		**48**	26	22			T = 9.57(X)	55% / 45%
PM Peak Hour		**45**	28	17			T = 9.05(X)	62% / 38%
Reductions for Internal Capture								
Daily	10%	**54**	27	27				
AM Peak Hour	10%	**5**	3	2				
PM Peak Hour	10%	**5**	3	2				
Reductions for Modal Split								
Daily	0%	**0**	0	0				
AM Peak Hour	0%	**0**	0	0				
PM Peak Hour	0%	**0**	0	0				
Reductions for Pass-By Trips								
Daily	22%	**118**	59	59				
AM Peak Hour	0%	**0**	0	0				
PM Peak Hour	43%	**19**	12	7				
NET NEW EXTERNAL VEHICULAR TRIPS								
Daily		**364**	182	182				
AM Peak Hour		**43**	23	20				
PM Peak Hour		**21**	13	8				

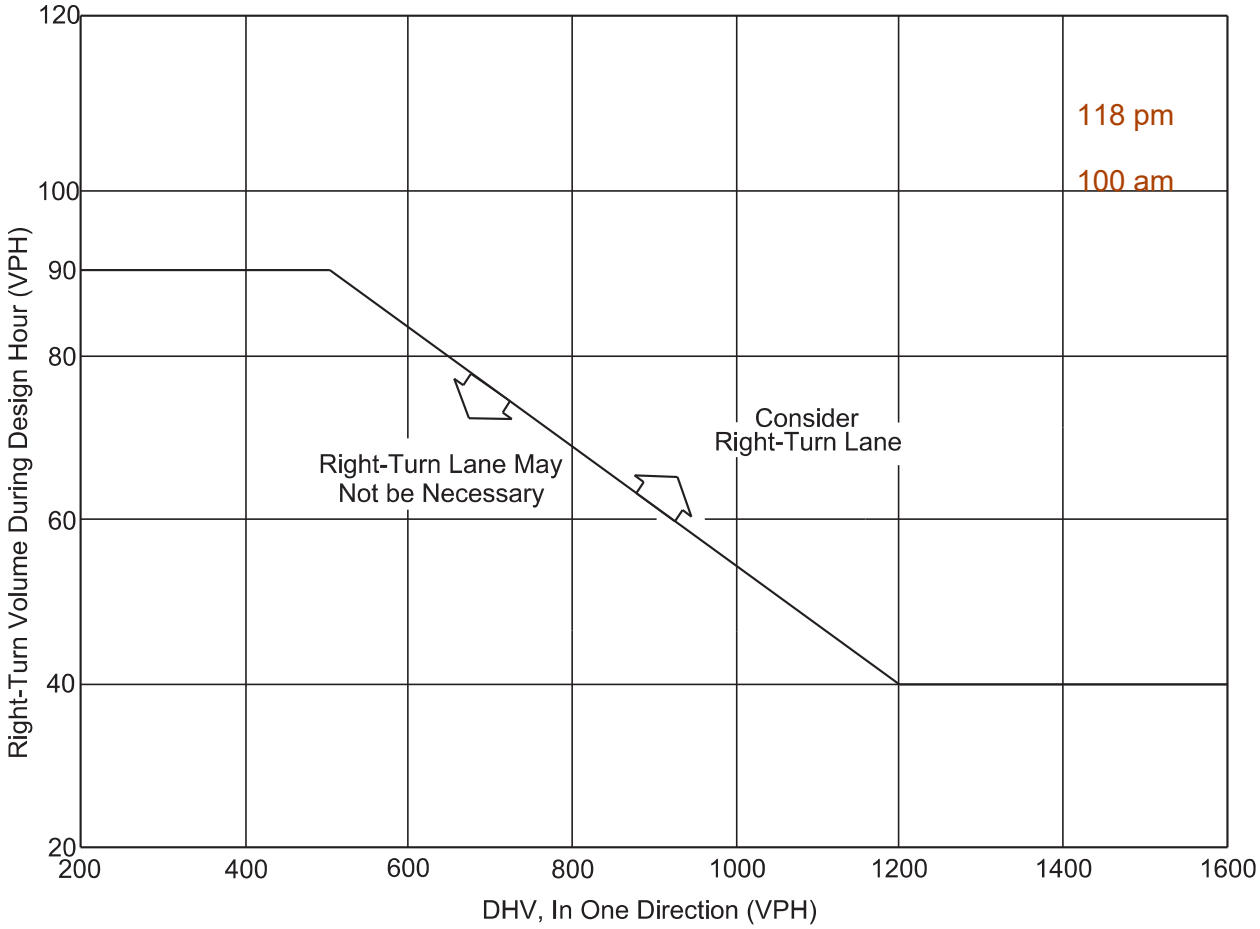
Multifamily Housing (Mid-Rise)	306 D.U.				221	Dwelling Unit		
Daily		**1,413**	707	706			T=4.77(X) - 46.46	50% / 50%
AM Peak Hour		**123**	28	95			T=0.44(X) - 11.61	23% / 77%
PM Peak Hour		**120**	73	47			T=0.39(X) + 0.34	61% / 39%
Reductions for Internal Capture								
Daily	10%	**142**	71	71				
AM Peak Hour	10%	**13**	3	10				
PM Peak Hour	10%	**12**	7	5				
Reductions for Modal Split								
Daily	0%	**0**	0	0				
AM Peak Hour	0%	**0**	0	0				
PM Peak Hour	0%	**0**	0	0				
Reductions for Pass-By Trips								
Daily	0%	**0**	0	0				
AM Peak Hour	0%	**0**	0	0				
PM Peak Hour	0%	**0**	0	0				
NET NEW EXTERNAL VEHICULAR TRIPS								
Daily		**1,271**	636	635				
AM Peak Hour		**110**	25	85				
PM Peak Hour		**108**	66	42				

TOTAL GROUP TRIPS				
Daily	**13,589**	6,797	6,792	
AM Peak Hour	**930**	462	468	
PM Peak Hour	**1,089**	563	526	
TOTAL INTERNAL CAPTURE TRIPS				
Daily	**1,362**	681	681	
AM Peak Hour	**95**	47	48	
PM Peak Hour	**111**	57	54	
TOTAL MODAL SPLIT TRIPS				
Daily	**0**	0	0	
AM Peak Hour	**0**	0	0	
PM Peak Hour	**0**	0	0	
TOTAL PASS-BY TRIPS				
Daily	**4,189**	2,095	2,094	
AM Peak Hour	**288**	150	138	
PM Peak Hour	**381**	197	184	
NET NEW EXTERNAL VEHICULAR TRIPS				
Daily	**8,361**	4,183	4,178	
AM Peak Hour	**605**	302	303	
PM Peak Hour	**653**	343	310	

850	Supermarket
814	Variety Store
934	Fast-Food Restaurant with Drive-Through Window
937	Coffee/Doughnut Shop with Drive-Through Window
720	Medical/Dental Office
932	High Turnover/Sit Down Restaurant
221	Multifamily Housing (Mid-Rise)
0	Land Use
0	Land Use
0	Land Use

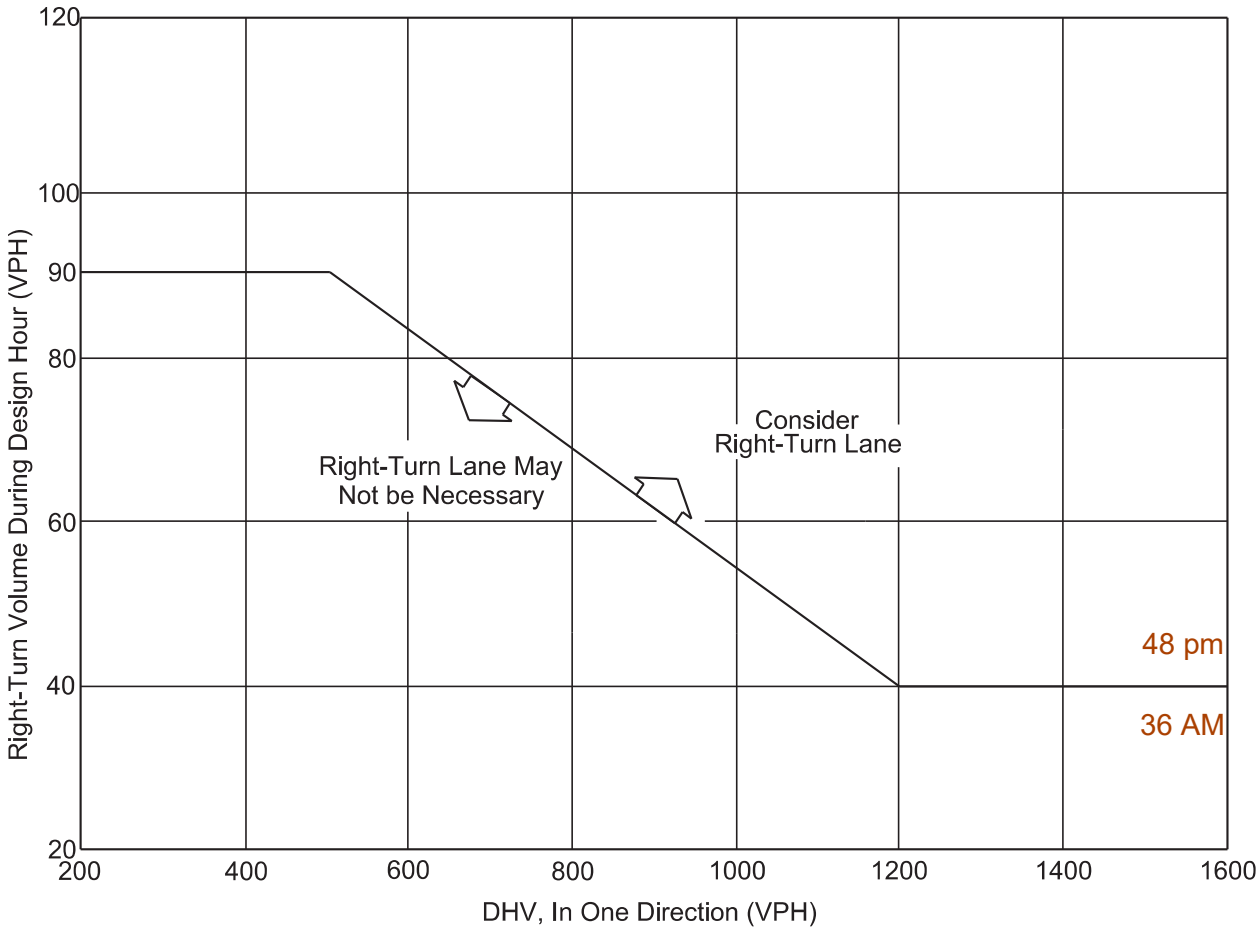
Note: [1] Where: T = Trips; X = Density by Variable

Appendix E: Turn Lane Worksheets



Note: Figure is only applicable on highways with a design speed of 50 miles per hour or greater.

GUIDELINES FOR RIGHT-TURN LANES AT UNSIGNALIZED INTERSECTIONS ON FOUR-LANE HIGHWAYS
Figure 9.5-B



Note: Figure is only applicable on highways with a design speed of 50 miles per hour or greater.

GUIDELINES FOR RIGHT-TURN LANES AT UNSIGNALIZED INTERSECTIONS ON FOUR-LANE HIGHWAYS
Figure 9.5-B

DEPARTMENT OF PLANNING AND DEVELOPMENT

TOMMY PARADISE
DIRECTOR

MONTHLY REPORT
FOR
December 2023

City of North Augusta

Department of Planning and Development

Monthly Report for December 2023

Item	This Month		Year To Date		Same Month, Last Year		Last Year To Date	
Development Applications	**Received**	**Approved**	**Received**	**Approved**	**Received**	**Approved**	**Received**	**Approved**
Subdivisions								
Major Subdivision Plans (PP)	0	0	3	4	2	0	10	1
Planned Acres	0	0.00	271.98	277.72	36.03	0.00	218.88	8.00
Planned Lots	0	0	662	278	113	0	333	79
Minor Subdivision Plats (MP)	4	0	15	8	0	0	14	9
Platted New Lots	13	0	38	22	0	0	48	45
Major Subdivision Plats (FP)	0	0	6	5	0	0	6	6
Platted Acres	0.00	0.00	130.2	112.77	0.00	0.00	276.37	276.37
Platted Lots	0	0	326	283	0	0	253	253
Site Plans								
Minor Site Plans (MSP)	2	2	18	10	3	4	16	11
Major Site Plans (SP)	2	0	5	1	0	0	3	2
Site Plan Modification (SPM)	0	0	0	0	0	0	0	0
Total Site Plan Acres	41.31	37.99	398.17	63.68	32.95	1.79	69.96	48.71
Planned Developments								
PD Gen Dev Plans/Major Mod. (PD)	0	0	3	2	0	0	1	0
PD Acres	0	0	245.7	175.34	0	0	68.73	0
Development Plan Modification (PDM)	0	0	0	0	0	0	4	0
Annexations								
Annexation Agreements Received	0	0	5	5	0	0	0	0
Annexation Cases (ANX)	0	0	5	5	0	0	2	1
Approved by City Council	0	0	5	5	0	0	1	1
Parcels	0	0	6	6	0	0	1	0
Acres	0	0	28	28.00	0	0	45	43.9

City of North Augusta

Department of Planning and Development

Monthly Report for December 2023

Item	This Month		Year To Date		Same Month Last Year		Last Year To Date	
	Received	Approved	Received	Approved	Received	Approved	Received	Approved
Zoning/Text Amendments								
Rezoning (RZM)	0	1	3	3	0	0	2	1
Parcels	0	5	8	8	0	0	1	1
Acres	0	0.50	10.39	10.39	0.00	0.00	15.64	4.39
Conditional Zoning (RZC)	0	0	0	0	0	0	0	0
Parcels	0	0	0	0	0	0	0	0
Acres	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Text Amendments (RZT)	0	0	1	1	0	0	1	1
Other								
Certificates of Zoning Compliance (CZC)	8	8	115	111	9	9	133	133
Zoning Confirmation Letters (LZC)	1	1	21	21	0	0	10	10
Residential Site Reviews	16	16	219	219	16	16	325	325
Sign Permits (SN)	3	3	30	30	3	3	57	57
Right of Way Naming (RWN)	0	0	1	1	0	0	2	2
Right of Way Abandonment	0	0	0	0	0	0	0	0
Planning Projects (PROJ)	0	0	0	0	0	0	4	2
Communications Towers (CT)	0	0	0	0	0	0	0	0
Conditional Use Permits (CU)	0	0	11	10	0	0	5	5

Item	This Month		Year To Date		Same Month Last Year		Last Year To Date	
Appeals	Received	Approved	Received	Approved	Received	Approved	Received	Approved
Variances	0	0	13	12	0	0	17	14
Special Exceptions	0	0	0	0	0	0	0	0
Administrative Decisions	0	0	0	0	0	0	0	0
Waivers	0	1	3	3	0	0	2	1

City of North Augusta

Department of Planning and Development

Monthly Report for December 2023

Item	This Month	Year To Date	Same Month Last Year	Last Year To Date
Fees Collected				
Development Applications	$1,626.67	$42,093.22	$5,580.88	$50,438.57
Appeals	$0.00	$2,963.74	$0.00	$4,257.77
Maps/Publications	$0.00	$0.00	$0.00	$0.00
Special Review Fees	$0.00	$0.00	$0.00	$0.00
Total Fees	**$1,626.67**	**$45,056.96**	**$5,580.88**	**$54,696.34**

* Not yet recorded

Item	This Month		Year To Date		Same Month, Last Year		Last Year To Date	
Code Enforcement	**Case Received or Investigated**	**Case Closed**	**Case Received or Investigated**	**Case Closed**	**Case Received or Investigated**	**Case Closed**	**Case Received or Investigated**	**Case Closed**
Property Maintenance	5	5	140	139	8	9	181	148
Property Leins/Contractor Mitigation	0	1	9	10	0	0	2	2
Swimming Pools	0	2	7	9	0	0	11	6
Recreational Vehicles/RV/Boat/Utility Trailers	3	1	24	26	6	2	33	28
Illegal Vehicles	3	3	43	59	21	4	57	43
Commercial Vehicles/Equipment	0	1	9	10	3	1	8	5
Temporary Signs	78	78	1188	1188	58	58	926	926
Landscape Inspections	31	31	239	239	27	27	238	238
Structure Demolitions	0	0	0	0	0	0	0	0

City of North Augusta
Department of Planning and Development

North Augusta Planning Department

December 2023 Staff Approvals

Residential Site Plans

Application Number	Tax Parcel Number	Applicant	Legal Description	Zone	Approval Date	Structure
B23-0716	007 16 03 016	H.G. Reynolds	432 Metz Dr	R-7	12/14/2023	New Residential Construction
B23-0720	005 18 01 013	Lage Custom Homes LLC	1005 Long Leaf Ct	R-14	12/18/2023	New Residential Construction
B23-0722	005 09 08 005	John Neivel	134 Blair Dr	PD	12/18/2023	8x12 Storage Shed
B23-0723	007 06 22 008	Luke Bauske	806 Lake Ave.	R-7	12/19/2023	17x23 Shed on Concrete Slab
B23-0728	006 15 01 011	Scott Royer	2104 Vireo Dr.	R-7	12/19/2023	12x24 Storage Building
B23-0732	006 13 15 003	Witter Construction Co	1972 Bolin Rd	R-14	12/22/2023	Garage/Storage Bldg
B23-0734	TMP1034	Ivey Residential SC LLC	892 Rachel Branch	R-7	12/22/2023	New Residential Construction
B23-0735	TMP1035	Ivey Residential SC LLC	896 Rachel Branch	R-7	12/22/2023	New Residential Construction
B23-0736	TMP1036	Ivey Residential SC LLC	900 Rachel Branch	R-7	12/22/2023	New Residential Construction
B23-0738	127 00 07 001	Keystone Homes	4098 Beautiful Pond Park	PD	12/22/2023	New Residential Construction
B23-0739	127 00 07 002	Keystone Homes	4106 Beautiful Pond Park	PD	12/22/2023	New Residential Construction
B23-0740	127 00 07 003	Keystone Homes	4116 Beautiful Pond Park	PD	12/22/2023	New Residential Construction
B23-0741	127 00 07 004	Keystone Homes	4124 Beautiful Pond Park	PD	12/22/2023	New Residential Construction
B23-0742	127 00 07 005	Keystone Homes	4134 Beautiful Pond Park	PD	12/22/2023	New Residential Construction

B23-0744	006 11 07 004	Ivey Residential SC LLC	5037 Anna Ccreek Way	R-7	12/28/2023	New Residential Construction
B23-0731	003 16 04 006	Graybeal LLC	636 Boeckh St.	PD	12/29/2023	New Residential Construction

Sign Permits

Application Number	Tax Parcel Number	Applicant	Legal Description	Zone	Approval Date	Use
SN23-037	006 20 05 002	Julie Cromwell	Dab City & Vap	GC\HC	12/6/2023	
SN23-038	006 10 12 001	AAA Sing Co	Forrest Bluff	R-7	12/6/2023	
SN23-039	006 18 01 008	Keirsten Tarpley	Koven Salon\Studio	NC\HC	12/18/2023	

Certificate of Zoning Compliance Approvals

Application Number	Tax Parcel Number	Applicant	Legal Description	Zone	Approval Date	Use
CZC23-108	006 19 03 001	DE Zhu Ren	Flower Europe Massage	GC\HC	12/1/2023	
CZC23-109	006 20 05 002	Sharon Ghani	Dab City Tobacco & Vape	GC\HC	12/4/2023	
CZC23-110		Ashley Johnson	Ashley's Yummy Tummy		12/6/2023	Food Truck
CZC23-111	007 14 03 002	Chris Macinnis	MD Revolution	D	12/7/2023	
CZC23-112	003 08 06 016	Victor De LaCruz	Funnel Cake Lounge Co LLC	P	12/20/2023	Food Truck
CZC23-113	006 06 13 029	Edward Cordes III	Ecordes 3 Photography	R-14	12/20/2023	
CZC23-114	003 08 06 016	Jenepher Bowman	Suzie Q's	P	12/20/2023	Food Truck
CZC23-115	006 20 05 002	Eric Medoh	Le Bodega Eatery	P	12/20/2023	Food Truck
