Transportation Analysis

Sugarloaf Crossing
DRI #2472

Gwinnett County, Georgia

Report Prepared:

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF APPENDICES

Available Upon Request

Synchro Capacity Analyses
Raw Traffic Count Data

EXECUTIVE SUMMARY

This report presents the analysis of the anticipated traffic impacts of the proposed Sugarloaf Crossing DRI development located in Gwinnett County, Georgia, between the cities of Lawrenceville and Dacula. The approximate 159.87-acre site is bordered by SR 316 (University Parkway) to the northeast and by SR 8 / US 29 (Winder Highway) to the northwest. The proposed development will be a mixed-use development consisting of approximately 1,100,000 square feet of general office space and 275,000 square feet of retail space.

The project is a Development of Regional Impact (DRI) and is subject to Georgia Regional Transportation Authority (GRTA) and Atlanta Regional Commission (ARC) review due to the project size exceeding 500,000 SF of mixed-use development in a Developing Suburbs area type. The DRI for this development is a rezoning with Gwinnett County. The DRI was formally triggered with the filing of the Initial DRI Information (Form 1) on February 9, 2015.

The proposed redevelopment project is expected to be completed by 2020 (approximately 5 years), and this analysis will consider the full build-out of the proposed site in 2020. The proposed site will consist of the following land uses and densities:

General Office:	1,100,000 SF
Retail:	275,000 SF

Capacity analyses were performed throughout the study network for the 2015 Existing conditions, the projected 2020 No-Build conditions, and the projected 2020 Build conditions.

- Existing 2015 conditions represent traffic volumes that were collected in March 2015 by performing AM and PM peak hour turning movement counts.
- Projected 2020 No-Build conditions represent the existing traffic volumes grown for five (5) years at 1.5 percent per year throughout the study network.
- Projected 2020 Build conditions represent the projected 2020 No-Build conditions with the addition of the project trips that are anticipated to be generated by the Sugarloaf Crossing development. Also included, is the one (1) proposed site access driveway, to tie into one of the existing study network intersections.

Based on the Existing 2015 conditions (present conditions; i.e. excludes background traffic growth and excludes the Sugarloaf Crossing DRI project traffic), none of the study intersections operate below the acceptable level-of-service (LOS) standard of D.

Based on the projected 2020 No-Build conditions (includes background traffic growth but excludes the Sugarloaf Crossing DRI project traffic), the following recommended improvements result in all study intersections operating at or above their level-of-service standard (LOS D, or LOS E, where applicable):

- SR 316 (University Parkway) at Cedars Road (Int. #1)
  - Construct an exclusive left-turn lane along the Cedars Road northbound approach.
  - Construct an exclusive left-turn lane along the Cedars Road southbound approach.

- SR 316 (University Parkway) at SR 8 / US 29 (Winder Highway) (Int. #3)
  - Construct a second through lane along the Winder Highway northbound approach.
  - Construct a second through lane along the Winder Highway southbound approach.

- SR 316 (University Parkway) at Harbins Road (Int. #4)
  - Construct a second through lane along the Harbins Road northbound approach.
  - Construct a second through lane along the Harbins Road southbound approach.

Based on the projected 2020 Build conditions (includes background traffic growth and includes the Sugarloaf Crossing DRI project traffic plus the site access driveway), the following recommended improvements result in all study intersections operating at or above their level-of-service standard (LOS D, or LOS E, where applicable). Please note that the following improvements are IN ADDITION TO the improvements associated with the projected 2020 No-Build conditions:

- SR 316 (University Parkway) at SR 8 / US 29 (Winder Highway) (Int. #3)
  - Construct an interchange to eliminate at-grade crossings and related delays.
  - Provide four through lanes along SR 8 at the new interchange (four-lane bridge across SR 316).
  - Provide dual left-turn lanes and a single channelized right-turn lane along each of the SR 316 off-ramp approaches to SR 8.
  - Provide a single southbound left-turn lane and a single northbound channelized right-turn lane along the SR 8 approaches to each of the SR 316 on-ramps.

  Or, alternatively (not recommended):

  - Construct a third through lane along the SR 316 eastbound approach.
  - Construct a third through lane along the SR 316 westbound approach.
  - Construct one additional northbound left-turn lane along SR 8 to SR 316, resulting in dual left-turn lanes.
  - Construct one additional westbound left-turn lane along SR 316 to SR 8, resulting in dual left-turn lanes.
  - Convert the existing northbound channelized right-turn along SR 8 from yield-control to continuous free-flow. Construct an eastbound receiving lane along SR 316, departing from SR 8, to accommodate this free-flow right-turn implementation.
  - Convert the existing southbound channelized right-turn along SR 8 from yield-control to continuous free-flow. Construct a westbound receiving lane along SR 316, departing from SR 8, to accommodate this free-flow right-turn implementation.

  An interchange is recommended due to the significant roadway geometry (intersection laneage) improvements otherwise required at this intersection. An interchange (grade separation) was once identified as a TIA project, and has been suggested in the City of Dacula's Comprehensive Plan Update (2014).

- Roadway segment of SR 8 / US 29 (Winder Highway) between Alcovy Industrial Blvd. / Proposed Site Driveway (Int. #8) and SR 316 (University Parkway) (Int. #3)
    - Widen SR 8 between Alcovy Industrial Blvd. / Proposed Site Driveway and SR 316 from a 2-lane section to a 4-lane section, to serve the projected Sugarloaf Crossing DRI project traffic between its access point (site driveway) and SR 316.
    - At the southern end of this segment, the additional northbound through travel lane begins with the recommended westbound free-flow right-turn from the Proposed Site Driveway onto SR 8 (see details for Int. #8 below).

- SR 8 / US 29 (Winder Highway) at Alcovy Industrial Blvd. / Proposed Site Driveway (Int. #8)
    - Install a traffic signal (when warranted). It should be noted that for all requests for new traffic signals, an alternative solution that considers a roundabout is required to be investigated, per GDOT policy.
    - Construct an exclusive northbound left-turn lane along SR 8 to Alcovy Industrial Blvd.
    - Construct an exclusive northbound channelized, yield-controlled right-turn lane along SR 8 to the Proposed Site Driveway.
    - Construct exclusive dual southbound left-turn lanes along SR 8 to the Proposed Site Driveway, and convert the existing southbound shared left-turn/through lane to be a through-only lane.
    - Construct an exclusive eastbound left-turn lane along Alcovy Industrial Blvd to SR 8, and convert the existing approach lane to be a through-only lane (while preserving the channelized right-turn).
    - Construct the Proposed Site Driveway to have dual ingress lanes (to receive the recommended dual southbound left-turn lanes) and dual egress lanes.
    - Provide one exclusive left-turn lane, one through lane, and one channelized, continuous free-flow right-turn add lane along the Proposed Site Driveway westbound approach to SR 8. It is recommended that the right-turn lane be formed from the outside egress through travel lane exiting the site.

1.0 PROJECT DESCRIPTION

1.1 Introduction

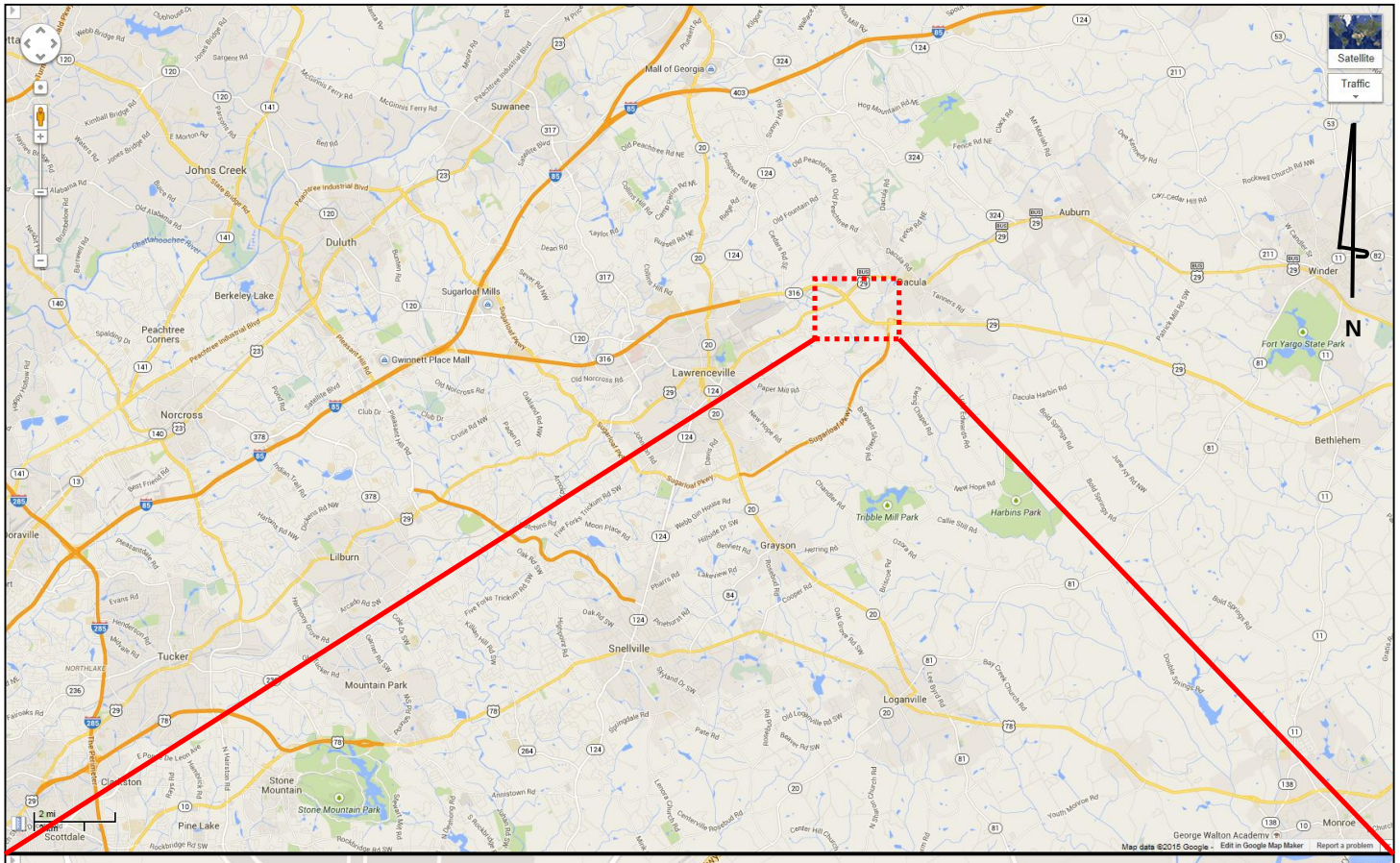
This report presents the analysis of the anticipated traffic impacts of the Sugarloaf Crossing DRI mixed-use development located in Gwinnett County, Georgia, between the cities of Lawrenceville and Dacula. The approximate 159.87-acre site is bordered by SR 316 (University Parkway) to the northeast and by SR 8 / US 29 (Winder Highway) to the northwest. The project will exceed 500,000 square feet of mixed-use development in a Developing Suburbs area type, therefore, the proposed development is a Development of Regional Impact (DRI) and is subject to Georgia Regional Transportation Authority (GRTA) and Atlanta Regional Commission (ARC) review.

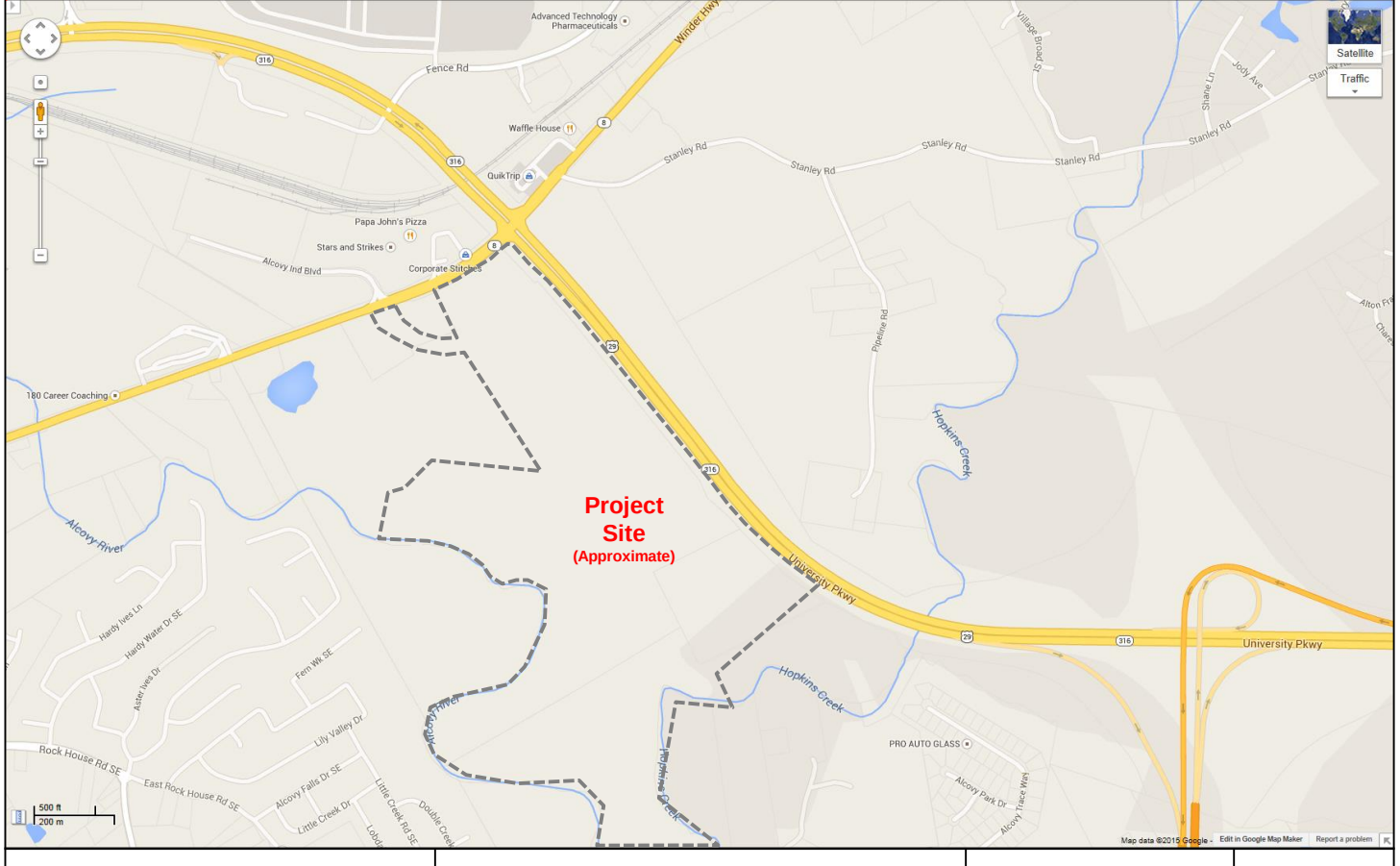
Figure 1 provides the site location of the Sugarloaf Crossing DRI project, and **Figure 2** provides an aerial view of the project site and surrounding area. **Figure 3** provides a zoomed-in aerial of the project site frontage along Winder Highway. Field review photographs taken within the vicinity of the study network are located in the site photo log in Appendix A. The Gwinnett County Existing Land Use Map, the Gwinnett County Future Development Map, and ARC's *PLAN 2040 Unified Growth Policy Map* are included in Appendix B.

The proposed project is expected to be completed by 2020, and this analysis will consider the full build-out of the proposed site in 2020. A summary of the proposed land-use and density can be found below in **Table 1**.

Table 1
Proposed Land Uses

General Office	1,100,000 SF
Retail	275,000 SF





Kimley»Horn	***Sugarloaf Crossing*** **DRI #2472** **Transportation Analysis**	**Site Location Map**	**Figure 1**

Kimley»Horn	*Sugarloaf Crossing* DRI #2472 Transportation Analysis	Site Aerial	Figure 2

Kimley»Horn	*Sugarloaf Crossing* DRI #2472 Transportation Analysis	Site Aerial (SR 8 Frontage)	Figure 3

1.2 Site Plan Review

The proposed development is approximately a 159.87-acre site in Gwinnett County. The project site is bordered by SR 316 (University Parkway) to the northeast, by SR 8 / US 29 (Winder Highway) to the northwest, and roughly by the Alcovy River and Hopkins Creek to the southwest and southeast. The project will include eleven office buildings, one retail building, plus some formal green spaces as functional areas for office users.

The property is currently an undeveloped land tract which is zoned to the Agriculture-Residence District (RA-200) and General Business District (C-2) classifications. The zoning classification is proposed to be changed to Regional Mixed-Use District (MU-R). ARC's *PLAN 2040 Unified Growth Policy Map* identifies the project site as being in a Developing Suburbs area.

In the northern corner of the project site, right-of-way will be reserved for future SR 316 eastbound entrance and exit ramps. These ramps will serve the envisioned interchange along SR 316 at SR 8 / US 29 (Winder Highway).

A reference of the proposed site plan can be found in Appendix C. A full-sized site plan consistent with GRTA's Site Plan Guidelines is also being submitted as part of the review package.

1.3 Site Access

As currently envisioned, the proposed development will be served by one (1) full-movement driveway along SR 8 / US 29 (Winder Highway). The proposed site driveway will be the fourth leg of the existing unsignalized intersection of Winder Highway at Alcovy Industrial Boulevard.

The proposed site driveway on Winder Highway provides vehicular access to the entire development. Internal private roadways throughout the site provide access to all buildings and parking facilities. See the referenced site plan in Appendix C for a visual representation of vehicular access and circulation throughout the proposed development.

The site driveway and internal roadways mentioned above provide access to all parking on the site. Parking will be provided throughout the development as follows:

Parking Provided:	3,850 spaces total (1,100 for retail + 2,750 for office)
Parking Required:	3,850 spaces total

1.4 Bicycle and Pedestrian Facilities

Pedestrian facilities (sidewalks) and bicycle facilities do not currently exist along the project site frontage. Sidewalks currently exist along the northwest side of SR 8 / US 29 (Winder Highway) in the vicinity of project site (along the existing shopping center development frontage). There are currently no sidewalks along SR 316. There are currently no bicycle facilities (bike lanes/paths) in the vicinity of the project site. According to the DRI site plan, pedestrian facilities (sidewalks) are proposed along most roadways internal to the DRI project site, and trails are proposed throughout the DRI project site.

1.5 Transit Facilities

There are no direct transit routes located within the vicinity of the project site, and therefore, there were no alternative mode reductions taken.

2.0 TRAFFIC ANALYSES, METHODOLOGY AND ASSUMPTIONS

2.1 Growth Rate

Background traffic is defined as expected traffic on the roadway network in future year(s) absent the construction and opening of the proposed project. Background traffic can include a base growth rate based on historical count data as well as population growth data and estimates as well as trips anticipated from nearby or adjacent other projects. Based on methodology outlined in the GRTA Letter of Understanding (LOU), a 1.5 percent per year background traffic growth rate was used for all roadways. This background growth rate was used to account for other development activity in the area.

2.2 Traffic Data Collection

Weekday peak hour turning movement counts were collected on Tuesday, March 10, 2015 at ten (10) intersections during the AM and PM peak periods. The morning and afternoon peak hours varied some between the intersections. Peak hours for all intersections are shown in **Table 2**.

Table 2
Peak Hour Summary

Intersection	AM Peak Hour	PM Peak Hour
1. SR 316 (University Pkwy) at Cedars Road	7:00-8:00	4:15-5:15
2. SR 316 (University Pkwy) at Hurricane Trail	6:45-7:45	4:15-5:15
3. SR 316 (University Pkwy) at SR 8 / US 29 (Winder Hwy)	6:45-7:45	4:45-5:45
4. SR 316 (University Pkwy) at Harbins Road	6:45-7:45	5:00-6:00
5. SR 8 / US 29 (Winder Hwy) at SR 124 (Scenic Hwy) / E Pike St	7:30-8:30	4:30-5:30
6. SR 8 / US 29 (Winder Hwy) at Sweet Gum Road	7:15-8:15	5:00-6:00
7. SR 8 / US 29 (Winder Hwy) at Cedars Road	6:45-7:45	5:00-6:00
8. SR 8 / US 29 (Winder Hwy) at Alcovy Industrial Blvd	7:30-8:30	4:45-5:45
9. SR 8 / Bus US 29 (Winder Hwy) at Circle Road	6:45-7:45	4:45-5:45
10. SR 8 / Bus US 29 (Winder Hwy) at Broad St / McMillan St	6:45-7:45	5:15-6:15

The collected peak hour turning movement traffic counts are available upon request.

2.3 Detailed Intersection Analysis

Level-of-service (LOS) is used to describe the operating characteristics of a road segment or intersection in relation to its capacity. LOS is defined as a qualitative measure that describes operational conditions and motorists' perceptions within a traffic stream. The *Highway Capacity Manual* defines six levels-of-service, LOS A through LOS F, with A being the best and F being the worst. Level-of-service analyses were conducted at all intersections within the study network using *Synchro Professional, Version 8.0*.

Existing traffic signal phasing and timing data (from current EPAC reports) was provided by Gwinnett County, and utilized in the *Synchro* model.

Levels-of-service for signalized intersections are reported for the intersection as a whole. One or more movements at an intersection may experience a low level-of-service, while the intersection as a whole may operate acceptably.

Levels-of-service for unsignalized intersections, with stop control on the minor street only, are reported for the side street approaches. Low levels-of-service for side street approaches are not uncommon, as vehicles may experience significant delays in turning onto a major roadway.

3.0 STUDY NETWORK

3.1 Gross Trip Generation

Traffic for the proposed land uses and densities were calculated using methodology contained in the *Institute of Transportation Engineers' (ITE) Trip Generation Manual, Ninth Edition*. Gross trips generated are displayed below in **Table 3**.

Table 3
Gross Trip Generation

Land Use (Intensity)	ITE Code	Daily Traffic		AM Peak Hour		PM Peak Hour	
		Enter	Exit	Enter	Exit	Enter	Exit
General Office (1,100,000 SF)	*710*	4,061	4,061	1,147	156	223	1,087
Retail (275,000 SF)	*820*	6,554	6,554	179	110	566	614
Total Gross Trips		**10,615**	**10,615**	**1,326**	**266**	**789**	**1,701**

3.2 Trip Distribution

The directional distribution and assignment of new project trips was based on the project land uses, a review of the land use densities and road facilities in the area, engineering judgment, and methodology discussions with the Georgia Regional Transportation Authority (GRTA), Atlanta Regional Commission (ARC), Georgia Department of Transportation (GDOT), and Gwinnett County.

3.3 Level-of-Service Standards

For the purposes of this traffic analysis, a level-of-service standard of D was assumed for all intersections and segments within the study network. If, however, an intersection or segment currently operates at LOS E or LOS F during an existing peak period, the LOS standard for that peak period becomes LOS E, consistent with the GRTA Letter of Understanding.

3.4 Study Network Determination

A general study area was determined using the GRTA 7% rule. This rule recommends that all intersections and segments be analyzed which are impacted to the extent that the traffic from the proposed site is 7% or more of the service volume of the facility (at a previously established LOS standard, typically LOS D) be considered for analysis. The study area was agreed upon during methodology discussions with GRTA, ARC, GDOT, and Gwinnett staff, and includes the following twelve (12) intersections in **Table 4**.

The study network includes eight (8) signalized intersections and two (2) two-way stop controlled intersections as noted in Table 4. The site location and study intersections can be found in **Figure 4**.

Table 4
Intersection Control Summary

Intersection	Control
1. SR 316 (University Pkwy) at Cedars Road	Signal
2. SR 316 (University Pkwy) at Hurricane Trail	Signal
3. SR 316 (University Pkwy) at SR 8 / US 29 (Winder Hwy)	Signal
4. SR 316 (University Pkwy) at Harbins Road	Signal
5. SR 8 / US 29 (Winder Hwy) at SR 124 (Scenic Hwy) / E Pike St	Signal
6. SR 8 / US 29 (Winder Hwy) at Sweet Gum Road	Signal
7. SR 8 / US 29 (Winder Hwy) at Cedars Road	Signal
8. SR 8 / US 29 (Winder Hwy) at Alcovy Industrial Blvd	TWSC
9. SR 8 / Bus US 29 (Winder Hwy) at Circle Road	TWSC
10. SR 8 / Bus US 29 (Winder Hwy) at Broad St / McMillan St	Signal

*Note: TWSC = Two-Way Stop Control

Each of the above listed intersections was analyzed for the Existing 2015 conditions, the projected 2020 No-Build conditions, and the projected 2020 Build conditions. The projected 2020 No-Build conditions represent the existing traffic volumes grown for five (5) years at 1.5 percent per year throughout the study network. The projected 2020 Build conditions add the project trips associated with the Sugarloaf Crossing development to the projected 2020 No-Build conditions.

LEGEND

- DRI Project Site
- Proposed Site Driveway
- Study Intersection (Signalized)
- Study Intersection (Unsignalized)

Project Site (Approximate)

N

2000 ft
500 m

Map data ©2015 Google - Edit in Google Map Maker | Report a problem

Figure 4

Study Network Intersections

Sugarloaf Crossing
DRI #2472
Transportation Analysis

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3.5 Existing Roadway Facilities

Roadway classification descriptions for the entire study area are provided in **Table 5** (bolded roadways run adjacent to the site).

Table 5
Roadway Classification

Roadway	No. of Lanes	Posted Speed Limit (MPH)	Functional Classification
SR 8 / US 29 (Winder Hwy)	**2-4**	**35-45**	**Minor Arterial**
SR 316 (University Pkwy)	**4**	**55-65**	**Principal Arterial**
Alcovy Industrial Blvd	2	35	Local Road
Cedars Road	2-4	40	Local Road
Sweet Gum Road	2	45	Major Collector
SR 124 (Scenic Hwy)	4	35	Principal Arterial
Hurricane Trail	3	35	Local Road
Circle Road	2	25	Local Road
Broad Street / McMillan Road	2	25	Local Road
Harbins Road	2	45-50	Minor Arterial

4.0 TRIP GENERATION

As stated previously, gross trips associated with the proposed development were estimated using the *Institute of Transportation Engineers' (ITE) Trip Generation Manual, Ninth Edition, 2012*, using equations where available. Trip generation for this proposed development is calculated based upon the following land uses: General Office Building (ITE 710) and Shopping Center / Retail (ITE 820).

Mixed-use vehicle trip reductions were taken according to the *ITE Trip Generation Handbook, Third Edition, 2014*. Total internal capture and vehicle trip reduction between the land uses is expected to be 15.9% for the weekday, 9.5% for the AM peak hour, and 4.6% for the PM peak hour as a result of the anticipated interaction between the office and retail uses within the proposed development.

Alternative transportation mode (walking, bicycle, and transit) reductions were not applied for this study.

Pass-by reductions were determined according to the *ITE Trip Generation Handbook, Third edition, 2014*. Per ITE guidance, the pass-by trip reduction rate for the proposed retail land use is 34% for the PM peak hour. However, per GRTA's DRI Technical Guidelines, the total pass-by trips associated with the development may be limited to 15% of the adjacent roadway's traffic volume. Based on traffic count data collected in March 2015, 15% of the adjacent roadway's traffic volume is the limiting factor for pass-by trip reduction (results in a pass-by trip reduction rate of 13.6% for the PM peak hour). It should be noted that pass-by trips are not new trips to the roadway network, rather, they are vehicles already travelling along the existing roadway network that stop to visit the retail land uses. No pass-by reductions were taken for the AM peak hour as pass-by trips are minimal in the morning for retail land uses.

The total (net) trips generated and analyzed in this report are listed in **Table 6**.

Table 6
Net Trip Generation

	Daily Traffic		AM Peak Hour		PM Peak Hour	
	Enter	**Exit**	**Enter**	**Exit**	**Enter**	**Exit**
Gross Project Trips	**10,615**	**10,615**	**1,326**	**266**	**789**	**1,701**
Mixed-Use Reduction	*-1,686*	*-1,686*	*-76*	*-76*	*-57*	*-57*
Alternative More Reduction	*-0*	*-0*	*-0*	*-0*	*-0*	*-0*
Pass-By Reduction (Limited by GRTA 15% Rule)	*-836*	*-836*	*-0*	*-0*	*-77*	*-77*
Net New Trips	**8,093**	**8,093**	**1,250**	**190**	**655**	**1,567**

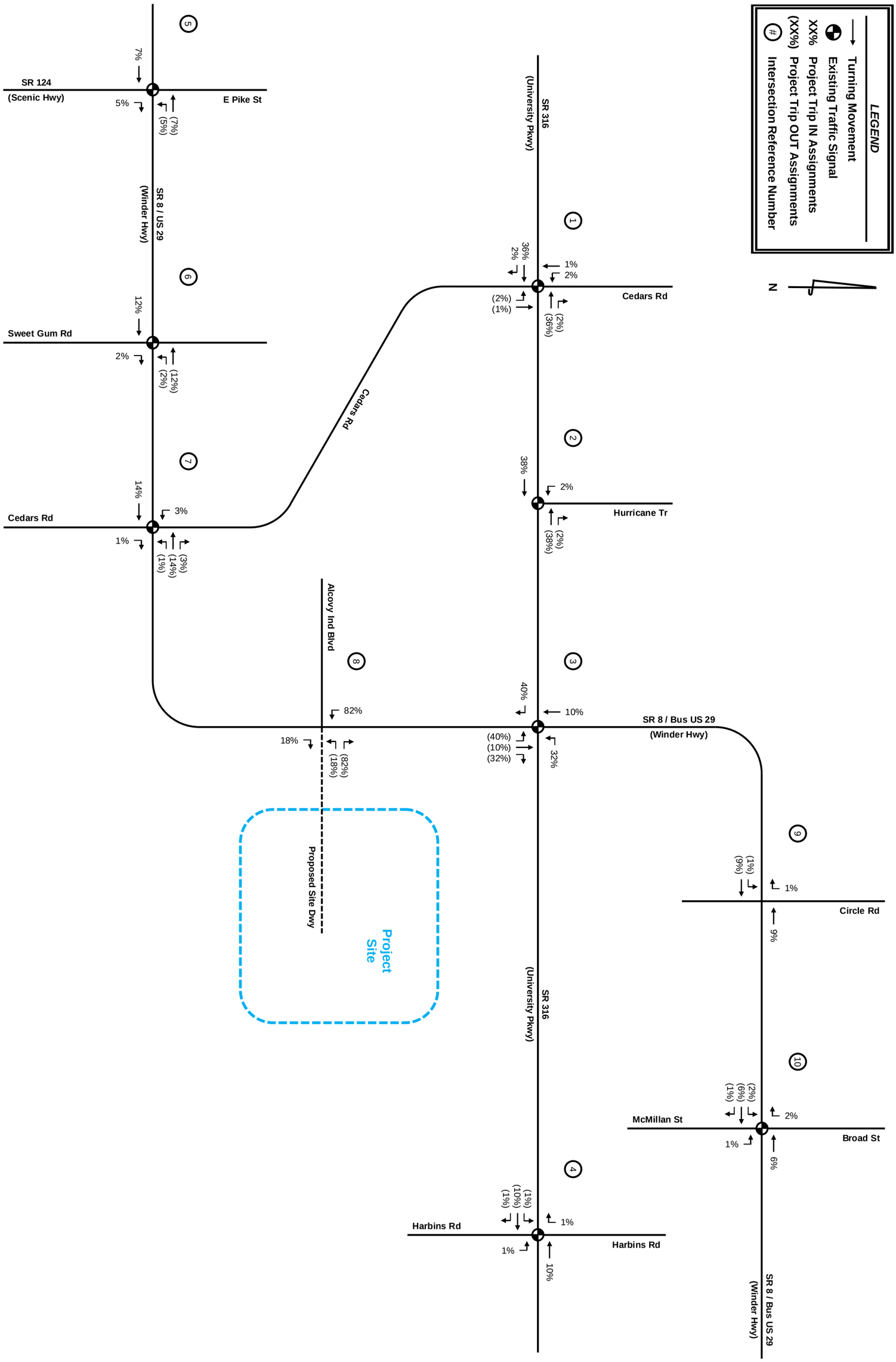
A more detailed trip generation analysis summary table is provided in Appendix D.

5.0 TRIP DISTRIBUTION AND ASSIGNMENT

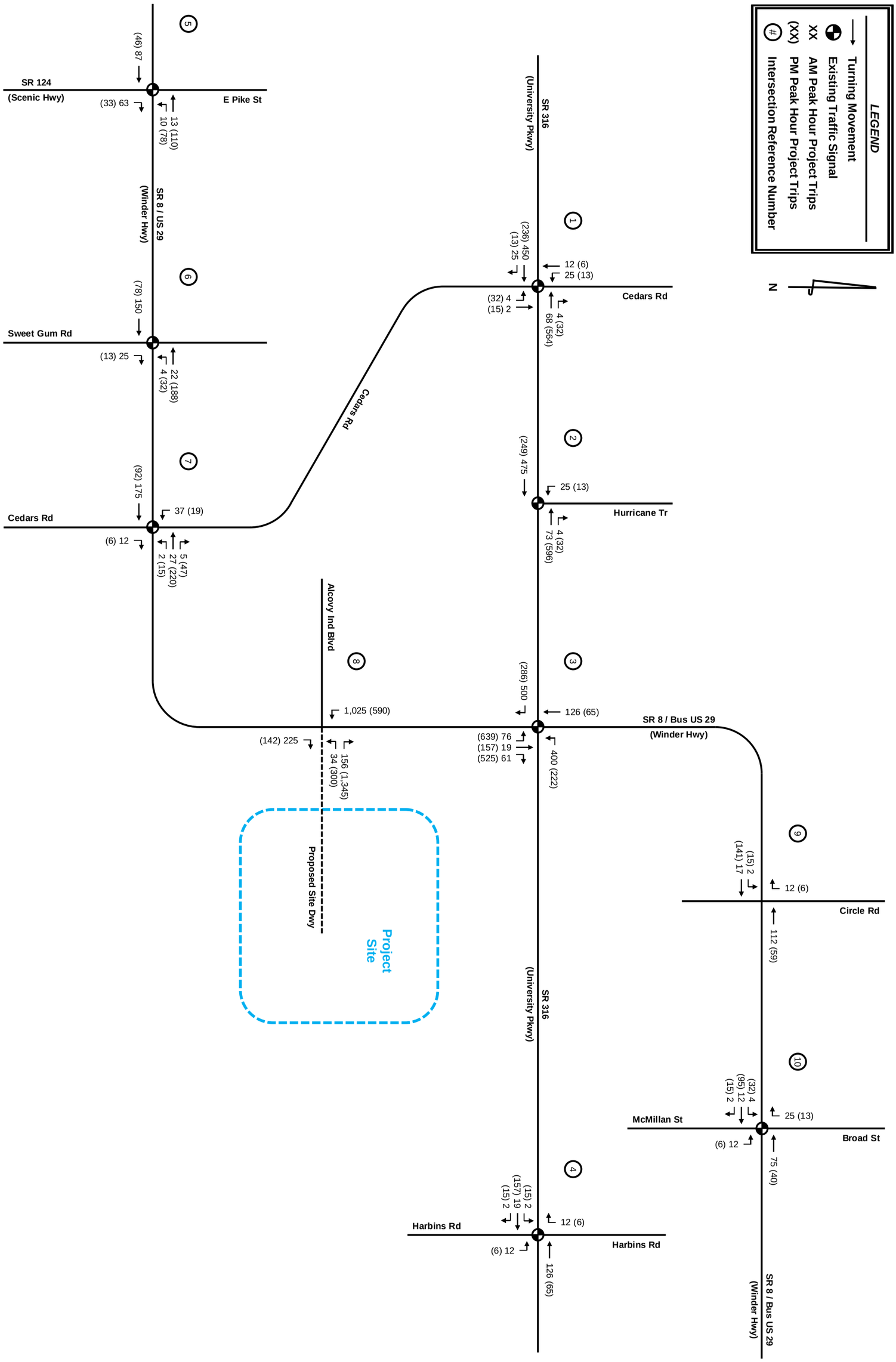
New trips were distributed onto the roadway network using the percentages developed as described in *Section 3.2* of this report, and as agreed to during methodology discussions with GRTA, ARC, GDOT, and Gwinnett County staff.

Figure 5 displays the anticipated distribution and assignment of project trips throughout the study roadway network. These trip assignment percentages were applied to the net new trips expected to be generated by the development, and the volumes were assigned to the roadway network. The combined peak hour project trips by turning movement throughout the study network, anticipated to be generated by the proposed Sugarloaf Crossing development, are shown on **Figure 6**.

Detailed intersection volume worksheets can also be found in Appendix E.



Kimley»Horn	*Sugarloaf Crossing* DRI #2472 Transportation Analysis	Project Trip Distribution & Assignment	Figure 5



Kimley»Horn	***Sugarloaf Crossing*** **DRI #2472** **Transportation Analysis**	**Project Trips**	**Figure 6**

6.0 TRAFFIC ANALYSIS

6.1 Existing 2015 Conditions

The observed existing peak hour traffic volumes were entered into *Synchro 8.0,* and capacity analyses were performed for the AM and PM peak hours. The existing peak hour traffic volumes are displayed in **Figure 7**, and the results of the capacity analyses for the Existing 2015 conditions are shown in **Table 7**. Detailed *Synchro* analysis reports are available upon request.

Table 7
Existing 2015 Intersection Levels-of-Service
LOS (delay in seconds)

Intersection	Control	LOS Std.	AM Peak Hour	PM Peak Hour
1. SR 316 (University Pkwy) at Cedars Road	Signal	AM – D PM – E	D (37.5)	E (61.8)
2. SR 316 (University Pkwy) at Hurricane Trail	Signal	D	B (17.1)	B (11.6)
3. SR 316 (University Pkwy) at SR 8 / US 29 (Winder Hwy)	Signal	D	D (43.1)	D (48.7)
4. SR 316 (University Pkwy) at Harbins Road	Signal	AM – E PM – D	E (65.6)	D (47.0)
5. SR 8 / US 29 (Winder Hwy) at SR 124 (Scenic Hwy) / E Pike St	Signal	D	C (27.2)	D (38.9)
6. SR 8 / US 29 (Winder Hwy) at Sweet Gum Road	Signal	D	D (35.4)	B (14.7)
7. SR 8 / US 29 (Winder Hwy) at Cedars Road	Signal	D	C (25.2)	B (18.8)
8. SR 8 / US 29 (Winder Hwy) at Alcovy Industrial Blvd /	EB Stop NBL Yield	D	C (15.5) A (0.2)	C (19.6) A (0.0)
9. SR 8 / Bus US 29 (Winder Hwy) at Circle Road*	SB Stop EBL Yield	D	C (16.0) A (9.4)	C (15.0) A (8.1)
10. SR 8 / Bus US 29 (Winder Hwy) at Broad St / McMillan St	Signal	D	C (24.7)	C (21.9)

**Note: the southern leg of Circle Road at Winder Highway (Intersection #9) is gated closed, and no vehicles were observed on this leg, thus, LOS for the northbound approach is not reported.*

As shown in Table 7, all study intersections currently operate at or above their acceptable level-of-service standard during the AM and PM peak hours for the Existing 2015 conditions. Therefore, there are no recommended improvements for the Existing 2015 conditions scenario.

LEGEND

- Existing Roadway Laneage
- Existing Traffic Signal
- STOP — Existing STOP Control
- XX — AM Peak Hour Traffic Volumes
- (XX) — PM Peak Hour Traffic Volumes
- (X) — Intersection Reference Number

N

SR 316 (University Pkwy)

SR 8 / Bus US 29 (Winder Hwy)

SR 124 (Scenic Hwy)

Cedars Rd

Hurricane Tr

Circle Rd

Broad St

McMillan St

Harbins Rd

E Pike St

Sweet Gum Rd

Alcovy Ind Blvd

1: 281 (208) / 128 (216) / 37 (116); FREE: 201 (51) / 1,966 (1,277) / 7 (6); (190) 95 / (2,110) 950 / (112) 42; (53) 90 / (159) 164 / (10) 9

2: 113 (94) / 97 (195); FREE: 150 (84) / 2,155 (1,109) / 0 (0); (170) 93 / (2,087) 856

3: 422 (206) / 370 (191) / 77 (79); YIELD: 123 (109) / 1,577 (899) / 135 (72); (306) 141 / (1,611) 744 / (50) 57; (127) 26 / (402) 131 / (228) 66

4: 171 (101) / 189 (370) / 71 (81); YIELD: 38 (95) / 1,453 (859) / 44 (33); (170) 90 / (1,576) 787 / (446) 113; (166) 417 / (370) 303 / (76) 31

5: 1 (15) / 2 (34) / 1 (14); YIELD: 7 (14) / 1,246 (541) / 370 (407); (26) 7 / (1,383) 364 / (73) 24; (115) 76 / (44) 4 / (475) 320

6: 1 (26) / 0 (8) / 0 (20); YIELD: 23 (0) / 641 (287) / 52 (154); (2) 21 / (768) 250 / (450) 81; (127) 396 / (1) 13 / (105) 123

7: 117 (161) / 39 (178) / 6 (29); YIELD: 9 (10) / 501 (228) / 12 (48); (135) 108 / (672) 181 / (52) 13; (28) 56 / (62) 162 / (49) 32

8: 13 (6) / 482 (275); STOP: (12) 3 / (4) 2; (0) 4 / (743) 269

9: 76 (75) / 0 (0) / 6 (39); STOP: 11 (18) / 644 (298) / 0 (0); (81) 41 / (634) 201 / (0) 0; (0) 0 / (0) 0 / (0) 0

10: 98 (60) / 59 (231) / 8 (26); 15 (16) / 512 (200) / 4 (10); (116) 77 / (489) 113 / (47) 3; (15) 20 / (107) 149 / (15) 4

Figure 7

Existing 2015 Conditions

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DRI #2472
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6.2 Projected 2020 No-Build Conditions

To account for growth in the vicinity of the proposed development, the existing traffic volumes were increased for five (5) years at 1.5 percent per year throughout the study network. These volumes were entered into *Synchro 8.0*, and capacity analyses were performed. The projected 2020 No-Build conditions were analyzed using existing roadway geometry and existing intersection control types.

The intersection laneage and traffic volumes for the projected 2020 No-Build conditions are shown in **Figure 8**. The results of the capacity analyses for the projected 2020 No-Build conditions with existing laneage and control types are shown in **Table 8**. Detailed *Synchro* analysis reports are available upon request.

Table 8
Projected 2020 No-Build Intersection Levels-of-Service
LOS (delay in seconds)

Intersection	Control	LOS Std.	AM Peak Hour	PM Peak Hour
1. SR 316 (University Pkwy) at Cedars Road	Signal	AM – D PM – E	E (56.6)	F (91.8)
2. SR 316 (University Pkwy) at Hurricane Trail	Signal	D	C (20.5)	B (12.5)
3. SR 316 (University Pkwy) at SR 8 / US 29 (Winder Hwy)	Signal	D	D (46.8)	E (56.7)
4. SR 316 (University Pkwy) at Harbins Road	Signal	AM – E PM – D	F (81.5)	E (62.1)
5. SR 8 / US 29 (Winder Hwy) at SR 124 (Scenic Hwy) / E Pike St	Signal	D	C (27.9)	D (42.0)
6. SR 8 / US 29 (Winder Hwy) at Sweet Gum Road	Signal	D	D (42.4)	B (16.8)
7. SR 8 / US 29 (Winder Hwy) at Cedars Road	Signal	D	C (25.9)	B (19.3)
8. SR 8 / US 29 (Winder Hwy) at Alcovy Industrial Blvd /	EB Stop NBL Yield	D	C (16.6) A (0.2)	C (22.1) A (0.0)
9. SR 8 / Bus US 29 (Winder Hwy) at Circle Road*	SB Stop EBL Yield	D	C (17.4) A (9.6)	C (16.3) A (8.2)
10. SR 8 / Bus US 29 (Winder Hwy) at Broad St / McMillan St	Signal	D	C (26.2)	C (23.1)

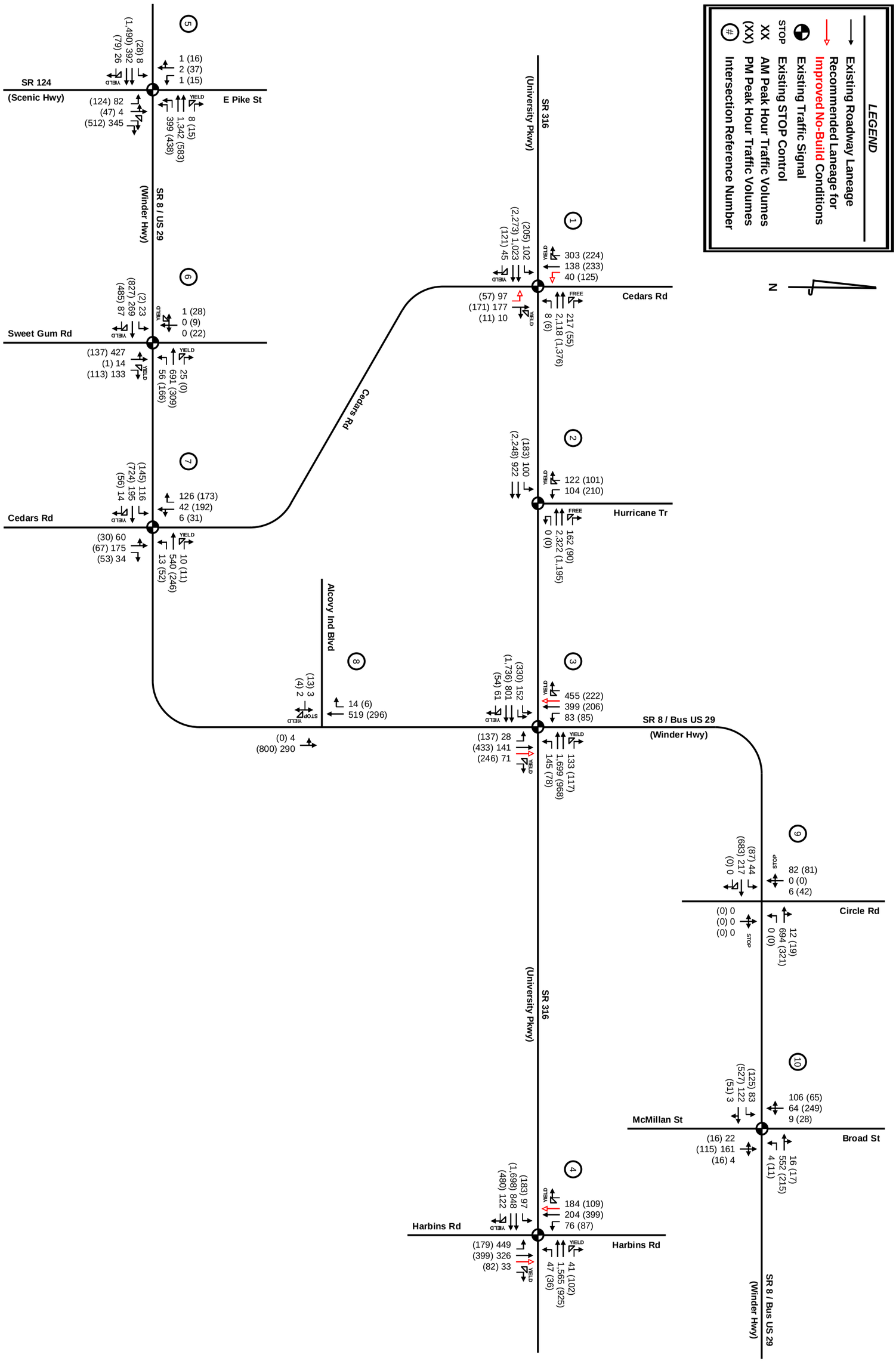
As shown in Table 8, three (3) intersections are projected to operate below their acceptable level-of-service standard during the AM Peak Hour and/or PM Peak Hour. Based on the projected 2020 No-Build conditions, the following improvements result in the below-listed intersections operating at or above their LOS standard:

- SR 316 (University Parkway) at Cedars Road (Int. #1)
  - Construct an exclusive left-turn lane along the Cedars Road northbound approach.
  - Construct an exclusive left-turn lane along the Cedars Road southbound approach.
- SR 316 (University Parkway) at SR 8 / US 29 (Winder Highway) (Int. #3)
  - Construct a second through lane along the Winder Highway northbound approach.
  - Construct a second through lane along the Winder Highway southbound approach.
- SR 316 (University Parkway) at Harbins Road (Int. #4)
  - Construct a second through lane along the Harbins Road northbound approach.
  - Construct a second through lane along the Harbins Road southbound approach.

The recommended roadway improvements are also illustrated on **Figure 8**. The results of the capacity analyses for the projected 2020 No-Build conditions with the roadway improvements stated above are shown in **Table 9**.

Table 9
Projected 2020 No-Build Intersection Levels-of-Service – IMPROVED
LOS (delay in seconds)

Intersection	Control	LOS Std.	AM Peak Hour	PM Peak Hour
1. SR 316 (University Pkwy) at Cedars Road	Signal	AM – D PM – E	C (31.4)	D (36.0)
3. SR 316 (University Pkwy) at SR 8 / US 29 (Winder Hwy)	Signal	D	D (49.0)	D (43.4)
4. SR 316 (University Pkwy) at Harbins Road	Signal	AM – E PM – D	E (64.3)	D (40.8)



Kimley»Horn	*Sugarloaf Crossing* DRI #2472 Transportation Analysis	Projected 2020 No-Build Conditions	Figure 8

6.3 Projected 2020 Build Conditions

The traffic associated with the proposed Sugarloaf Crossing DRI development was added to the projected 2020 No-Build volumes. These volumes were then entered into *Synchro 8.0*, and capacity analyses were performed. The projected 2020 Build conditions were analyzed using existing roadway geometry and existing intersection control types.

The intersection laneage and traffic volumes used for the projected 2020 Build conditions are shown in **Figure 9**.The results of the capacity analyses for the projected 2020 Build conditions with existing laneage and control types are shown in **Table 10**. Detailed *Synchro* analysis reports are available upon request.

Table 10
Projected 2020 Build Intersection Levels-of-Service
LOS (delay in seconds)

Intersection	Control	LOS Std.	AM Peak Hour	PM Peak Hour
1. SR 316 (University Pkwy) at Cedars Road	Signal	AM – D PM – E	E (79.7)	F (189.9)
2. SR 316 (University Pkwy) at Hurricane Trail	Signal	D	C (21.4)	B (19.5)
3. SR 316 (University Pkwy) at SR 8 / US 29 (Winder Hwy)	Signal	D	F (130.8)	F (226.9)
4. SR 316 (University Pkwy) at Harbins Road	Signal	AM – E PM – D	F (91.3)	E (73.4)
5. SR 8 / US 29 (Winder Hwy) at SR 124 (Scenic Hwy) / E Pike St	Signal	D	C (28.1)	D (45.0)
6. SR 8 / US 29 (Winder Hwy) at Sweet Gum Road	Signal	D	D (42.9)	B (19.9)
7. SR 8 / US 29 (Winder Hwy) at Cedars Road	Signal	D	C (24.5)	C (21.1)
8. SR 8 / US 29 (Winder Hwy) at Alcovy Industrial Blvd / Proposed Site Driveway	EB Stop WB Stop NBL Yield SBL Yield	D	F (Error) F (Error) A (0.1) F (93.0)	F (Error) F (Error) A (0.0) E (46.4)
9. SR 8 / Bus US 29 (Winder Hwy) at Circle Road*	SB Stop EBL Yield	D	C (21.6) B (10.2)	C (19.8) A (8.5)
10. SR 8 / Bus US 29 (Winder Hwy) at Broad St / McMillan St	Signal	D	C (31.2)	C (25.0)

* Error = excessive delays (outside *Synchro* limitations) due to stop control on minor street only with heavy major street volume.

As shown in Table 10, four (4) intersections are projected to operate below their acceptable level-of-service standard during the AM Peak Hour and/or PM Peak Hour. Following implementation of the improvements recommended in the projected 2020 No-Build conditions analysis, two (2) intersections are still projected to operate below their acceptable level-of-service standard during the AM Peak Hour and/or PM Peak Hour.

Based on the projected 2020 Build conditions, the following improvements result in the below-listed intersections operating at or above their LOS standard (please note that the following improvements are IN ADDITION TO the improvements needed under projected 2020 No-Build conditions (recommendations noted in *Section 6.2*):

- SR 316 (University Parkway) at SR 8 / US 29 (Winder Highway) (Int. #3)
  - Construct an interchange to eliminate at-grade crossings and related delays.
  - Provide four through lanes along SR 8 at the new interchange (four-lane bridge across SR 316).
  - Provide dual left-turn lanes and a single channelized right-turn lane along each of the SR 316 off-ramp approaches to SR 8.
  - Provide a single southbound left-turn lane and a single northbound channelized right-turn lane along the SR 8 approaches to each of the SR 316 on-ramps.

  Or, alternatively (not recommended):

  - Construct a third through lane along the SR 316 eastbound approach.
  - Construct a third through lane along the SR 316 westbound approach.
  - Construct one additional northbound left-turn lane along SR 8 to SR 316, resulting in dual left-turn lanes.
  - Construct one additional westbound left-turn lane along SR 316 to SR 8, resulting in dual left-turn lanes.
  - Convert the existing northbound channelized right-turn along SR 8 from yield-control to continuous free-flow. Construct an eastbound receiving lane along SR 316, departing from SR 8, to accommodate this free-flow right-turn implementation.
  - Convert the existing southbound channelized right-turn along SR 8 from yield-control to continuous free-flow. Construct a westbound receiving lane along SR 316, departing from SR 8, to accommodate this free-flow right-turn implementation.

  An interchange is recommended due to the significant roadway geometry (intersection laneage) improvements otherwise required at this intersection. An interchange (grade separation) was once identified as a TIA project, and has been suggested in the City of Dacula's Comprehensive Plan Update (2014).

- Roadway segment of SR 8 / US 29 (Winder Highway) between Alcovy Industrial Blvd. / Proposed Site Driveway (Int. #8) and SR 316 (University Parkway) (Int. #3)
  - Widen SR 8 between Alcovy Industrial Blvd. / Proposed Site Driveway and SR 316 from a 2-lane section to a 4-lane section, to serve the projected Sugarloaf Crossing DRI project traffic between its access point (site driveway) and SR 316.
  - At the southern end of this segment, the additional northbound through travel lane begins with the recommended westbound free-flow right-turn from the Proposed Site Driveway onto SR 8 (see details for Int. #8 below).

- SR 8 / US 29 (Winder Highway) at Alcovy Industrial Blvd. / Proposed Site Driveway (Int. #8)
  - Install a traffic signal (when warranted). It should be noted that for all requests for new traffic signals, an alternative solution that considers a roundabout is required to be investigated, per GDOT policy.
  - Construct an exclusive northbound left-turn lane along SR 8 to Alcovy Industrial Blvd.
  - Construct an exclusive northbound channelized, yield-controlled right-turn lane along SR 8 to the Proposed Site Driveway.
  - Construct exclusive dual southbound left-turn lanes along SR 8 to the Proposed Site Driveway, and convert the existing southbound shared left-turn/through lane to be a through-only lane.
  - Construct an exclusive eastbound left-turn lane along Alcovy Industrial Blvd to SR 8, and convert the existing approach lane to be a through-only lane (while preserving the channelized right-turn).
  - Construct the Proposed Site Driveway to have dual ingress lanes (to receive the recommended dual southbound left-turn lanes) and dual egress lanes.
  - Provide one exclusive left-turn lane, one through lane, and one channelized, continuous free-flow right-turn add lane along the Proposed Site Driveway westbound approach to SR 8. It is recommended that the right-turn lane be formed from the outside egress through travel lane exiting the site.

The recommended roadway improvements are also illustrated on **Figure 9**. The results of the capacity analyses for the project 2020 Build conditions with both the 2020 No-Build recommended improvements (Section 6.2) and the 2020 Build recommended improvements stated above are shown in **Table 11**.

Table 11
Projected 2020 Build Intersection Levels-of-Service – IMPROVED
LOS (delay in seconds)

Intersection	Control	LOS Std.	AM Peak Hour	PM Peak Hour
1. SR 316 (University Pkwy) at Cedars Road	Signal	AM – D PM – E	D (36.0)	E (71.8)
3. SR 316 (University Pkwy) EB Ramps at SR 8 / US 29 (Winder Hwy)*	Signal	D	C (33.6)*	C (31.4)*
3. SR 316 (University Pkwy) WB Ramps at SR 8 / US 29 (Winder Hwy)*	Signal	D	C (34.1)*	B (19.7)*
3. SR 316 (University Pkwy) at SR 8 / US 29 (Winder Hwy)**	Signal	D	D (48.8)**	D (49.7)**
4. SR 316 (University Pkwy) at Harbins Road	Signal	AM – E PM – D	E (75.2)	D (43.5)
8. SR 8 / US 29 (Winder Hwy) at Alcovy Industrial Blvd / Proposed Site Driveway	Signal	D	C (26.4)	D (46.3)

* Recommended solution: interchange with signalized ramp intersections
** Alternative solution: significant intersection laneage improvements

LEGEND

- Existing Roadway Laneage
- Recommended Laneage for Improved No-Build Conditions
- Recommended Laneage for Improved Build Conditions
- Existing Traffic Signal
- Recommended Traffic Signal for Improved Build Conditions
- STOP — Existing STOP Control
- XX — AM Peak Hour Traffic Volumes
- (XX) — PM Peak Hour Traffic Volumes
- # — Intersection Reference Number

N

SR 316 (University Pkwy)

SR 8 / Bus US 29 (Winder Hwy)

Cedars Rd

Hurricane Tr

Circle Rd

Broad St

McMillan St

Harbins Rd

Alcovy Ind Blvd

Proposed Site Driveway

Alternative Solution

Alternative Solution

SR 124 (Scenic Hwy)

E Pike St

Sweet Gum Rd

Recommended Solution

Existing Shopping Center Driveway*

SR 316 WB Ramps

SR 316 EB Ramps

* Note: Existing Shopping Center Driveway volumes based on traffic counts performed in Sept. 2013.

Recommended Solution

Figure 9

Projected 2020 Build Conditions

Sugarloaf Crossing
DRI #2472
Transportation Analysis

Kimley»Horn

7.0 INGRESS/EGRESS ANALYSIS

Vehicular access to the Sugarloaf Crossing DRI development is proposed at one (1) location. The one site driveway is proposed to tie into the existing T-intersection of SR 8 / US 29 (Winder Hwy) at Alcovy Industrial Blvd (Intersection #8) as the fourth, eastern leg to the intersection.

The proposed site driveway provides vehicular access to the entire development. Internal private roadways throughout the site provide access to all buildings and parking facilities.

Capacity analyses were performed for the Proposed Site Driveway intersection (Int. #8) using *Synchro 8.0*. The results of the capacity analyses for this intersection (LOS, delay, and recommended laneage) are reported in *Section 6.3* of this report. Based on the projected 2020 Build conditions, the Proposed Site Driveway intersection is anticipated to operate at an acceptable level-of-service, assuming implementation of the recommended laneage, signalization, and roadway improvements.

8.0 IDENTIFICATION OF PROGRAMMED PROJECTS

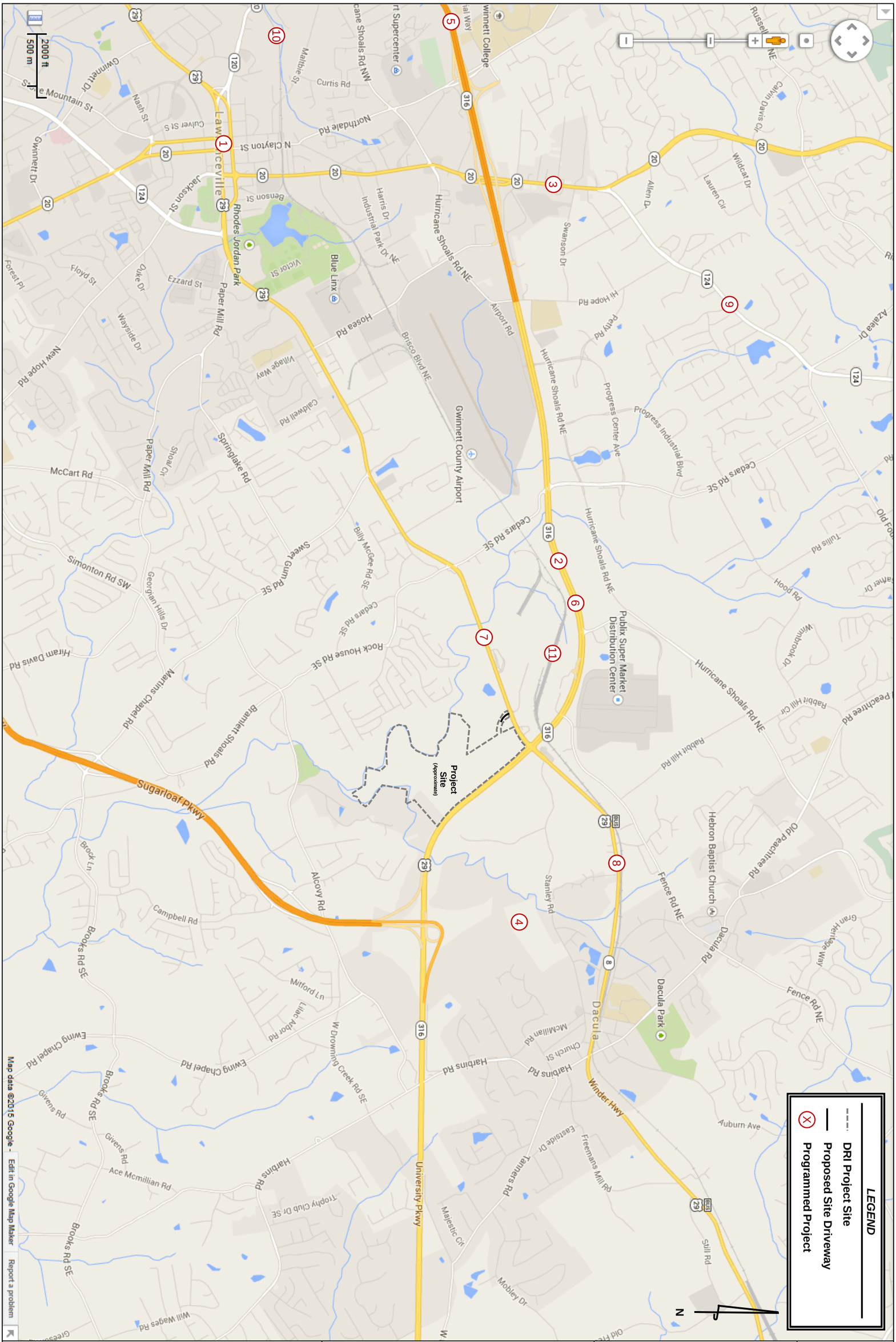
According to ARC's Transportation Improvement Program, the Regional Transportation Improvement Program, GDOT's Construction Work Program (none at this time), Gwinnett County's programmed projects, and the STIP, the following projects are programmed or planned to be completed by the respective years within the vicinity of the proposed development. The identified projects are listed in **Table 12** below.

Table 12
Programmed Improvements

#	Year	Project ID	Project Description
1	2020	GW-342	Downtown Lawrenceville Pedestrian Improvements and One-Way Pair Conversion (Last Mile Connectivity / Complete Street Retrofit) – includes conversion of SR 20 (Clayton Street) and SR 20 (Perry Street) to two-way operation.
2	2020	GW-390D	Gwinnett County ATMS/ITS Infrastructure Expansion along SR 316 from SR 20 Interchange to the Barrow County Line (Apalachee River) – includes interconnecting traffic signals.
3	2030	GW-364	SR 20 (Buford Drive) Widening from SR 124 (Braselton Highway) to Hurricane Shoals Road (4 lanes to 6 lanes); 1.2 miles.
4	2040	GW-308B	Sugarloaf Parkway Extension: Phase 2 – New four-lane alignment from SR 316 east of Lawrenceville to SR 20 (Buford Drive / Mall of Georgia Parkway) near intersection with SR 324 (Gravel Springs Road); 8.5 miles.
5	2040+	ASP-AR-ML-440	SR 316 Managed Lanes from I-85 to High Hope Road; 8.1 miles.
6	2040+	ASP-AR-ML-450	SR 316 Managed Lanes from High Hope Road to SR 81; 13.3 miles.
7	2040+	ASP-GW-369	US 29 (Winder Highway) Widening from SR 124 (Scenic Highway) to SR 316 (2 lanes to 4 lanes); 3.6 miles.
8	2040+	ASP-GW-370	US 29 (Winder Highway) Widening from SR 316 to Apalachee Church Road (2 lanes to 4 lanes); 5.1 miles.
9	2040+	ASP-GW-361	SR 124 (Braselton Highway) Widening from SR 20 (Buford Drive) to Hamilton Mill Road (2 lanes to 4 lanes); 7.6 miles.
10	2040+	ASP-AR-441	Innovation Crescent Commuter Rail Service from Downtown Atlanta Multimodal Center to Lawrenceville.
11	2040+	ASP-AR-442	Innovation Crescent Commuter Rail Service Extension from Lawrenceville to Athens.

Please refer to **Figure 10** for an overview map of the above programmed improvement projects' locations within the vicinity of the proposed development. Fact sheets for projects 1-4 can be found in **Appendix F**.

Additionally, an interchange (grade separation) at the intersection of SR 316 (University Parkway) at SR 8 / US 29 (Winder Highway) (Int. #3) was once identified as a TIA project, and has been suggested in the City of Dacula's Comprehensive Plan Update (2014).



Kimley»Horn	***Sugarloaf Crossing*** **DRI #2472** **Transportation Analysis**	**Programmed Projects**	**Figure 10**

9.0 INTERNAL CIRCULATION ANALYSIS

Internal roadways throughout the site provide vehicular access to all buildings and parking on the site. The proposed site driveway on Winder Highway will provide access to buildings on the northern portion of the site, and will terminate at a proposed roundabout, which connects additional internal roadways to provide access to the other buildings and parking areas. A detailed copy of the proposed site plan with internal site roadways can be found in Appendix C and a full-sized site plan is attached to the report.

Mixed-use vehicle trip reductions were taken according to the *ITE Trip Generation Handbook, Third Edition, 2014*. Total internal capture and vehicle trip reduction between the proposed land uses is expected to be 15.9% for the weekday, 9.5% for the AM peak hour, and 4.6% for the PM peak hour as a result of the anticipated interaction between the various land uses within the proposed development.

10.0 COMPLIANCE WITH COMPREHENSIVE PLAN ANALYSIS

The property is currently an undeveloped land tract which is zoned to the Agriculture-Residence District (RA-200) and General Business District (C-2) classifications, according to the Sugarloaf Crossing site plan. The proposed development will require a rezoning with Gwinnett County and is proposed to be changed to Regional Mixed-Use District (MU-R).

The Gwinnett County 2030 Unified Plan Future Development Map identifies the project site as being located in an R & D Corridor character area type. The ARC PLAN 2040 Unified Growth Policy Map identifies the project site as being located in a Developing Suburbs area type and a Regionally Important Resources place type. The Sugarloaf Crossing development plan appears to be consistent with the area type and future land use identified. The land use maps can be found in Appendix B.

Appendix A
Site Photo Log

Kimley»Horn

Gwinnett County, Georgia
Photograph Sheet

KHA Job No.: 019399003
Date: April 2015
Page: 1 of 3

Sugarloaf Crossing DRI #2472

Photo No. 1

Comments: SR 8 (Winder Highway) northbound approach to approximate location of future SR 316 (University Parkway) interchange ramp (if an interchange were to be constructed). Photo looking to the southwest.

Photo No. 2

Comments: SR 8 (Winder Highway) southbound approach to approximate location of future SR 316 (University Parkway) interchange ramp (if an interchange were to be constructed). Photo looking to the northeast.

Sugarloaf Crossing DRI #2472

Photo No. 3

Comments: SR 8 (Winder Highway) northbound approach to approximate location of proposed site driveway. Photo looking to the southwest.

Photo No. 4

Comments: SR 8 (Winder Highway) southbound approach to approximate location of proposed site driveway. Photo looking to the northeast.

Kimley»Horn

Gwinnett County, Georgia
Photograph Sheet

KHA Job No.: 019399003
Date: April 2015
Page: 3 of 3

Sugarloaf Crossing DRI #2472

Photo No. 5

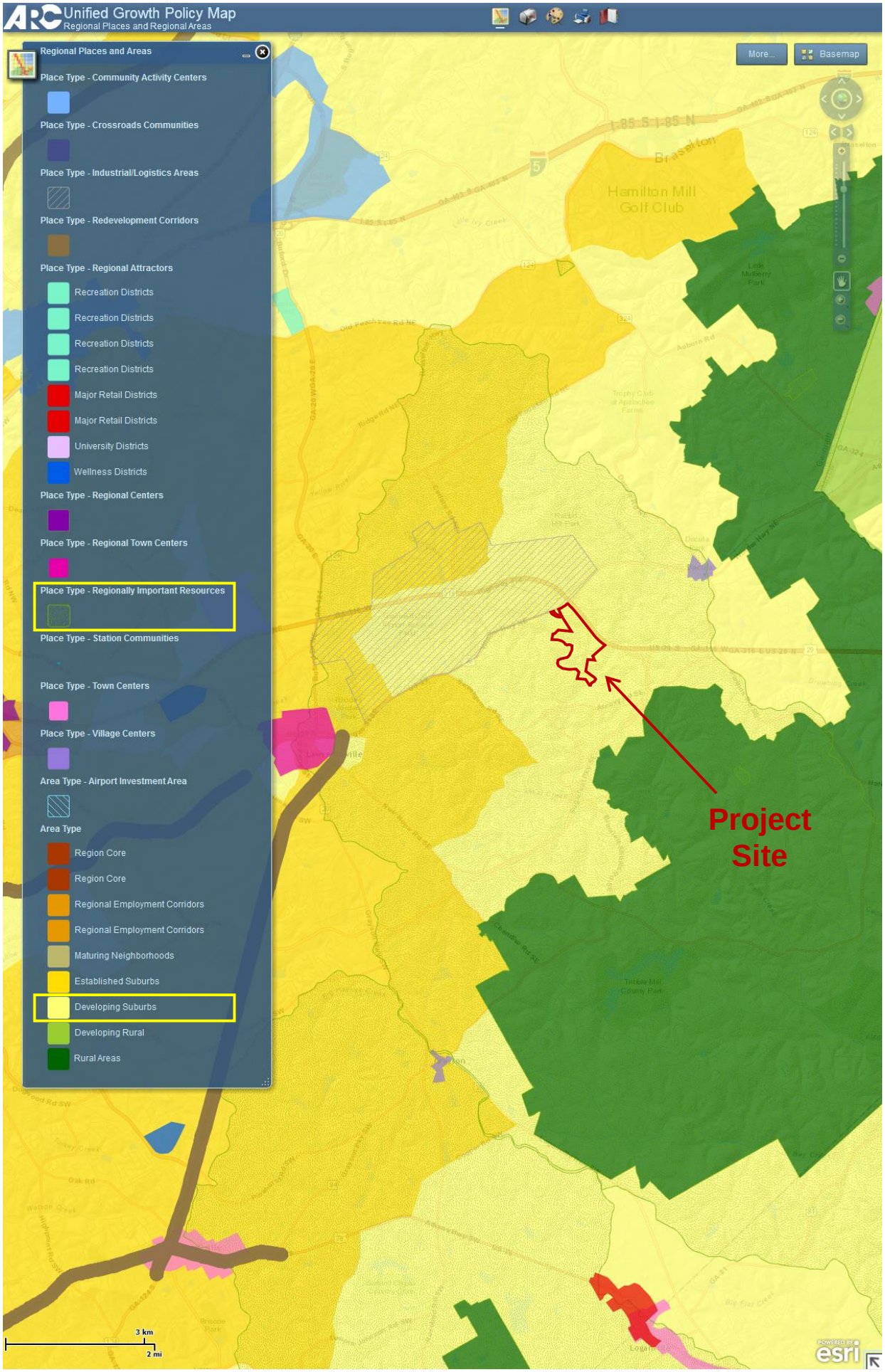
Comments: Alcovy Industrial Boulevard eastbound approach to SR 8 (Winder Highway). Photo looking to the northwest.

Photo No. 6

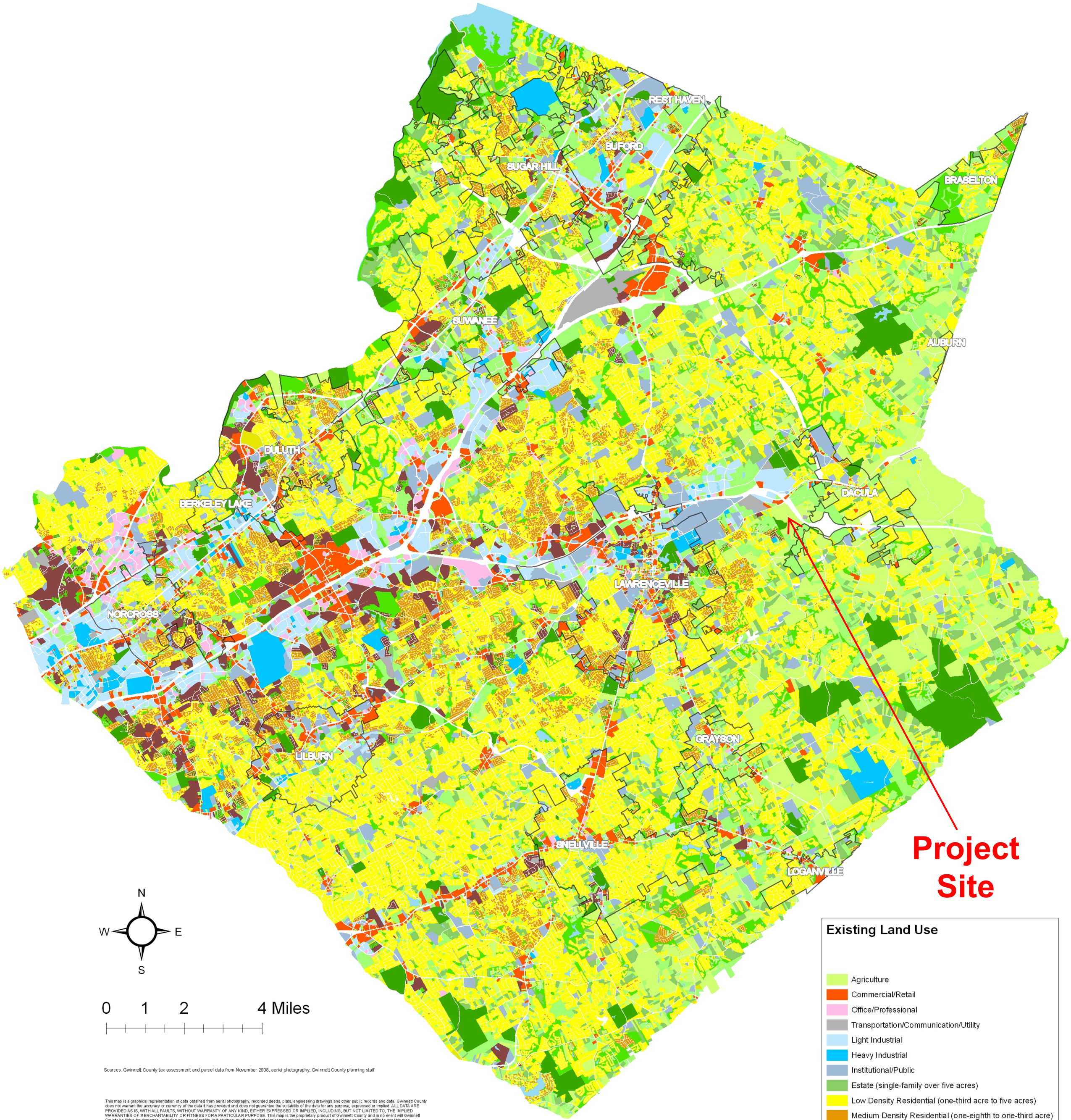
Comments: SR 8 (Winder Highway) southbound departure from SR 316 (University Parkway). Photo looking to the southwest.

Appendix B
Land Use and Zoning Maps

ARC Unified Growth Policy Map



2009 Existing Land Use in Gwinnett County



Existing Land Use

- Agriculture
- Commercial/Retail
- Office/Professional
- Transportation/Communication/Utility
- Light Industrial
- Heavy Industrial
- Institutional/Public
- Estate (single-family over five acres)
- Low Density Residential (one-third acre to five acres)
- Medium Density Residential (one-eighth to one-third acre)
- High Density Residential (eight or more units/acre)
- Mixed Use
- Multifamily Dwellings (includes mobile home parks)
- Park (government parkland)
- Park/Recreation/Conservation
- Undeveloped
- Right of Way
- Water
- Municipalities

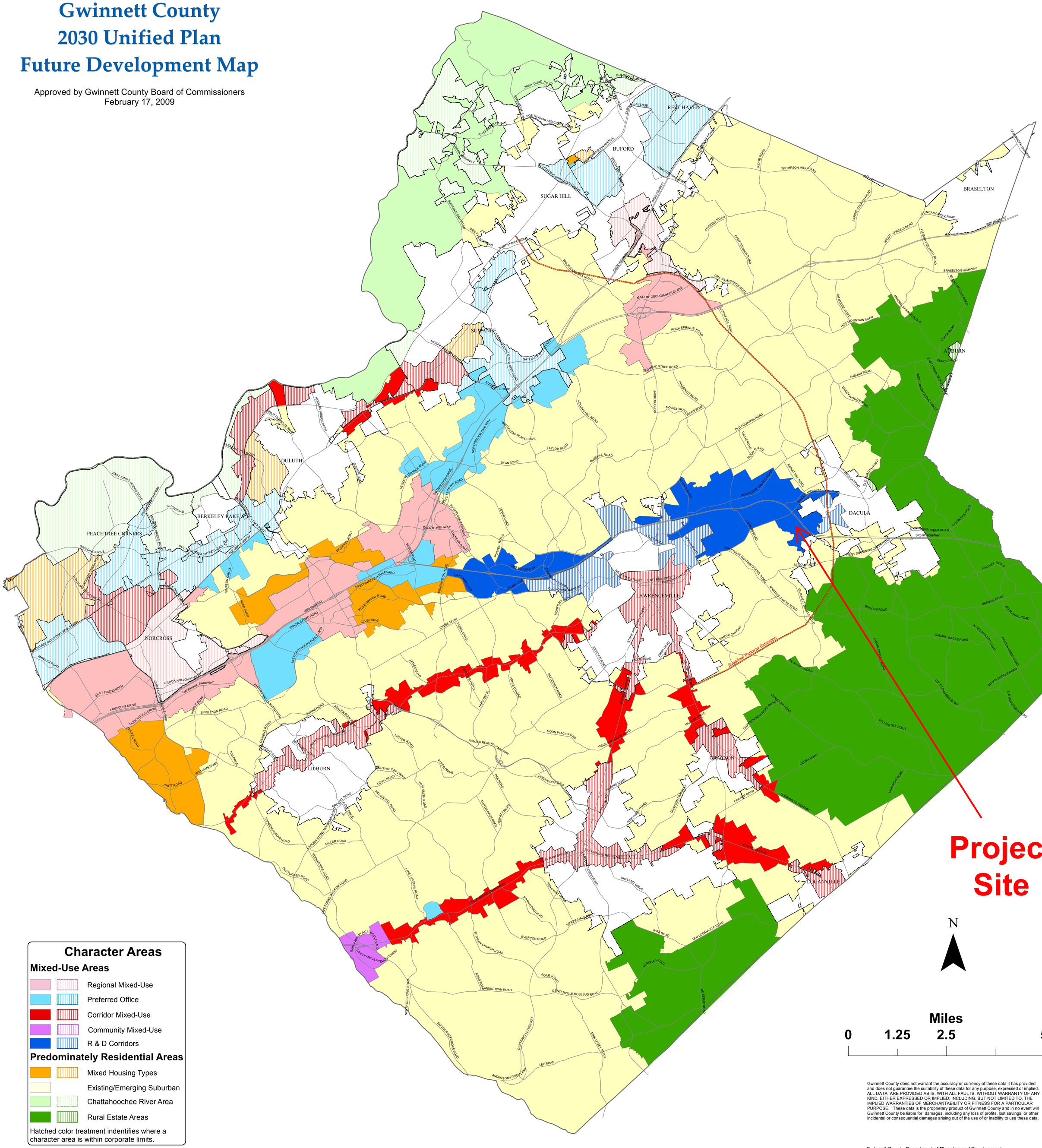
Sources: Gwinnett County tax assessment and parcel data from November 2008, aerial photography, Gwinnett County planning staff

The parcels in some zoning districts have been classified as Low Density Residential regardless of actual lot size. Districts with suffixes CSO, MOD, or CLU are required to average three units or less per acre.

Gwinnett County Department of Planning & Development
Printed July 2009

Gwinnett County
2030 Unified Plan
Future Development Map

Approved by Gwinnett County Board of Commissioners
February 17, 2009



Character Areas

Mixed-Use Areas

- Regional Mixed-Use
- Preferred Office
- Corridor Mixed-Use
- Community Mixed-Use
- R & D Corridors

Predominately Residential Areas

- Mixed Housing Types
- Existing/Emerging Suburban
- Chattahoochee River Area
- Rural Estate Areas

Hatched color treatment indentifies where a character area is within corporate limits.

This map shows those areas that will be most subject to major policy interventions to achieve Unified Plan goals.

Gwinnett County Department of Planning and Development
Long Range Planning Section
Planning Data Services Section
Date Printed: February 2009

Gwinnett County - Functional Classification Review

Project Site

Legend

2013 Functional Class

- Interstate (FC-1)
- Other Frwy and Expr (FC-2)
- Other Principal Arterials (FC-3)
- Minor Arterials (FC-4)
- Major Collectors (FC-5)
- Minor Collectors (FC-6)
- Local Roads (FC-7)

Regional Thoroughfares Network

Proposed FC Changes

- From FC-4 to FC-3
- From FC-3 to FC-4

Appendix C
Proposed Site Plan

LEGEND

AIF - ANGLE IRON FOUND
BLA - BEGIN LIMITED ACCESS
CTP - CRIMP TOP PIPE
CL - CENTERLINE
CMF - CONCRETE MONUMENT FOUND
DB_PG - DEED BOOK, PAGE
ELEV - ELEVATION
FH - FIRE HYDRANT
-G- - GAS LINE
GAR - GARAGE
GV - GAS VALVE
GW - GUY WIRE
HWF - HOG WIRE FENCE
IPF - IRON PIN FOUND
IPS - IRON PIN SET
1/2" REBAR
WITH YELLOW PLASTIC CAP
STAMPED RAI LSF000484
LL - LAND LOT
LLL - LAND LOT LINE
LP - LIGHT POLE
N/F - NOW OR FORMERLY
OB - OUTBUILDING
OH - OVERHEAD
OTP - OPEN TOP PIPE
-P- - POWER LINE
-P/T- - POWER & TELEPHONE LINE
PB, PG - PLAT BOOK, PAGE
PBX - POWER BOX
PL - PROPERTY LINE
POB - POINT OF BEGINNING
PP - POWER POLE
PTP - POWER & TELEPHONE POLE
R/W - RIGHT OF WAY
TBX - TELEPHONE BOX
TMH - TELEPHONE MANHOLE
TPOB - TRUE POINT OF BEGINNING
TSB - TRAFFIC SIGNAL BOX
TSP - TRAFFIC SIGNAL POLE
-T- - TELEPHONE LINE
-W- - WATER LINE
WF - WOOD FENCE
WM - WATER METER
WV - WATER VALVE
YR - YEAR
-III- - LIMITED ACCESS

INTERSECTION 3
EXISTING LANEAGE
EXISTING TRAFFIC SIGNAL

GEORGIA HIGHWAY 316
U.S. HIGHWAY 19
UNIVERSITY PARKWAY
R/W VARIES

DB 5167, PG 93
PROJECT NO. FR-003-2(45)
DB 12992, PG 70
PROJECT NO. NH-108-1(25)
(MAJOR ARTERIAL)

University Parkway- Hwy 316

MAINTENANCE EASEMENT
DB 5167, PG 93

CULVERT

Proposed DOT Right of Way

Assumed alignment of future on and off ramp for SR 316

GEORGIA HIGHWAY 8
U.S. HIGHWAY 29
R/W VARIES
PROJECT NO.
(PRINCIPAL ARTERIAL) (17)

US Hwy 29/Georgia Hwy 8

TRACT "B"
1.645 ACRES
TAX PARCEL: 5-243-007
ZONED RA200

Site Driveway #5

PROPOSED RIGHT-OF-WAY DEDICATION TO GWINNETT COUNTY
SEE DETAIL SHEET #2

N/F
ELOISE W. WILLIAMS
TAX PARCEL: 5-243-009
ZONED RA200

N/F
ELOISE W. WILLIAMS
TAX PARCEL: 5-243-002
ZONED RA200

N/F
RUEL S. WILLIAMS
TAX PARCEL: 5-243-001
ZONED RA200

GEORGIA HIGHWAY 8
U.S. HIGHWAY 29
R/W VARIES
PROJECT NO.
(PRINCIPAL ARTERIAL) (17)

EXISTING POND

N/F
ROGER B. WILLIAMS
DB 800, PG 293 IPS

PARCEL: 5-242-007
ZONED: RA200

AIF
LL CORNER

IPF 5/8" OTP
ON LINE 24.9'
FROM RIVER CL

N/F
WILLIAM DALE HIGON
DB 2584, PG 29
PB 22, PG 88-B

PARCEL: 5-239-016
ZONED: RA200

INTERSECTION 8
PROPOSED LANEAGE
PROPOSED TRAFFIC SIGNAL
(IF WARRANTED)

INTERMITTENT STREAM J13

APPROXIMATE 100 YEAR FLOOD LINE ZONE AE

ALCOVY RIVER

Focal office building at roundabout

Roundabout as focal feature and for traffic calming

N/F
GWINNETT COUNTY, GEORGIA
DB 46098, PG 860

PARCEL: 5-243-003
ZONED: RZT-SFR

N/F
ALCOVY FALLS
COMMUNITY ASSOCIATION, INC.
DB 46104, PG 423
PB 113, PGs 82 & 83
UNIT ONE
RECREATION AREA
1.125 ACRES
DEED OVERLAP

PARCEL: 5-238-310
ZONED: RZT-SFR

TRACT A
182.654 ACRES
TAX PARCEL: 5-243-005
ZONED RA200
1695

COLONIAL PIPELINE EASEMENT (80')

WETLAND

SWM

PARKING

BUILDING A
BUILDING B
BUILDING C
BUILDING D
BUILDING E
BUILDING F
BUILDING G
BUILDING H
BUILDING I
BUILDING J
BUILDING K

Nature and amenity trails winding through the trees and along creeks

BRANCH/CREEK INTERSECTION

CL OF BRANCH IS PL

HOPKINS CREEK

Use parking decks to take up the slope and create podiums for office towers

N/F
BBC PARTNERS, LLC
DB 46135, PG 151
DB 47377, PG 465

PARCEL: 5-244-081
ZONED: R140

CL OF HOPKINS CREEK IS PL

CREEK/RIVER INTERSECTION

Create formal green spaces as functional areas for office users

Buildings grouped in areas to work with topography
Each office tower to be built with it's own parking to allow phasing of development

N/F
BBC PARTNERS, LLC
DB 46135, PG 151
DB 47377, PG 465

PARCEL: 5-244-001
ZONED: RA200

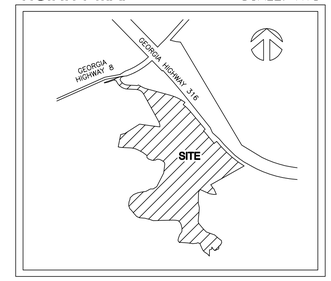
IRF
1/2"REBAR
LL CORNER

PLAN KEY

A PROPERTY LINE
B PROPOSED CURB & GUTTER
C PROPOSED 4' SIDEWALK
D PROPOSED TRAIL
E 75' IMPERVIOUS BUFFER
F 50' UNDISTURBED BUFFER

VICINITY MAP

SCALE: NTS



THIS PROPERTY IS NOT LOCATED WITHIN A FLOOD HAZARD ZONE "AE" AS PER FEMA FLOOD INSURANCE RATE MAP OF GWINNETT COUNTY, GEORGIA AS SHOWN ON MAP No.'S 13135C0075F, 13135C0076F, EFFECTIVE DATE: SEPTEMBER 29, 2006.

NOTES:

1. TOTAL SITE AREA: 159.871 ACRES
2. ZONING:
   CURRENT ZONING: RA 200 & C-2 (GWINNETT COUNTY)
   PROPOSED ZONING: MU-R (GWINNETT COUNTY)
3. UTILITY PROVIDERS:
   A. WATER - GWINNETT COUNTY
   B. SANITARY SEWER - GWINNETT COUNTY
   C. GAS - ATLANTA GAS LIGHT
   D. TELEPHONE/CABLE/INTERNET - CHARTER/AT&T
   E. POWER - JACKSON EMC
4. SITE IS IN UNINCORPORATED GWINNETT COUNTY

GENERAL INFORMATION:

APPLICANT: WALTON DEVELOPMENT & MANAGEMENT (USA), INC.
295 WEST CROSSVILLE ROAD
BUILDING 700, SUITE 710
ROSWELL, GEORGIA 30075
PHONE: 770.642.7750
CONTACT:
MR. RICK SHMURAK, PE
PHONE: 770.642.7750

ENGINEER: ROCHESTER & ASSOCIATES, INC.
425 OAK STREET
GAINESVILLE, GA. 30501
PHONE: (770) 718-0600

TRAFFIC ENGINEER: KIMLEY-HORN AND ASSOCIATES, INC.
2 SUN COURT, SUITE 450
PEACHTREE CORNERS, GA. 30092
CONTACT:
JOHN WALKER, P.E., PTOE
PHONE: (770) 825-0744

LAND USE:

PROPOSED USES:
RETAIL 275,000 SF
OFFICE 1,100,000 SF
FLOOR AREA RATIO:
1,375,000 SF/6,963,981 SF = 20%
MAXIMUM NUMBER OF STORIES IS 12.

OPEN SPACE:
OPEN SPACE/GREEN SPACE 35.2 ACRES (22%)

PARKING SUMMARY:

SPACES PROVIDED: RETAIL- 1,100
OFFICE- 2,750

SPACES REQUIRED: 3,850 SPACES

BUILDING LETTER	BUILDING USE	NUMBER OF STORIES	SQUARE FEET/ UNITS
A	RETAIL	2 (MAX.)	150,000 S.F.
B	RETAIL	2 (MAX.)	125,000 S.F.
C	OFFICE	12 (MAX.)	120,000 S.F.
D	OFFICE	12 (MAX.)	120,000 S.F.
E	OFFICE	12 (MAX.)	120,000 S.F.
F	OFFICE	12 (MAX.)	120,000 S.F.
G	OFFICE	12 (MAX.)	120,000 S.F.
H	OFFICE	12 (MAX.)	120,000 S.F.
I	OFFICE	12 (MAX.)	120,000 S.F.
J	OFFICE	12 (MAX.)	120,000 S.F.
K	OFFICE	12 (MAX.)	140,000 S.F.

OWNER & DEVELOPER:

WUSF 2 SUGARLOAF LLC
4800 N SCOTTSDALE RD.
SUITE 4000
SCOTTSDALE, AZ 85251

DATE: 6/23/15

GRAPHIC SCALE
100' 0' 200' 400'

JOB NO : G211012.WDM
FILE NO. 14-718 HC.dwg
DRAWN BY: SWS

SUGARLOAF CROSSING

GWINNETT COUNTY, GEORGIA

DRI # 2472 - Plan

This plan is conceptual in nature and subject to change without notice.

MILL CREEK CONSULTING
4480 Commerce Drive Buford, Georgia 30518 (770) 614-6611

WAKEFIELD BEASLEY & ASSOCIATES

Kimley»Horn

Rochester
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Appendix D
Trip Generation Analysis

Trip Generation Analysis (9th Ed.)
Surgarloaf Crossing DRI
Gwinnett County, Georgia

Land Use	Intensity	Daily Trips	AM Peak Hour			PM Peak Hour		
			Total	In	Out	Total	In	Out
Proposed Site Traffic								
710 General Office Building	1,100,000 s.f.	8,122	1,303	1,147	156	1,310	223	1,087
820 Shopping Center / Retail	275,000 s.f.	13,107	289	179	110	1,180	566	614
Gross Trips		**21,229**	**1,592**	**1,326**	**266**	**2,490**	**789**	**1,701**
Office Trips		8,122	1,303	1,147	156	1,310	223	1,087
Mixed-Use Reductions		*-1,686*	*-76*	*-32*	*-44*	*-57*	*-12*	*-45*
Alternative Mode Reductions		*0*	*0*	*0*	*0*	*0*	*0*	*0*
Adjusted Office Trips		6,436	1,227	1,115	112	1,253	211	1,042
Retail Trips		13,107	289	179	110	1,180	566	614
Mixed-Use Reductions		*-1,686*	*-76*	*-44*	*-32*	*-57*	*-45*	*-12*
Alternative Mode Reductions		*0*	*0*	*0*	*0*	*0*	*0*	*0*
Pass By Reductions (Limited by GRTA 15% Rule)		*-1,671*	*0*	*0*	*0*	*-153*	*-77*	*-77*
Adjusted Retail Trips		9,750	213	135	78	970	444	525
Mixed-Use Reductions - TOTAL		*-3,372*	*-152*	*-76*	*-76*	*-114*	*-57*	*-57*
Alternative Mode Reductions - TOTAL		*0*	*0*	*0*	*0*	*0*	*0*	*0*
Pass-By Reductions - TOTAL		*-1,671*	*0*	*0*	*0*	*-153*	*-77*	*-77*
New Trips		**16,186**	**1,440**	**1,250**	**190**	**2,223**	**655**	**1,567**
Driveway Volumes		**17,857**	**1,440**	**1,250**	**190**	**2,376**	**732**	**1,644**

k:\atl_tpto\019399003 sugarloaf crossing dri, november 2014\analysis\[sugarloaf dri analysis.xls]trip generation

Appendix E
Intersection Volume Worksheets

INTERSECTION VOLUME DEVELOPMENT

SR 316 (University Parkway) at Cedars Road
AM PEAK HOUR

Description	Cedars Rd Northbound			Cedars Rd Southbound			SR 316 (University Pkwy) Eastbound			SR 316 (University Pkwy) Westbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Observed 2015 Traffic Volumes	90	164	9	37	128	281	95	950	42	7	1,966	201
Pedestrians		0			0			0			0	
Conflicting Pedestrians	0		0	0		0	0		0	0		0
Heavy Vehicle %	2%	2%	2%	5%	2%	3%	5%	14%	2%	14%	4%	3%
Peak Hour Factor		0.88			0.93			0.89			0.93	
Adjustment												
Adjusted 2015 Volumes	90	164	9	37	128	281	95	950	42	7	1966	201
Annual Growth Rate	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
Growth Factor	1.077	1.077	1.077	1.077	1.077	1.077	1.077	1.077	1.077	1.077	1.077	1.077
New Road Adjustment												
Other Proposed Developments												
2020 Background Traffic	97	177	10	40	138	303	102	1,023	45	8	2,118	217
Project Trips												
Trip Distribution IN				2%	1%			36%	2%			
Trip Distribution OUT	2%	1%									36%	2%
Office Trips	2	1	0	22	11	0	0	401	22	0	40	2
Trip Distribution IN				2%	1%			36%	2%			
Trip Distribution OUT	2%	1%									36%	2%
Retail Trips	2	1	0	3	1	0	0	49	3	0	28	2
Pass-By Trips	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Trips	4	2	0	25	12	0	0	450	25	0	68	4
2020 Buildout Total	101	179	10	65	150	303	102	1,473	70	8	2,186	221

PM PEAK HOUR

Description	Cedars Rd Northbound			Cedars Rd Southbound			SR 316 (University Pkwy) Eastbound			SR 316 (University Pkwy) Westbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Observed 2015 Traffic Volumes	53	159	10	116	216	208	190	2,110	112	6	1,277	51
Pedestrians		0			0			0			0	
Conflicting Pedestrians	0		0	0		0	0		0	0		0
Heavy Vehicle %	2%	2%	2%	3%	2%	5%	4%	3%	2%	2%	7%	8%
Peak Hour Factor		0.91			0.88			0.94			0.85	
Adjustment												
Adjusted 2015 Volumes	53	159	10	116	216	208	190	2110	112	6	1277	51
Annual Growth Rate	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
Growth Factor	1.077	1.077	1.077	1.077	1.077	1.077	1.077	1.077	1.077	1.077	1.077	1.077
New Road Adjustment												
Other Proposed Developments												
2020 Background Traffic	57	171	11	125	233	224	205	2,273	121	6	1,376	55
Project Trips												
Trip Distribution IN				2%	1%			36%	2%			
Trip Distribution OUT	2%	1%									36%	2%
Office Trips	21	10	0	4	2	0	0	76	4	0	375	21
Trip Distribution IN				2%	1%			36%	2%			
Trip Distribution OUT	2%	1%									36%	2%
Retail Trips	11	5	0	9	4	0	0	160	9	0	189	11
Pass-By Trips	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Trips	32	15	0	13	6	0	0	236	13	0	564	32
2020 Buildout Total	89	186	11	138	239	224	205	2,509	134	6	1,940	87

INTERSECTION VOLUME DEVELOPMENT

SR 316 (University Parkway) at Hurricane Trail
AM PEAK HOUR

Description	N/A Northbound			Hurricane Tr Southbound			SR 316 (University Pkwy) Eastbound			SR 316 (University Pkwy) Westbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Observed 2015 Traffic Volumes				97		113	93	856			2,155	150
Pedestrians		0			0			0			0	
Conflicting Pedestrians	0		0	0		0	0		0	0		0
Heavy Vehicle %				18%		25%	29%	10%			3%	5%
Peak Hour Factor					0.83			0.92			0.97	
Adjustment												
Adjusted 2015 Volumes	0	0	0	97	0	113	93	856	0	0	2155	150
Annual Growth Rate	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
Growth Factor	1.077	1.077	1.077	1.077	1.077	1.077	1.077	1.077	1.077	1.077	1.077	1.077
New Road Adjustment												
Other Proposed Developments												
2020 Background Traffic	0	0	0	104	0	122	100	922	0	0	2,322	162
Project Trips												
Trip Distribution IN				2%				38%				
Trip Distribution OUT											38%	2%
Office Trips	0	0	0	22	0	0	0	424	0	0	43	2
Trip Distribution IN				2%				38%				
Trip Distribution OUT											38%	2%
Retail Trips	0	0	0	3	0	0	0	51	0	0	30	2
Pass-By Trips	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Trips	0	0	0	25	0	0	0	475	0	0	73	4
2020 Buildout Total	0	0	0	129	0	122	100	1,397	0	0	2,395	166

PM PEAK HOUR

Description	N/A Northbound			Hurricane Tr Southbound			SR 316 (University Pkwy) Eastbound			SR 316 (University Pkwy) Westbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Observed 2015 Traffic Volumes				195		94	170	2,087			1,109	84
Pedestrians		0			0			0			0	
Conflicting Pedestrians	0		0	0		0	0		0	0		0
Heavy Vehicle %				8%		19%	15%	3%			8%	16%
Peak Hour Factor					0.94			0.97			0.91	
Adjustment												
Adjusted 2015 Volumes	0	0	0	195	0	94	170	2087	0	0	1109	84
Annual Growth Rate	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
Growth Factor	1.077	1.077	1.077	1.077	1.077	1.077	1.077	1.077	1.077	1.077	1.077	1.077
New Road Adjustment												
Other Proposed Developments												
2020 Background Traffic	0	0	0	210	0	101	183	2,248	0	0	1,195	90
Project Trips												
Trip Distribution IN				2%				38%				
Trip Distribution OUT											38%	2%
Office Trips	0	0	0	4	0	0	0	80	0	0	396	21
Trip Distribution IN				2%				38%				
Trip Distribution OUT											38%	2%
Retail Trips	0	0	0	9	0	0	0	169	0	0	200	11
Pass-By Trips	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Trips	0	0	0	13	0	0	0	249	0	0	596	32
2020 Buildout Total	0	0	0	223	0	101	183	2,497	0	0	1,791	122

INTERSECTION VOLUME DEVELOPMENT

SR 316 (University Parkway) at SR 8 / US 29 (Winder Highway)
AM PEAK HOUR

Description	SR 8 / US 29 (Winder Hwy) Northbound			SR 8 / US 29 (Winder Hwy) Southbound			SR 316 (University Pkwy) Eastbound			SR 316 (University Pkwy) Westbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Observed 2015 Traffic Volumes	26	131	66	77	370	422	141	744	57	135	1,577	123
Pedestrians		0			0			0			0	
Conflicting Pedestrians	0		0	0		0	0		0	0		0
Heavy Vehicle %	27%	2%	18%	9%	2%	4%	17%	10%	18%	2%	3%	4%
Peak Hour Factor		0.74			0.95			0.87			0.96	
Adjustment												
Adjusted 2015 Volumes	26	131	66	77	370	422	141	744	57	135	1577	123
Annual Growth Rate	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
Growth Factor	1.077	1.077	1.077	1.077	1.077	1.077	1.077	1.077	1.077	1.077	1.077	1.077
New Road Adjustment												
Other Proposed Developments												
2020 Background Traffic	28	141	71	83	399	455	152	801	61	145	1,699	133
Project Trips												
Trip Distribution IN					10%				40%	32%		
Trip Distribution OUT	40%	10%	32%									
Office Trips	45	11	36	0	112	0	0	0	446	357	0	0
Trip Distribution IN					10%				40%	32%		
Trip Distribution OUT	40%	10%	32%									
Retail Trips	31	8	25	0	14	0	0	0	54	43	0	0
Pass-By Trips	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Trips	76	19	61	0	126	0	0	0	500	400	0	0
2020 Buildout Total	104	160	132	83	525	455	152	801	561	545	1,699	133

PM PEAK HOUR

Description	SR 8 / US 29 (Winder Hwy) Northbound			SR 8 / US 29 (Winder Hwy) Southbound			SR 316 (University Pkwy) Eastbound			SR 316 (University Pkwy) Westbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Observed 2015 Traffic Volumes	127	402	228	79	191	206	306	1,611	50	72	899	109
Pedestrians		0			0			0			0	
Conflicting Pedestrians	0		0	0		0	0		0	0		0
Heavy Vehicle %	4%	2%	3%	2%	4%	8%	4%	3%	10%	3%	4%	5%
Peak Hour Factor		0.87			0.92			0.98			0.92	
Adjustment												
Adjusted 2015 Volumes	127	402	228	79	191	206	306	1611	50	72	899	109
Annual Growth Rate	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
Growth Factor	1.077	1.077	1.077	1.077	1.077	1.077	1.077	1.077	1.077	1.077	1.077	1.077
New Road Adjustment												
Other Proposed Developments												
2020 Background Traffic	137	433	246	85	206	222	330	1,736	54	78	968	117
Project Trips												
Trip Distribution IN					10%				40%	32%		
Trip Distribution OUT	40%	10%	32%									
Office Trips	417	104	333	0	21	0	0	0	84	68	0	0
Trip Distribution IN					10%				40%	32%		
Trip Distribution OUT	40%	10%	32%									
Retail Trips	210	53	168	0	44	0	0	0	178	142	0	0
Pass-By Trips	12	0	24	0	0	0	0	-24	24	12	-12	0
Total Project Trips	639	157	525	0	65	0	0	-24	286	222	-12	0
2020 Buildout Total	776	590	771	85	271	222	330	1,712	340	300	956	117

INTERSECTION VOLUME DEVELOPMENT

SR 316 (University Parkway) at Harbins Road
AM PEAK HOUR

Description	Harbins Rd Northbound			Harbins Rd Southbound			SR 316 (University Pkwy) Eastbound			SR 316 (University Pkwy) Westbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Observed 2015 Traffic Volumes	417	303	31	71	189	171	90	787	113	44	1,453	38
Pedestrians		0			0			0			0	
Conflicting Pedestrians	0		0	0		0	0		0	0		0
Heavy Vehicle %	2%	3%	7%	3%	7%	2%	2%	11%	4%	2%	3%	3%
Peak Hour Factor		0.92			0.83			0.93			0.91	
Adjustment												
Adjusted 2015 Volumes	417	303	31	71	189	171	90	787	113	44	1453	38
Annual Growth Rate	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
Growth Factor	1.077	1.077	1.077	1.077	1.077	1.077	1.077	1.077	1.077	1.077	1.077	1.077
New Road Adjustment												
Other Proposed Developments												
2020 Background Traffic	449	326	33	76	204	184	97	848	122	47	1,565	41
Project Trips												
Trip Distribution IN	1%					1%					10%	
Trip Distribution OUT							1%	10%	1%			
Office Trips	11	0	0	0	0	11	1	11	1	0	112	0
Trip Distribution IN	1%					1%					10%	
Trip Distribution OUT							1%	10%	1%			
Retail Trips	1	0	0	0	0	1	1	8	1	0	14	0
Pass-By Trips	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Trips	12	0	0	0	0	12	2	19	2	0	126	0
2020 Buildout Total	461	326	33	76	204	196	99	867	124	47	1,691	41

PM PEAK HOUR

Description	Harbins Rd Northbound			Harbins Rd Southbound			SR 316 (University Pkwy) Eastbound			SR 316 (University Pkwy) Westbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Observed 2015 Traffic Volumes	166	370	76	81	370	101	170	1,576	446	33	859	95
Pedestrians		0			0			0			0	
Conflicting Pedestrians	0		0	0		0	0		0	0		0
Heavy Vehicle %	3%	2%	2%	2%	3%	2%	2%	2%	3%	2%	5%	2%
Peak Hour Factor		0.87			0.78			0.94			0.91	
Adjustment												
Adjusted 2015 Volumes	166	370	76	81	370	101	170	1576	446	33	859	95
Annual Growth Rate	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
Growth Factor	1.077	1.077	1.077	1.077	1.077	1.077	1.077	1.077	1.077	1.077	1.077	1.077
New Road Adjustment												
Other Proposed Developments												
2020 Background Traffic	179	399	82	87	399	109	183	1,698	480	36	925	102
Project Trips												
Trip Distribution IN	1%					1%					10%	
Trip Distribution OUT							1%	10%	1%			
Office Trips	2	0	0	0	0	2	10	104	10	0	21	0
Trip Distribution IN	1%					1%					10%	
Trip Distribution OUT							1%	10%	1%			
Retail Trips	4	0	0	0	0	4	5	53	5	0	44	0
Pass-By Trips	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Trips	6	0	0	0	0	6	15	157	15	0	65	0
2020 Buildout Total	185	399	82	87	399	115	198	1,855	495	36	990	102

INTERSECTION VOLUME DEVELOPMENT

SR 8 / US 29 (E Crogan Street) at SR 124 (Scenic Highway) / E Pike Street
AM PEAK HOUR

Description	SR 124 (Scenic Hwy) Northbound			E Pike St Southbound			SR 8 / US 29 (E Crogan St) Eastbound			SR 8 / US 29 (E Crogan St) Westbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Observed 2015 Traffic Volumes	76	4	320	1	2	1	7	364	24	370	1,246	7
Pedestrians		0			1			0			0	
Conflicting Pedestrians	0		0	0		0	1		0	0		1
Heavy Vehicle %	12%	2%	7%	2%	2%	2%	2%	5%	13%	6%	2%	2%
Peak Hour Factor		0.91			0.25			0.78			0.96	
Adjustment												
Adjusted 2015 Volumes	76	4	320	1	2	1	7	364	24	370	1246	7
Annual Growth Rate	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
Growth Factor	1.077	1.077	1.077	1.077	1.077	1.077	1.077	1.077	1.077	1.077	1.077	1.077
New Road Adjustment												
Other Proposed Developments												
2020 Background Traffic	82	4	345	1	2	1	8	392	26	399	1,342	8
Project Trips												
Trip Distribution IN			5%					7%				
Trip Distribution OUT										5%	7%	
Office Trips	0	0	56	0	0	0	0	78	0	6	8	0
Trip Distribution IN			5%					7%				
Trip Distribution OUT										5%	7%	
Retail Trips	0	0	7	0	0	0	0	9	0	4	5	0
Pass-By Trips	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Trips	0	0	63	0	0	0	0	87	0	10	13	0
2020 Buildout Total	82	4	408	1	2	1	8	479	26	409	1,355	8

PM PEAK HOUR

Description	SR 124 (Scenic Hwy) Northbound			E Pike St Southbound			SR 8 / US 29 (E Crogan St) Eastbound			SR 8 / US 29 (E Crogan St) Westbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Observed 2015 Traffic Volumes	115	44	475	14	34	15	26	1,383	73	407	541	14
Pedestrians		3			1			0			1	
Conflicting Pedestrians	0		1	1		0	1		3	3		1
Heavy Vehicle %	7%	2%	3%	7%	2%	7%	4%	2%	6%	3%	2%	14%
Peak Hour Factor		0.97			0.80			0.94			0.91	
Adjustment												
Adjusted 2015 Volumes	115	44	475	14	34	15	26	1383	73	407	541	14
Annual Growth Rate	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
Growth Factor	1.077	1.077	1.077	1.077	1.077	1.077	1.077	1.077	1.077	1.077	1.077	1.077
New Road Adjustment												
Other Proposed Developments												
2020 Background Traffic	124	47	512	15	37	16	28	1,490	79	438	583	15
Project Trips												
Trip Distribution IN			5%					7%				
Trip Distribution OUT										5%	7%	
Office Trips	0	0	11	0	0	0	0	15	0	52	73	0
Trip Distribution IN			5%					7%				
Trip Distribution OUT										5%	7%	
Retail Trips	0	0	22	0	0	0	0	31	0	26	37	0
Pass-By Trips	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Trips	0	0	33	0	0	0	0	46	0	78	110	0
2020 Buildout Total	124	47	545	15	37	16	28	1,536	79	516	693	15

INTERSECTION VOLUME DEVELOPMENT

SR 8 / US 29 (Winder Highway) at Sweet Gum Road
AM PEAK HOUR

Description	Sweet Gum Rd Northbound			Sweet Gum Rd Southbound			SR 8 / US 29 (Winder Hwy) Eastbound			SR 8 / US 29 (Winder Hwy) Westbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Observed 2015 Traffic Volumes	396	13	123	0	0	1	21	250	81	52	641	23
Pedestrians		0			0			0			0	
Conflicting Pedestrians	0		0	0		0	0		0	0		0
Heavy Vehicle %	2%	2%	2%	2%	2%	2%	2%	13%	17%	2%	3%	2%
Peak Hour Factor		0.81			0.25			0.87			0.87	
Adjustment												
Adjusted 2015 Volumes	396	13	123	0	0	1	21	250	81	52	641	23
Annual Growth Rate	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
Growth Factor	1.077	1.077	1.077	1.077	1.077	1.077	1.077	1.077	1.077	1.077	1.077	1.077
New Road Adjustment												
Other Proposed Developments												
2020 Background Traffic	427	14	133	0	0	1	23	269	87	56	691	25
Project Trips												
Trip Distribution IN			2%					12%				
Trip Distribution OUT										2%	12%	
Office Trips	0	0	22	0	0	0	0	134	0	2	13	0
Trip Distribution IN			2%					12%				
Trip Distribution OUT										2%	12%	
Retail Trips	0	0	3	0	0	0	0	16	0	2	9	0
Pass-By Trips	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Trips	0	0	25	0	0	0	0	150	0	4	22	0
2020 Buildout Total	427	14	158	0	0	1	23	419	87	60	713	25

PM PEAK HOUR

Description	Sweet Gum Rd Northbound			Sweet Gum Rd Southbound			SR 8 / US 29 (Winder Hwy) Eastbound			SR 8 / US 29 (Winder Hwy) Westbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Observed 2015 Traffic Volumes	127	1	105	20	8	26	2	768	450	154	287	0
Pedestrians		0			0			0			0	
Conflicting Pedestrians	0		0	0		0	0		0	0		0
Heavy Vehicle %	2%	2%	2%	2%	2%	4%	2%	2%	2%	2%	2%	2%
Peak Hour Factor		0.93			0.52			0.86			0.93	
Adjustment												
Adjusted 2015 Volumes	127	1	105	20	8	26	2	768	450	154	287	0
Annual Growth Rate	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
Growth Factor	1.077	1.077	1.077	1.077	1.077	1.077	1.077	1.077	1.077	1.077	1.077	1.077
New Road Adjustment												
Other Proposed Developments												
2020 Background Traffic	137	1	113	22	9	28	2	827	485	166	309	0
Project Trips												
Trip Distribution IN			2%					12%				
Trip Distribution OUT										2%	12%	
Office Trips	0	0	4	0	0	0	0	25	0	21	125	0
Trip Distribution IN			2%					12%				
Trip Distribution OUT										2%	12%	
Retail Trips	0	0	9	0	0	0	0	53	0	11	63	0
Pass-By Trips	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Trips	0	0	13	0	0	0	0	78	0	32	188	0
2020 Buildout Total	137	1	126	22	9	28	2	905	485	198	497	0

INTERSECTION VOLUME DEVELOPMENT

SR 8 / US 29 (Winder Highway) at Cedars Road
AM PEAK HOUR

Description	Cedars Rd Northbound			Cedars Rd Southbound			SR 8 / US 29 (Winder Hwy) Eastbound			SR 8 / US 29 (Winder Hwy) Westbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Observed 2015 Traffic Volumes	56	162	32	6	39	117	108	181	13	12	501	9
Pedestrians		0			0			0			0	
Conflicting Pedestrians	0		0	0		0	0		0	0		0
Heavy Vehicle %	5%	2%	3%	17%	8%	2%	3%	9%	8%	2%	4%	11%
Peak Hour Factor		0.88			0.75			0.87			0.95	
Adjustment												
Adjusted 2015 Volumes	56	162	32	6	39	117	108	181	13	12	501	9
Annual Growth Rate	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
Growth Factor	1.077	1.077	1.077	1.077	1.077	1.077	1.077	1.077	1.077	1.077	1.077	1.077
New Road Adjustment												
Other Proposed Developments												
2020 Background Traffic	60	175	34	6	42	126	116	195	14	13	540	10
Project Trips												
Trip Distribution IN			1%	3%				14%				
Trip Distribution OUT										1%	14%	3%
Office Trips	0	0	11	33	0	0	0	156	0	1	16	3
Trip Distribution IN			1%	3%				14%				
Trip Distribution OUT										1%	14%	3%
Retail Trips	0	0	1	4	0	0	0	19	0	1	11	2
Pass-By Trips	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Trips	0	0	12	37	0	0	0	175	0	2	27	5
2020 Buildout Total	60	175	46	43	42	126	116	370	14	15	567	15

PM PEAK HOUR

Description	Cedars Rd Northbound			Cedars Rd Southbound			SR 8 / US 29 (Winder Hwy) Eastbound			SR 8 / US 29 (Winder Hwy) Westbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Observed 2015 Traffic Volumes	28	62	49	29	178	161	135	672	52	48	228	10
Pedestrians		0			0			0			0	
Conflicting Pedestrians	0		0	0		0	0		0	0		0
Heavy Vehicle %	2%	2%	2%	3%	2%	2%	2%	2%	2%	2%	3%	30%
Peak Hour Factor		0.85			0.90			0.91			0.88	
Adjustment												
Adjusted 2015 Volumes	28	62	49	29	178	161	135	672	52	48	228	10
Annual Growth Rate	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
Growth Factor	1.077	1.077	1.077	1.077	1.077	1.077	1.077	1.077	1.077	1.077	1.077	1.077
New Road Adjustment												
Other Proposed Developments												
2020 Background Traffic	30	67	53	31	192	173	145	724	56	52	246	11
Project Trips												
Trip Distribution IN			1%	3%				14%				
Trip Distribution OUT										1%	14%	3%
Office Trips	0	0	2	6	0	0	0	30	0	10	146	31
Trip Distribution IN			1%	3%				14%				
Trip Distribution OUT										1%	14%	3%
Retail Trips	0	0	4	13	0	0	0	62	0	5	74	16
Pass-By Trips	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Trips	0	0	6	19	0	0	0	92	0	15	220	47
2020 Buildout Total	30	67	59	50	192	173	145	816	56	67	466	58

INTERSECTION VOLUME DEVELOPMENT

SR 8 / US 29 (Winder Highway) at Alcovy Industrial Boulevard / Proposed Site Driveway

AM PEAK HOUR

Description	SR 8 / US 29 (Winder Hwy) Northbound			SR 8 / US 29 (Winder Hwy) Southbound			Alcovy Ind Blvd Eastbound			Proposed Site Dwy Westbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Observed 2015 Traffic Volumes	4	269			482	13	3		2			
Pedestrians		0			0			0			0	
Conflicting Pedestrians	0		0	0		0	0		0	0		0
Heavy Vehicle %	2%	12%	2%	2%	5%	2%	50%	2%	2%	2%	2%	2%
Peak Hour Factor		0.88			0.91			0.42			0.88	
Adjustment												
Adjusted 2015 Volumes	4	269	0	0	482	13	3	0	2	0	0	0
Annual Growth Rate	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
Growth Factor	1.077	1.077	1.077	1.077	1.077	1.077	1.077	1.077	1.077	1.077	1.077	1.077
New Road Adjustment												
Other Proposed Developments												
2020 Background Traffic	4	290	0	0	519	14	3	0	2	0	0	0
Project Trips												
Trip Distribution IN			18%	82%								
Trip Distribution OUT										18%		82%
Office Trips	0	0	201	914	0	0	0	0	0	20	0	92
Trip Distribution IN			18%	82%								
Trip Distribution OUT										18%		82%
Retail Trips	0	0	24	111	0	0	0	0	0	14	0	64
Pass-By Trips	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Trips	0	0	225	1,025	0	0	0	0	0	34	0	156
2020 Buildout Total	4	290	225	1,025	519	14	3	0	2	34	0	156

Note: Assumed PHF = 0.88 for Proposed Site Driveway.

PM PEAK HOUR

Description	SR 8 / US 29 (Winder Hwy) Northbound			SR 8 / US 29 (Winder Hwy) Southbound			Alcovy Ind Blvd Eastbound			Proposed Site Dwy Westbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Observed 2015 Traffic Volumes	0	743			275	6	12		4			
Pedestrians		0			0			0			0	
Conflicting Pedestrians	0		0	0		0	0		0	0		0
Heavy Vehicle %	2%	2%	2%	2%	3%	50%	2%	2%	2%	2%	2%	2%
Peak Hour Factor		0.91			0.91			0.67			0.88	
Adjustment												
Adjusted 2015 Volumes	0	743	0	0	275	6	12	0	4	0	0	0
Annual Growth Rate	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
Growth Factor	1.077	1.077	1.077	1.077	1.077	1.077	1.077	1.077	1.077	1.077	1.077	1.077
New Road Adjustment												
Other Proposed Developments												
2020 Background Traffic	0	800	0	0	296	6	13	0	4	0	0	0
Project Trips												
Trip Distribution IN			18%	82%								
Trip Distribution OUT										18%		82%
Office Trips	0	0	38	173	0	0	0	0	0	188	0	854
Trip Distribution IN			18%	82%								
Trip Distribution OUT										18%		82%
Retail Trips	0	0	80	364	0	0	0	0	0	95	0	431
Pass-By Trips	0	-24	24	53	-17	0	0	0	0	17	0	60
Total Project Trips	0	-24	142	590	-17	0	0	0	0	300	0	1,345
2020 Buildout Total	0	776	142	590	279	6	13	0	4	300	0	1,345

INTERSECTION VOLUME DEVELOPMENT

SR 8 / Business US 29 (Winder Highway) at Circle Road
AM PEAK HOUR

Description	Circle Rd Northbound			Circle Rd Southbound			SR 8 / US 29 (Winder Hwy) Eastbound			SR 8 / US 29 (Winder Hwy) Westbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Observed 2015 Traffic Volumes	0	0	0	6	0	76	41	201	0	0	644	11
Pedestrians		0			0			0			1	
Conflicting Pedestrians	0		1	1		0	0		0	0		0
Heavy Vehicle %	2%	2%	2%	2%	2%	2%	2%	7%	2%	2%	3%	2%
Peak Hour Factor		0.25			0.85			0.77			0.90	
Adjustment												
Adjusted 2015 Volumes	0	0	0	6	0	76	41	201	0	0	644	11
Annual Growth Rate	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
Growth Factor	1.077	1.077	1.077	1.077	1.077	1.077	1.077	1.077	1.077	1.077	1.077	1.077
New Road Adjustment												
Other Proposed Developments												
2020 Background Traffic	0	0	0	6	0	82	44	217	0	0	694	12
Project Trips												
Trip Distribution IN						1%					9%	
Trip Distribution OUT							1%	9%				
Office Trips	0	0	0	0	0	11	1	10	0	0	100	0
Trip Distribution IN						1%					9%	
Trip Distribution OUT							1%	9%				
Retail Trips	0	0	0	0	0	1	1	7	0	0	12	0
Pass-By Trips	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Trips	0	0	0	0	0	12	2	17	0	0	112	0
2020 Buildout Total	0	0	0	6	0	94	46	234	0	0	806	12

PM PEAK HOUR

Description	Circle Rd Northbound			Circle Rd Southbound			SR 8 / US 29 (Winder Hwy) Eastbound			SR 8 / US 29 (Winder Hwy) Westbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Observed 2015 Traffic Volumes	0	0	0	39	0	75	81	634	0	0	298	18
Pedestrians		0			0			0			0	
Conflicting Pedestrians	0		0	0		0	0		0	0		0
Heavy Vehicle %	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	6%	2%
Peak Hour Factor		0.25			0.84			0.93			0.96	
Adjustment												
Adjusted 2015 Volumes	0	0	0	39	0	75	81	634	0	0	298	18
Annual Growth Rate	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
Growth Factor	1.077	1.077	1.077	1.077	1.077	1.077	1.077	1.077	1.077	1.077	1.077	1.077
New Road Adjustment												
Other Proposed Developments												
2020 Background Traffic	0	0	0	42	0	81	87	683	0	0	321	19
Project Trips												
Trip Distribution IN						1%					9%	
Trip Distribution OUT							1%	9%				
Office Trips	0	0	0	0	0	2	10	94	0	0	19	0
Trip Distribution IN						1%					9%	
Trip Distribution OUT							1%	9%				
Retail Trips	0	0	0	0	0	4	5	47	0	0	40	0
Pass-By Trips	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Trips	0	0	0	0	0	6	15	141	0	0	59	0
2020 Buildout Total	0	0	0	42	0	87	102	824	0	0	380	19

INTERSECTION VOLUME DEVELOPMENT

SR 8 / Business US 29 (Winder Highway) at Broad Street / McMillan Street
AM PEAK HOUR

Description	McMillan St Northbound			Broad St Southbound			SR 8 / US 29 (Winder Hwy) Eastbound			SR 8 / US 29 (Winder Hwy) Westbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Observed 2015 Traffic Volumes	20	149	4	8	59	98	77	113	3	4	512	15
Pedestrians		0			0			0			10	
Conflicting Pedestrians	0		10	10		0	0		0	0		0
Heavy Vehicle %	5%	2%	2%	2%	2%	2%	3%	10%	2%	2%	5%	2%
Peak Hour Factor		0.68			0.54			0.78			0.87	
Adjustment												
Adjusted 2015 Volumes	20	149	4	8	59	98	77	113	3	4	512	15
Annual Growth Rate	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
Growth Factor	1.077	1.077	1.077	1.077	1.077	1.077	1.077	1.077	1.077	1.077	1.077	1.077
New Road Adjustment												
Other Proposed Developments												
2020 Background Traffic	22	161	4	9	64	106	83	122	3	4	552	16
Project Trips												
Trip Distribution IN	1%					2%					6%	
Trip Distribution OUT							2%	6%	1%			
Office Trips	11	0	0	0	0	22	2	7	1	0	67	0
Trip Distribution IN	1%					2%					6%	
Trip Distribution OUT							2%	6%	1%			
Retail Trips	1	0	0	0	0	3	2	5	1	0	8	0
Pass-By Trips	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Trips	12	0	0	0	0	25	4	12	2	0	75	0
2020 Buildout Total	34	161	4	9	64	131	87	134	5	4	627	16

PM PEAK HOUR

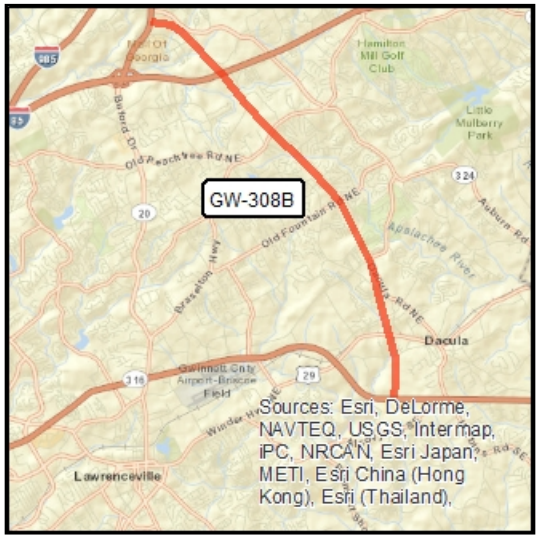
Description	McMillan St Northbound			Broad St Southbound			SR 8 / US 29 (Winder Hwy) Eastbound			SR 8 / US 29 (Winder Hwy) Westbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Observed 2015 Traffic Volumes	15	107	15	26	231	60	116	489	47	10	200	16
Pedestrians		0			0			0			0	
Conflicting Pedestrians	0		0	0		0	0		0	0		0
Heavy Vehicle %	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	5%	2%
Peak Hour Factor		0.80			0.83			0.87			0.83	
Adjustment												
Adjusted 2015 Volumes	15	107	15	26	231	60	116	489	47	10	200	16
Annual Growth Rate	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
Growth Factor	1.077	1.077	1.077	1.077	1.077	1.077	1.077	1.077	1.077	1.077	1.077	1.077
New Road Adjustment												
Other Proposed Developments												
2020 Background Traffic	16	115	16	28	249	65	125	527	51	11	215	17
Project Trips												
Trip Distribution IN	1%					2%					6%	
Trip Distribution OUT							2%	6%	1%			
Office Trips	2	0	0	0	0	4	21	63	10	0	13	0
Trip Distribution IN	1%					2%					6%	
Trip Distribution OUT							2%	6%	1%			
Retail Trips	4	0	0	0	0	9	11	32	5	0	27	0
Pass-By Trips	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Trips	6	0	0	0	0	13	32	95	15	0	40	0
2020 Buildout Total	22	115	16	28	249	78	157	622	66	11	255	17

Appendix F
Programmed Project Fact Sheets

GW-308B

PLAN 2040 RTP Update PROJECT FACT SHEET

Short Title	SUGARLOAF PARKWAY EXTENSION: PHASE 2 - NEW ALIGNMENT FROM SR 316 EAST OF LAWRENCEVILLE TO SR 20 (BUFORD DRIVE / MALL OF GEORGIA PARKWAY) NEAR INTERSECTION WITH SR 324 (GRAVEL SPRINGS ROAD)
GDOT Project No.	0006924
Federal ID No.	CSSTP-0006-00(924)
Status	Programmed
Service Type	Roadway / General Purpose Capacity
Sponsor	Gwinnett County
Jurisdiction	Regional - Northeast
Analysis Level	In the Region's Air Quality Conformity Analysis
Existing Thru Lane	0
Planned Thru Lane	4



Network Year	2040
Corridor Length	8.5 miles

Detailed Description and Justification

This Buford/Dacula/East-Cross County Connector project consists of constructing a new 8.5 miles roadway from SR 316 east of Lawrenceville to SR 20 (Buford Dr.). The road will include a 4 lane divided highway with a raised median, bicycle and pedestrian facilities, turn lanes as well as grade separation at SR 20, I-85, SR 124, Old Fountain Rd., Old Peachtree Rd, Fence Rd, SR 8, and SR 316. The project will add need roadway capacity and address peak period congestion in the northern part of the county experiencing rapid population and employment growth.

Phase Status & Funding Information		Status	FISCAL YEAR	TOTAL PHASE COST	BREAKDOWN OF TOTAL PHASE COST BY FUNDING SOURCE			
					FEDERAL	STATE	BONDS	LOCAL/PRIVATE
PE	Local Jurisdiction/Municipality Funds	AUTH	2006	**$10,000,000**	~~$0,000~~	~~$0,000~~	~~$0,000~~	~~$10,000,000~~
PE-OV	STP - Statewide Flexible (GDOT)	AUTH	2011	**$50,000**	~~$40,000~~	~~$10,000~~	~~$0,000~~	~~$0,000~~
ROW	Local Jurisdiction/Municipality Funds	AUTH	2010	**$17,000,000**	~~$0,000~~	~~$0,000~~	~~$0,000~~	~~$17,000,000~~
ROW	Federal Earmark Funding		2015	**$5,624,375**	$4,499,500	$0,000	$0,000	$1,124,875
ROW	Local Jurisdiction/Municipality Funds		2015	**$30,542,625**	$0,000	$0,000	$0,000	$30,542,625
UTL	Local Jurisdiction/Municipality Funds		LR 2031-2040	**$10,355,000**	$0,000	$0,000	$0,000	$10,355,000
CST	General Federal Aid 2020-2040		LR 2031-2040	**$179,647,295**	$143,717,836	$35,929,459	$0,000	$0,000
				$253,219,295	**$148,257,336**	**$35,939,459**	**$0,000**	**$69,022,500**

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

? For additional information about this project, please call (404) 463-3100 or email transportation@atlantaregional.com.

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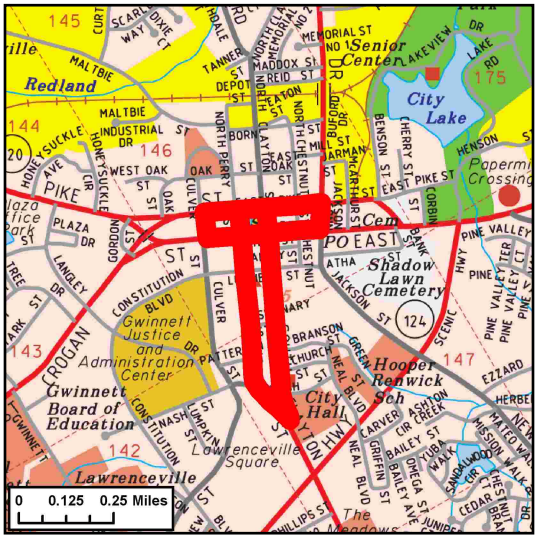
GW-342

PLAN 2040 RTP Update PROJECT FACT SHEET

Short Title	DOWNTOWN LAWRENCEVILLE PEDESTRIAN IMPROVEMENTS & ONE-WAY PAIR CONVERSION
GDOT Project No.	0008963
Federal ID No.	CSSTP-0008-00(963)
Status	Programmed
Service Type	Last Mile Connectivity / Complete Street Retrofit
Sponsor	City of Lawrenceville
Jurisdiction	Gwinnett County
Analysis Level	In the Region's Air Quality Conformity Analysis
Existing Thru Lane	N/A
Planned Thru Lane	N/A



Network Year	2020
Corridor Length	TBD miles

Detailed Description and Justification

This project will provide for pedestrian improvements in downtown Lawrenceville and will also include the conversion of SR 20/Clayton Street and SR 20/Perry Street to a two-way operation. Clayton Street and Perry Street exist as a north-south one-way pair that is currently designated as SR 20. Clayton Street consists of three (3) northbound travel lanes and Perry Street consists of three (3) southbound travel lanes. The proposed project will convert Perry Street and Clayton Street from three (3) one-way travel lanes to two-way operation. The typical section for two-way operation will consist of one (1) through-lane in each direction and one (1) center two-way left-turn lane. Existing signals along Perry and Clayton will be re-configured at Nash Street, Luckie Street, Crogan Street, and Pike Street to accommodate the two-way operation.

In order to convert Perry Street and Clayton Street, these two facilities will need to be removed from the state system. GDOT has committed to re-designating SR 20 around the Downtown area by using SR 124/Scenic Highway to SR 8/124/East Crogan Street as the re-designated SR 20 route. These re-designations will occur separate from this project and be conducted by GDOT staff prior to project implementation.

Phase Status & Funding Information		Status	FISCAL YEAR	TOTAL PHASE COST	BREAKDOWN OF TOTAL PHASE COST BY FUNDING SOURCE			
					FEDERAL	STATE	BONDS	LOCAL/PRIVATE
PE	STP - Urban (>200K) (ARC)	AUTH	2009	**$577,500**	~~$461,960~~	~~$0,000~~	~~$0,000~~	~~$115,540~~
ROW	Local Jurisdiction/Municipality Funds	AUTH	2015	**$1,867,000**	~~$0,000~~	~~$0,000~~	~~$0,000~~	~~$1,867,000~~
CST	STP - Urban (>200K) (ARC)		2017	**$4,252,796**	$2,628,240	$0,000	$0,000	$1,624,556
				$6,697,296	**$3,090,200**	**$0,000**	**$0,000**	**$3,607,096**

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

GW-364

PLAN 2040 RTP Update PROJECT FACT SHEET

Short Title	SR 20 (BUFORD DRIVE) WIDENING FROM SR 124 (BRASELTON HIGHWAY) TO HURRICANE SHOALS ROAD
GDOT Project No.	TBD
Federal ID No.	N/A
Status	Long Range
Service Type	Roadway / General Purpose Capacity
Sponsor	GDOT
Jurisdiction	Gwinnett County
Analysis Level	In the Region's Air Quality Conformity Analysis
Existing Thru Lane	4
Planned Thru Lane	6

Network Year	2030	
Corridor Length	1.2	miles

Detailed Description and Justification

This project will widen SR 20 (Buford Drive) from SR 124 (Braselton Highway) to Hurricane Shoals Road from 4 to 6 lanes.

Phase Status & Funding Information		Status	FISCAL YEAR	TOTAL PHASE COST	BREAKDOWN OF TOTAL PHASE COST BY FUNDING SOURCE			
					FEDERAL	STATE	BONDS	LOCAL/PRIVATE
ALL	General Federal Aid 2020-2040		LR 2020-2030	**$16,400,000**	$13,100,000	$3,300,000	$0,000	$0,000
				$16,400,000	**$13,100,000**	**$3,300,000**	**$0,000**	**$0,000**

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

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GW-390D

PLAN 2040 RTP Update PROJECT FACT SHEET

Short Title	GWINNETT COUNTY ATMS/ITS INFRASTRUCTURE EXPANSION - SR 316 FROM SR 20 INTERCHANGE TO BARROW COUNTY LINE (APALACHEE RIVER)
GDOT Project No.	0013325
Federal ID No.	N/A
Status	Programmed
Service Type	Roadway / Operations & Safety
Sponsor	Gwinnett County
Jurisdiction	Gwinnett County
Analysis Level	Exempt from Air Quality Analysis (40 CFR 93)
Existing Thru Lane	N/A
Planned Thru Lane	N/A

Network Year	2020	
Corridor Length	TBD	miles

Detailed Description and Justification

In addition to the ATMS/ITS infrastructure already in place, the proposed CMAQ-funded ATMS/ITS expansion enables critical monitoring ability of almost every major travel corridor in Gwinnett County, significantly improving travel in the northeast Atlanta region. Traffic signalization and intersection improvement projects are designed to reduce traffic congestion, increase travel speeds, and/or reduce delay thus meeting both goals of the CMAQ program: decreasing congestion and reducing air pollution. Interconnecting traffic signals improves both peak and off peak travel speeds and reduces congestion at intersections. Fiber optic cable installation for traffic signal optimization will occur along four major travel corridors in Gwinnett County: Old Peachtree Road, from North Brown Road to Sugarloaf Parkway; Ronald Reagan Parkway, from SR 124 to US 29; Five Forks Trickum Road, from Sugarloaf Parkway to Rockbridge Road; SR 316, from Hi-Hope Road to Barrow County line.

Phase Status & Funding Information		Status	FISCAL YEAR	TOTAL PHASE COST	BREAKDOWN OF TOTAL PHASE COST BY FUNDING SOURCE			
					FEDERAL	STATE	BONDS	LOCAL/PRIVATE
PE	STP - Urban (>200K) (ARC)		2015	**$76,875**	$61,500	$0,000	$0,000	$15,375
CST	Congestion Mitigation & Air Quality Improvement (CMAQ)		2017	**$2,005,800**	$1,604,600	$0,000	$0,000	$401,200
				$2,082,675	**$1,666,100**	**$0,000**	**$0,000**	**$416,575**

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

? For additional information about this project, please call (404) 463-3100 or email transportation@atlantaregional.com.

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Available Upon Request

***Synchro* Capacity Analyses**

Raw Traffic Count Data