Transportation Analysis

# Perimeter Center Mixed Use DRI# 1533 Dekalb County, Georgia

*Prepared for:* Barry Real Estate Companies

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# TABLE OF CONTENTS

1.0	Project Description	1
1.1 1.2 1.3 1.4 1.5	Introduction Site Plan Review Site Access Bicycle and Pedestrian Facilities Transit Facilities	
2.0	Traffic Analyses Methodology and Assumptions	2
2.1 2.2 2.3	Growth Rate Traffic Data Collection Detailed Intersection Analysis	2
3.0	Study Network	
3.1 3.2 3.3 3.4 3.5	Gross Trip Generation. Trip Distribution Level of Service Standards Study Network Determination Existing Facilities.	
4.0	Trip Generation	4
5.0	Trip Distribution and Assignment	5
6.0	Traffic Analysis	5
6.1 6.2 6.3	Existing 2007 Traffic	6
7.0	Identification of Programmed Projects	
8.0	Ingress/Egress Analysis	9
9.0	Internal Circulation Analysis	9
10.0	Compliance with Comprehensive Plan Analysis	10
11.0	Non-Expedited Criteria	10
11.1 11.2	Quality, Character, Convenience, and Flexibility of Transportation Options Vehicle Miles Traveled	
11.3 11.4	Relationship Between Location of Proposed DRI and Regional Mobility Relationship Between Proposed DRI and Existing or Planned Transit Facilities	
11.4	Transportation Management Area Designation	
11.6	Offsite Trip Reduction and Trip Reduction Techniques	11
11.7	Balance of Land Uses – Jobs/Housing Balance	
<i>11.8</i> 12.0	Relationship Between Proposed DRI and Existing Development and Infrastructure Area of Influence	
12.1 12.2	Criteria Study Area Determination and Characteristics	
12.2	Development Housing Analysis	

12.4	Affordable Housing Analysis	15
13.0	ARC's Air Quality Benchmark	16

#### APPENDIX

Site Photos Alternative Modes Programmed Improvements Trip Generation and Volume Worksheets Peak Hour Turning Movement Counts Capacity Analyses – Existing 2007 Conditions Capacity Analyses – 2010 No-Build Conditions Capacity Analyses – 2010 Build Conditions

# LIST OF TABLES

#### Page

Table 1:	Proposed Land Uses	1
Table 2:	Perimeter Center East Mixed Use DRI, Gross Trip Generation	
Table 3:	Perimeter Center East Mixed Use DRI, Net Trip Generation	5
Table 4:	Existing 2007 Intersection Levels of Service	6
Table 5:	2010 No-Build Intersection Levels of Service	6
Table 6:	2010 Build Intersection Levels of Service	7
Table 7:	2010 Build Intersection Levels of Service IMPROVED	
Table 8:	Trip Reductions	
Table 9:	Census Tract Information	
Table 10:	Estimated Workers per Household	
Table 11:	AOI Jobs and Average Salaries	14
Table 12:	Expected Workers	
Table 13:	ARC VMT Reductions	

# LIST OF FIGURES

#### Following Page

Figure 1:	Site Location
Figure 2:	Aerial Photograph1
Figure 3:	Land Plan/Site Plan 1
Figure 4:	Residential Distribution
Figure 5:	Non-Residential Distribution
Figure 6:	Project Trips
Figure 7:	Existing 2007 Conditions
Figure 8:	Projected 2010 No-Build Conditions
Figure 9:	Projected 2010 Build Conditions
Figure 10:	Programmed Improvements
Figure 11:	Area of Influence



# **EXECUTIVE SUMMARY**

This report presents the analysis of the anticipated traffic impacts of a proposed 2.8-acre mixed-use redevelopment (Perimeter Center East Mixed Use) in DeKalb County, Georgia. This report is being prepared as part of a submittal requesting rezoning from O-I/C-1 (Office-Industrial/Commercial) to O-I Conditional. Because the project will exceed 400,000 square feet of mixed-use development area, the proposed redevelopment is a Development of Regional Impact (DRI) and is subject to Georgia Regional Transportation Authority (GRTA) and Atlanta Regional Commission (ARC) review.

The proposed redevelopment is expected to consist of a 12-story, 240 room hotel, and 23 story, 330 unit residential tower, a 75,000 square-foot (SF) Fitness Club, and an 8,000 SF street-level restaurant to replace the existing 3,920 SF bank with drive through window. The development is scheduled to be completed in a single phase, by the year 2010.

The results of the detailed intersection analysis for the 2010 No-Build (excluding Perimeter Center East Mixed Use development) and 2010 Build conditions (including Perimeter Center East Mixed Use development) identifies the following improvements are necessary in order to maintain the Level of Service standard within the study network.

2010 No-Build recommended improvements (includes background growth but does not include Perimeter Center East Mixed Use DRI project traffic):

No Improvements Necessary

2010 Build recommended improvements (includes Perimeter Center East Mixed Use DRI project traffic):

Ashford Dunwoody Road @ Perimeter Center East

- Remove split-phase timing.
- Re-stripe the eastbound approach to include an exclusive left-turn lane, an exclusive through lane, and an exclusive right-turn lane.
- Add protected only phasing for the exclusive eastbound left-turn lane.
- Re-stripe the westbound approach to include exclusive dual left-turn lanes, an exclusive through lane and an exclusive right-turn lane.
- Add protected only phasing for the exclusive westbound left-turn lanes.
- Optimize signal splits and offsets.

# **1.0 PROJECT DESCRIPTION**

#### 1.1 Introduction

This report presents the analysis of the anticipated traffic impacts of a proposed 2.8-acre mixed-use redevelopment (Perimeter Center East Mixed Use) in DeKalb County, Georgia. This report is being prepared as part of a submittal requesting rezoning from O-I/C-1 (Office-Industrial/Commercial) to O-I Conditional. Because the project will exceed 400,000 square feet of mixed-use development area, the proposed redevelopment is a Development of Regional Impact (DRI) and is subject to Georgia Regional Transportation Authority (GRTA) and Atlanta Regional Commission (ARC) review.

The proposed redevelopment is expected to consist of a 12-story, 240 room hotel, and 23 story, 330 unit residential tower, a 75,000 square-foot (SF) Fitness Club, and an 8,000 SF street-level restaurant to replace the existing 3,920 SF bank with drive through window. The development is scheduled to be completed in a single phase, by the year 2010.

Table 1 Proposed Land Uses				
High-Rise Condominiums 330 dwelling units				
Hotel	240 rooms			
Fitness Club	75,000 SF			
High-turnover (Sit-down) Restaurant	8,000 SF			

A summary of the proposed land-uses and densities can be found below in Table 1.

Figure 1 and Figure 2 provide a location map and an aerial photograph of the site.

#### *1.2 Site Plan Review*

The redevelopment plan is scheduled to be completed in one phase. The proposed site is located in the southeast corner of the intersection of Ashford-Dunwoody Road and Perimeter Center East.

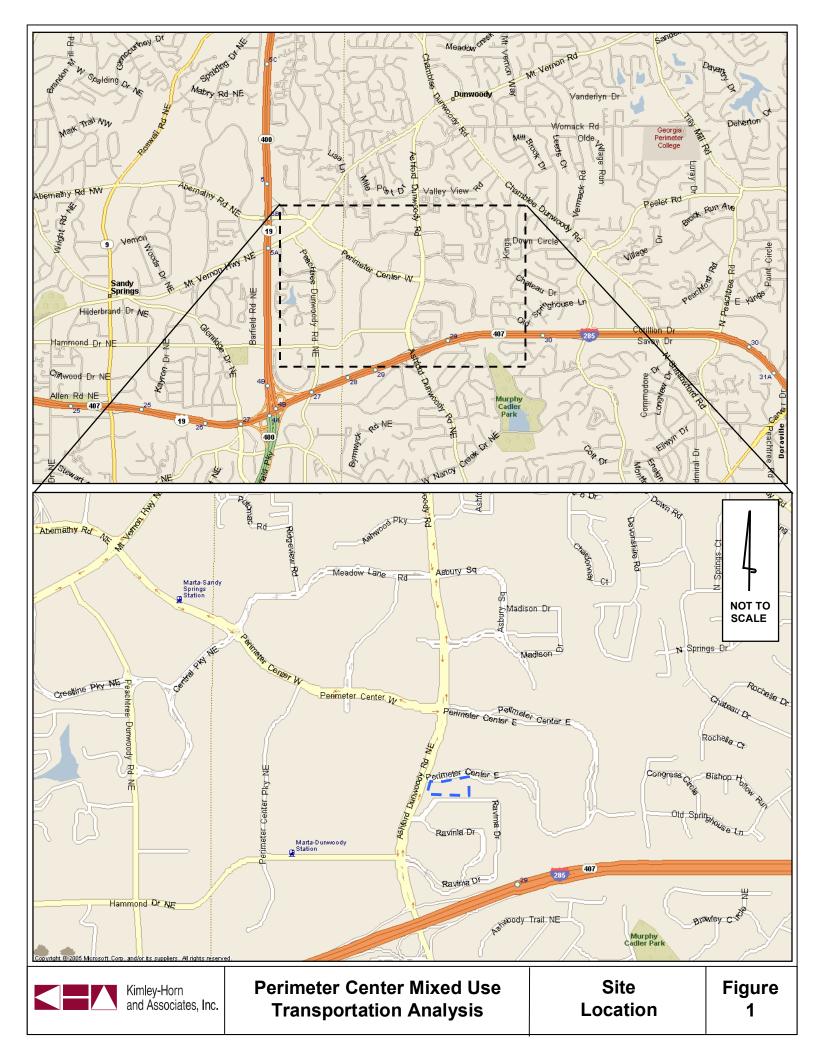
**Figure 3** is a small-scale copy of the site plan. A full-size site plan consistent with GRTA's Site Plan Guidelines is also being submitted as part of the Review Package.

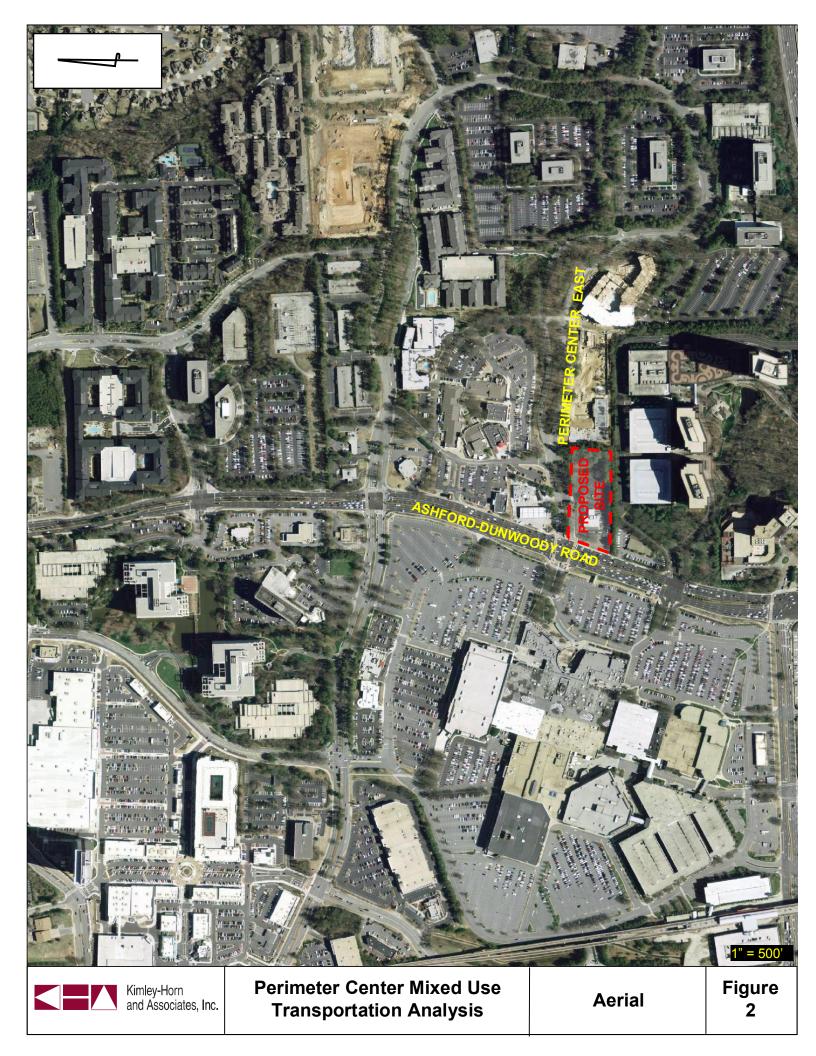
#### 1.3 Site Access

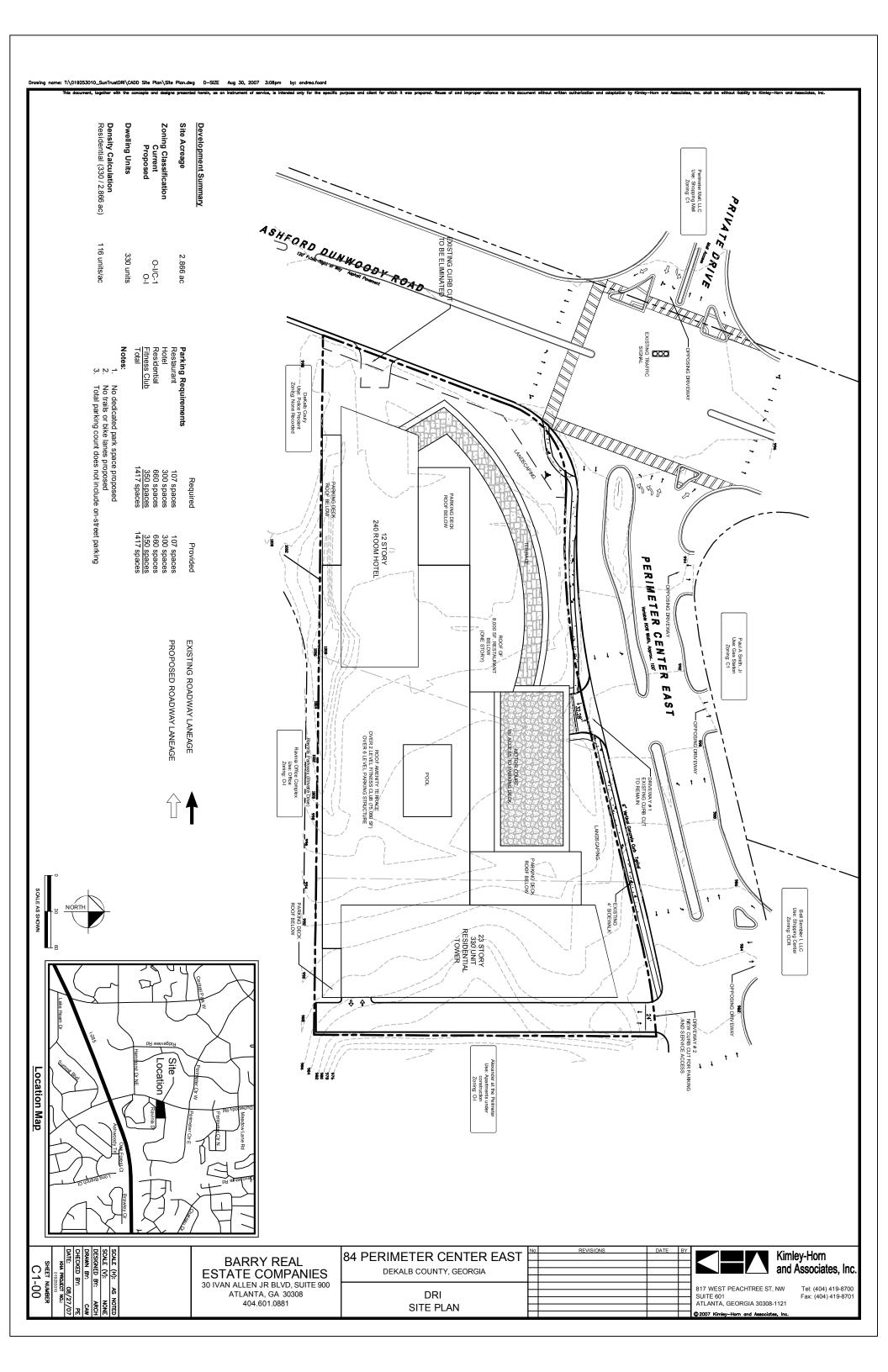
Two site driveways are currently proposed for the development, both of which are along Perimeter Center East. The first driveway (Driveway 1), located approximately 280' (centerline to centerline) east of the intersection with Ashford Dunwoody Road, is an existing driveway. Driveway 1 will serve as the main entrance to the development. The second driveway (Driveway 2) is located approximately 260' east of Driveway 1. Driveway 2 will serve as a service entrance, as well as an entrance to the parking deck. An existing driveway along Ashford-Dunwoody Road, located approximately 140' south of Perimeter Center East, will be removed.

### *1.4 Bicycle and Pedestrian Facilities*

Pedestrian facilities currently exist along both sides of the road along Perimeter Center East and along the west side of Ashford Dunwoody Road.







### 1.5 Transit Facilities

The site is located approximately 2,600 feet east of the Dunwoody MARTA transit (bus + rail) station. The site is served by MARTA buses, local shuttle bus routes, GRTA Xpress Routes and Cobb Community Transit routes. Additionally, there are many local destinations, including Perimeter Mall, within walking distance for residents, employees, and visitors to the site.

The Dunwoody MARTA station lies on the North-South Marta rail line (10-20 minute headways) which intersects the East-West rail line (to the south) at the Five Points station. Five MARTA bus routes operate from the Dunwoody station including the following: Route 5-Sandy Springs (15-30 minute headways), Route 70-Chamblee-Dunwoody (varying headways), Route 87- Roswell Road (20-30 minute headways), Route 150-Perimeter Center (30-60 minute headways), and Route 305- Barfield Road (30 minute headways).

In addition to the MARTA bus routes, the development is also close to GRTA Xpress Route 428- Panola Road to Perimeter Center (30-minute headway). This route stops at the Dunwoody MARTA station. See the attached maps for detailed route descriptions for both the MARTA and Xpress routes.

Cobb Community Transit (CCT) Route #65 operates from the Marietta Transfer Center to the MARTA Dunwoody Transit Station during the AM and PM peak periods Monday through Friday.

Additionally, in cooperation with the Perimeter Transportation Coalition, many companies in the area operate shuttles that provide transportation between their properties, the MARTA stations, and Perimeter Mall. The Equity East Express Shuttle has a stop directly in front of the site.

#### 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. Historical traffic count data from the Georgia DOT was reviewed for the area surrounding the proposed redevelopment, and growth rates of 2.0% per year along all roadways were agreed upon during the methodology meeting with GRTA staff.

#### 2.2 Traffic Data Collection

2007 weekday peak hour turning movement counts were conducted on Wednesday August 22, 2007, Thursday August 23, 2007, and Tuesday August 28, 2007 at the study intersections between 7:00-9:00 AM and 4:00-6:00 PM. The morning and afternoon peak hours varied between the three intersections:

0	Ashford-Dunwoody Road @ Perimeter Center East	(AM Peak 8:00-9:00, PM Peak 5:00-6:00)
0	Perimeter Center East @ Site Driveway #1	(AM Peak 7:45-8:45, PM Peak 4:30-5:30)
0	Perimeter Center East @ Site Driveway #2	(AM Peak 8:00-9:00, PM Peak 4:00-5:00

All raw count data is included in the Appendix.

#### 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 6.0.

Levels of service for signalized intersections are reported for individual movements as well as 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 delay in turning onto a major roadway.

# **3.0 Study Network**

#### 3.1 Gross Trip Generation

As stated earlier, the proposed redevelopment is expected to consist of a 12-story, 240 room hotel, and 23 story, 330 unit residential tower, a 75,000 square-foot (SF) Fitness Club, and an 8,000 SF street-level restaurant. The redevelopment is scheduled to be completed in a single phase, by the year 2010.

Traffic for these land uses was calculated using equations contained in the *Institute of Transportation Engineers'* (*ITE*) *Trip Generation Manual, Seventh Edition, 2003.* Average rates were used only when equations were not provided. Gross trips generated are displayed below in **Table 2**.

Table 2 Perimeter Center East Mixed Use DRI Gross Trip Generation								
Daily Traffic AM Peak Hour PM Peak Hou							ak Hour	
Land Use	ITE Code	Enter	Exit	Enter	Exit	Enter	Exit	
	В	uild-Out (Y	'ear 2010)					
330 DU High-Rise Condos	232	734	734	24	101	79	49	
240 RM Hotel	310	888	888	74	74	75	67	
75,000 SF Fitness Club	492	1,235	1,235	38	53	155	149	
8,000 SF High-Turnover (Sit- Down) Restaurant	932	509	509	48	44	53	34	
Total								

#### 3.2 Trip Distribution

The directional distribution and assignment of new project trips was based on a review of existing counts, engineering judgment, and discussions with GRTA, GDOT, ARC, and Dekalb County staff at the methodology meeting.

### 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 GRTA's Letter of Understanding.

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#### *3.4 Study Network Determination*

A general study area was determined using the 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) be considered for analysis. This general study area includes the following intersections:

0	Ashford-Dunwoody Road @ Perimeter Center East	(signalized)
0	Perimeter Center East @ Site Driveway #1	(unsignalized)
0	Perimeter Center East @ Site Driveway #2	(unsignalized)

Each of the above listed intersections was analyzed for the AM and PM peak periods under Existing 2007 Condition, the 2010 No-Build Condition, and the 2010 Build Condition. The 2010 No-Build condition represents the existing traffic volumes grown at 2.0% per year for three years. The 2010 Build condition adds the projected trips associated with Perimeter Center East Mixed Use redevelopment to the 2010 No-Build condition.

#### 3.5 Existing Facilities

#### Ashford-Dunwoody Road

 Ashford-Dunwoody Road is a north-south oriented roadway that extends from Peachtree Road to Mt. Vernon Road. Ashford-Dunwoody Road is a eight-lane median divided urban minor arterial in the vicinity of the project site near the intersection with Perimeter Center East, with 4 northbound and 4 southbound lanes.

Perimeter Center East

• Perimeter Center East is an east-west oriented roadway that loops from Perimeter Center West to Ashford-Dunwoody Road. Perimeter Center East is a four-lane median divided roadway.

Roadway	Road Type	Number of Lanes	Posted Speed Limit (MPH)	GDOT Functional Classification
Ashford-Dunwoody Road	Two-Way, Divided	8	45	Urban Minor Arterial
Perimeter Center East	Two-Way, Divided	4	35	Urban Local Street

### 4.0 **TRIP GENERATION**

As stated earlier, trips associated with the proposed development were estimated using the ITE *Trip Generation Manual*, Seventh Edition (2003), using equations where available.

Mixed-use and pass-by reductions were taken according to the *ITE Trip Generation Handbook, June 2004* and GRTA guidelines. Alternate modes of transportation reductions of 10% for residential and 5% for non-residential were taken, per the Letter of Understanding. The total trips generated and analyzed in the report are listed below in **Table 3**.

Table 3 Perimeter Center East Mixed Use DRI Net Trip Generation							
	Daily Traffic AM Peak Hour PM Peak Hour						
Land Use	Enter	Exit	Enter	Exit	Enter	Exit	
Build-Out (Year 2010)							
Gross Trips	3,366	3,366	184	245	362	299	
Internal Capture Reductions	-349	-349	0	0	-41	-41	
Alternative Mode Reductions	-223	-223	-15	-20	-22	-19	
Pass-by Reductions	-177	-177	0	0	-16	-16	
New Trips	2,617	2,617	169	225	283	223	

#### 5.0 TRIP DISTRIBUTION AND ASSIGNMENT

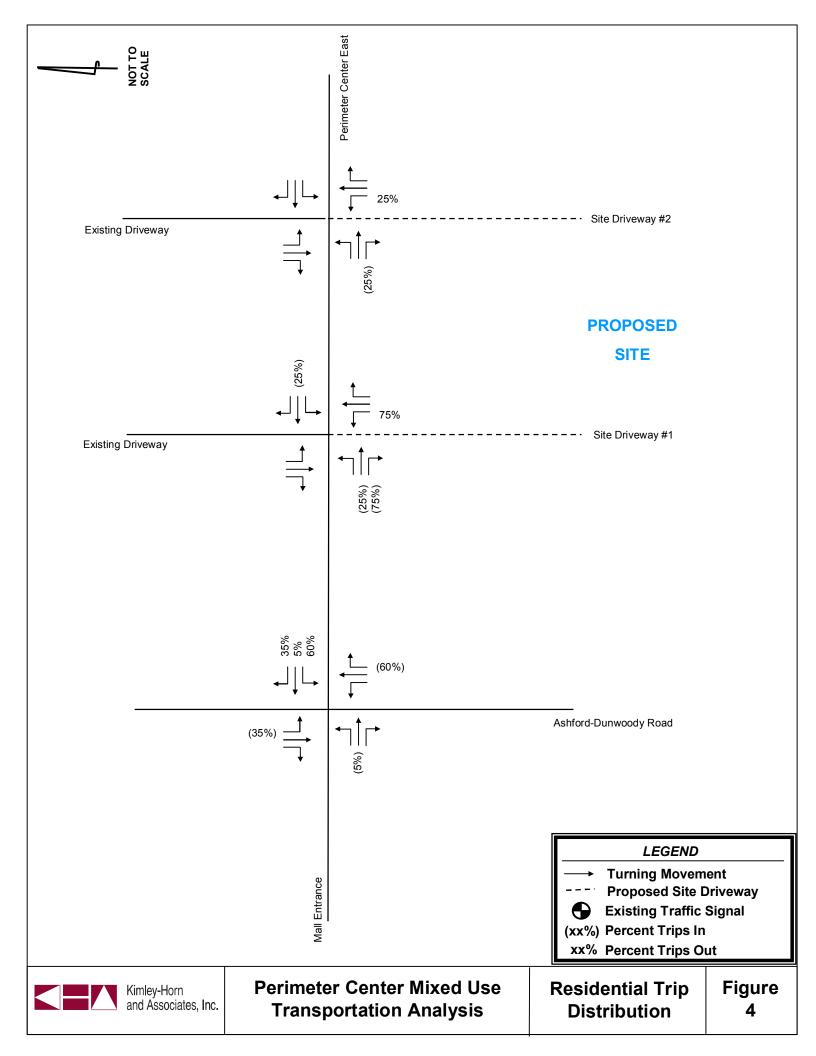
New trips were distributed onto the roadway network using the percentages agreed to during the methodology meeting. **Figure 4 and Figure 5** displays the expected percentages for the development throughout the roadway network. These percentages were applied to the new trips generated by the development (see Table 3, above), and the volumes were assigned to the roadway network. The expected peak hour turning movements generated by the proposed development are shown in **Figure 6**.

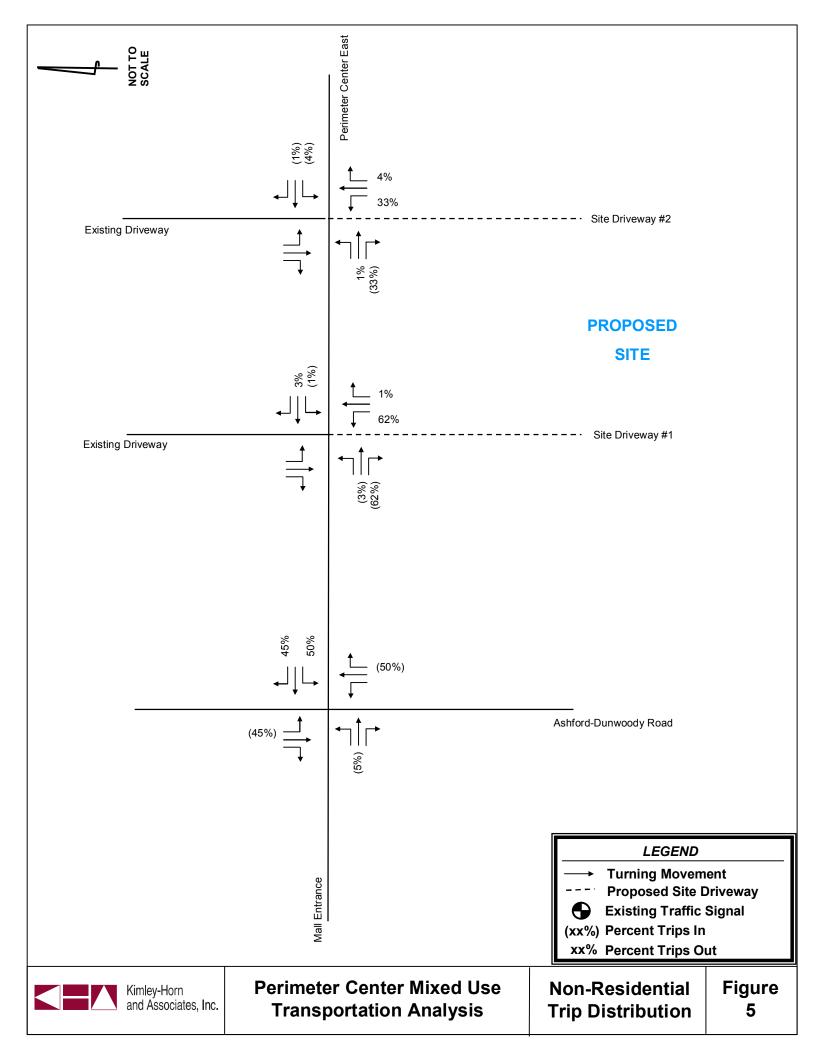
### 6.0 TRAFFIC ANALYSIS

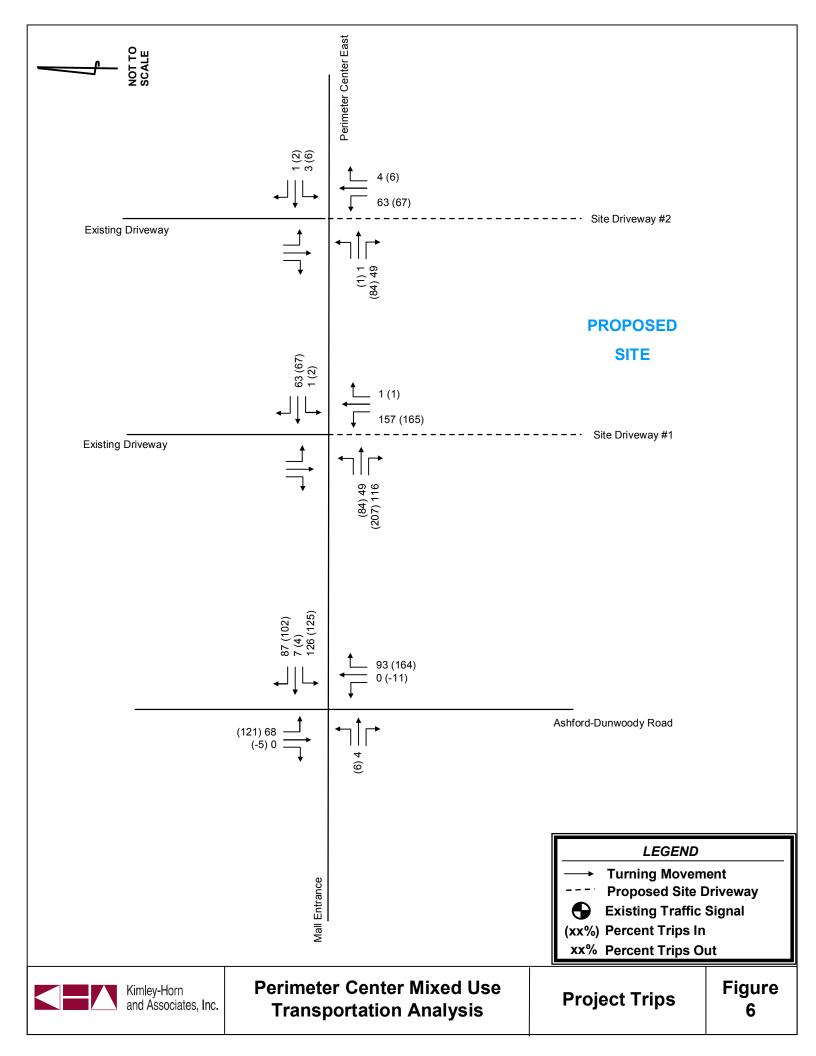
#### 6.1 Existing 2007 Traffic

These observed existing peak hour traffic volumes (as well as pedestrian volumes and heavy vehicle percentages) were input in Synchro 6.0, along with the existing cycle lengths, splits, and offsets, and an Existing 2007 Conditions analysis was performed. The results are displayed below in **Table 4**.

The existing traffic volumes are shown in Figure 7.







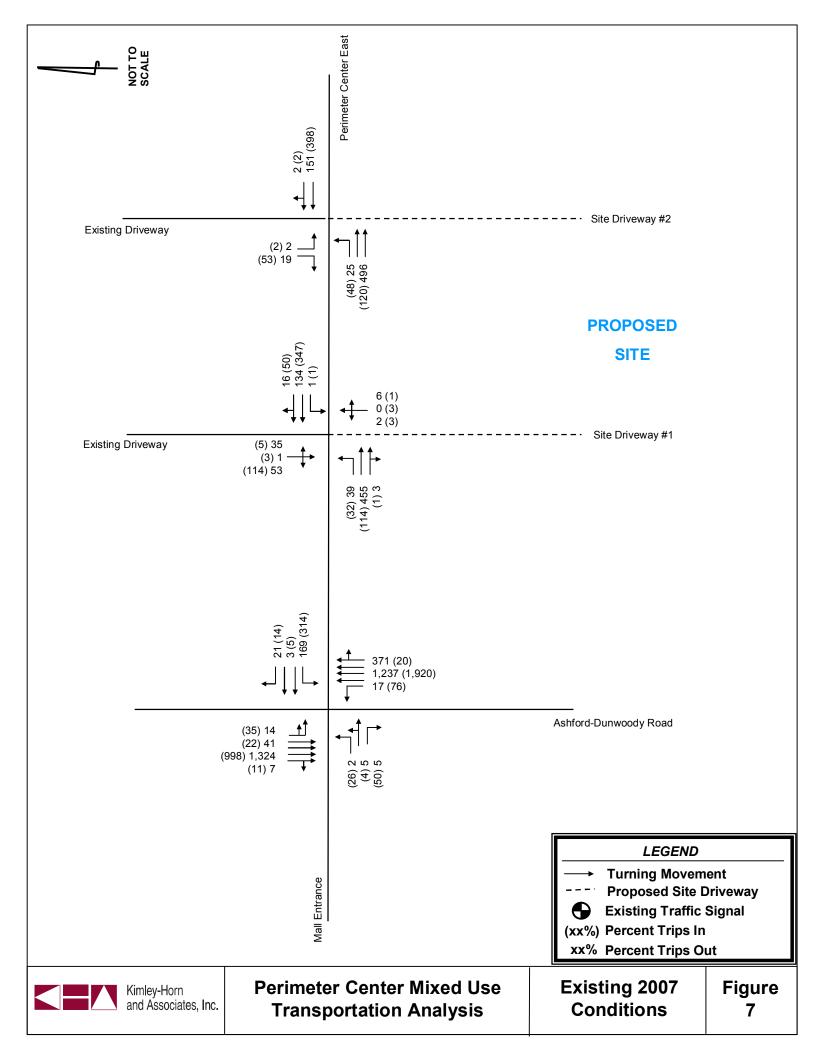




Table 4 Perimeter Center East Mixed Use DRI Existing 2007 Intersection Levels of Service (delay in seconds)								
	Intersection Control AM Peak Hour PM Peak Hour							
1	Ashford-Dunwoody Road at Perimeter Center East	Signal	A (9.5)	C (22.5)				
2	Perimeter Center East at Driveway #1 Northbound Approach	Side-Street Stop Control	B (11.8)	C (16.7)				
3	Perimeter Center East at Driveway #2 Southbound Approach	Side-Street Stop Control	A (9.2)	A (10.1)				

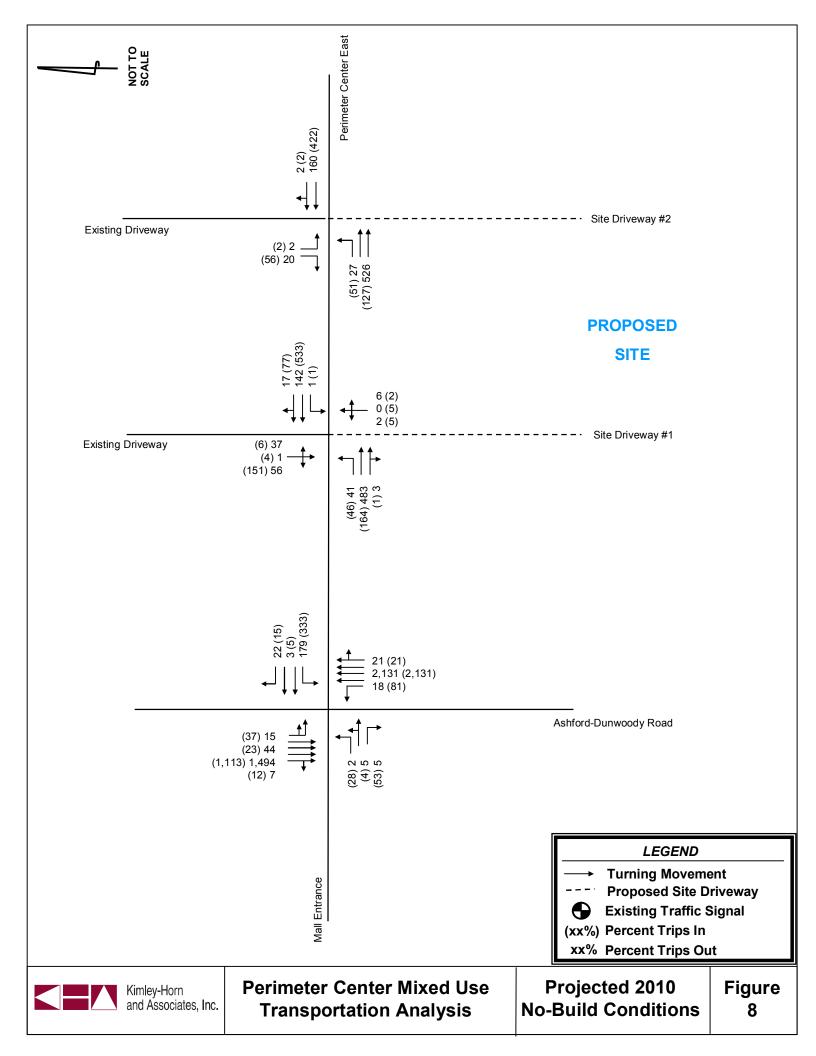
As shown in the table, all intersections currently operate above the acceptable Level of Service standard (LOS D) during both the AM the PM peak hours.

### 6.2 2010 No-Build Traffic

The existing traffic volumes were grown at 2.0% per year along all roadway links within the study network. These volumes were input in Synchro 6.0 and analyses of the projected No-Build conditions were performed. The results are displayed below in **Table 5**.

	Table 5 Perimeter Center East Mixed Use DRI 2010 No-Build Intersection Levels of Service (delay in seconds)							
	Intersection Control LOS AM PM Peak Standard Hour							
1	Ashford-Dunwoody Road at Perimeter Center East	Signal	D	A (9.7)	C (33.0)			
2	Perimeter Center East at Driveway #1 Northbound Approach	Side-Street Stop Control	D	B (12.2)	C (17.7)			
3	Perimeter Center East at Driveway #2 Southbound Approach	Side-Street Stop Control	D	A (9.4)	A (10.3)			

As shown in the table, all intersections met the acceptable Level of Service standards for the year 2010 No-Build condition. The projected volumes for the year 2010 No-Build condition are shown in **Figure 8**.



### 6.3 2010 Build Traffic

The traffic associated with the proposed development (Perimeter Center East Mixed Use) was added to the 2010 No-Build volumes. These volumes were then input into Synchro 6.0. The results of the analyses are displayed in **Table 6**.

Table 6 Perimeter Center East Mixed Use DRI 2010 Build Intersection Levels of Service (delay in seconds)						
Intersection Control LOS AM Peak PM Standard Hour Hour						
1	Ashford-Dunwoody Road at Perimeter Center East	Signal	D	C (21.5)	F (173.6)	
Ashford-Dunwoody Road at Perimeter Center East Improved		Signal	D	B (16.7)	D (45.4)	
2	Perimeter Center East at Driveway #1 Northbound Approach	Side-Street Stop Control	D	F (145.0)	F (469.2)	
3	Perimeter Center East at Driveway #2 Northbound Approach	Side-Street Stop Control	D	C (23.1)	B (18.8)	

As shown in **Table 6**, two of the three study intersections do not operate acceptably. To obtain an acceptable level of service at the intersection of Ashford-Dunwoody Road at Perimeter Center East, the following improvements are recommended:

Ashford Dunwoody Road @ Perimeter Center East

- Remove split-phase timing.
- Re-stripe the eastbound approach to include an exclusive left-turn lane, an exclusive through lane, and an exclusive right-turn lane.
- Add protected only phasing for the exclusive eastbound left-turn lane.
- Re-stripe the westbound approach to include exclusive dual left-turn lanes, an exclusive through lane and an exclusive right-turn lane.
- Add protected only phasing for the exclusive westbound left-turn lanes.
- Optimize signal splits and offsets.

With the improvements listed above, the intersection of Ashford-Dunwoody Road at Perimeter Center East is expected to operate acceptably, as shown below in **Table 7**. While Site Driveway #1 is projected to operate below the level of service standard, this is not uncommon for unsignalized side-street approaches during the peak hour of traffic. Additionally, the parking structure is proposed to share access between the two driveways, providing the opportunity for redistribution of volumes during times of heavy delay. Therefore, no improvements are recommended for this location. **Figure 9** displays projected 2010 Build Conditions.

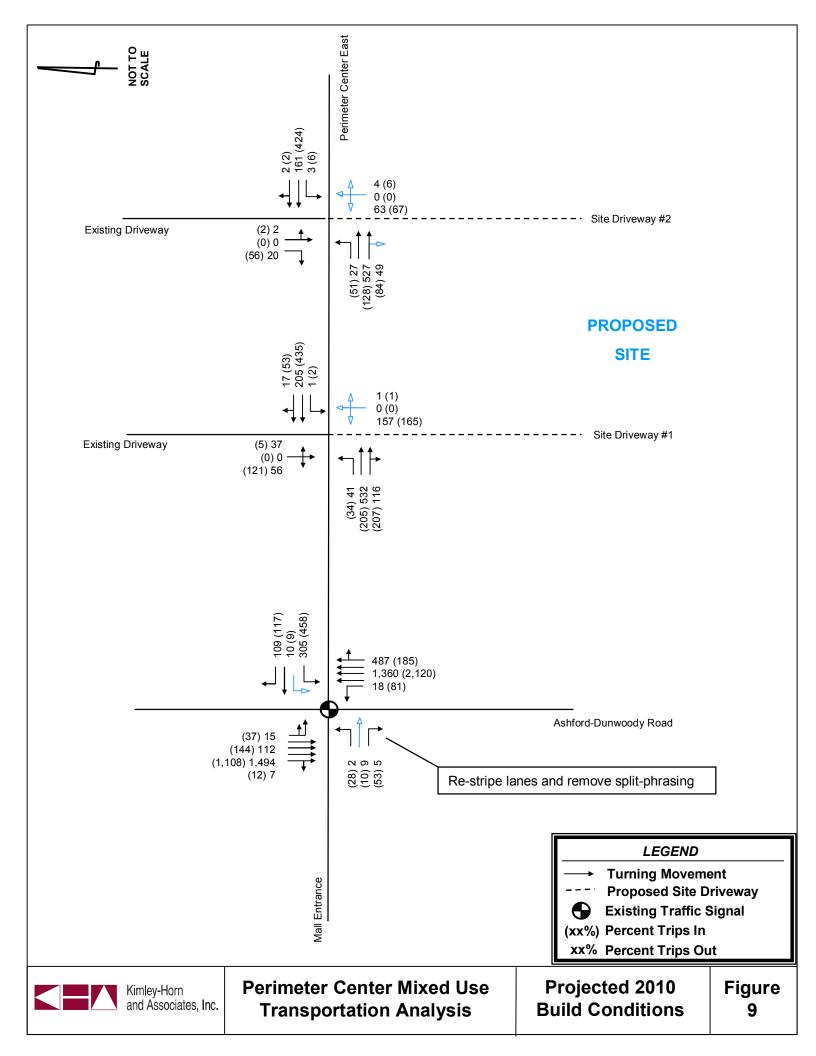




	Table 7 Perimeter Center East Mixed Use DRI 2010 Build Intersection Levels of Service IMPROVED (delay in seconds)						
	Intersection Control LOS AM Peak PM Standard Hour Hour						
1	Ashford-Dunwoody Road at Perimeter Center East	Signal	D	C (16.7)	D (45.4)		
2 Perimeter Center East at Driveway #1 Northbound Approach		Side-Street Stop Control	D	F (145.0)	F (469.2)		
3	Perimeter Center East at Driveway #1 Northbound Approach	Side-Street Stop Control	D	C (23.1)	B (18.8)		

Based on the methodology included in the GRTA Letter of Understanding, a queuing analysis for the westbound movement on Perimeter Center East is to be included in the traffic study. Under 2010 Build Improved Conditions, a 50<sup>th</sup> percentile queue of 172 feet and a 95<sup>th</sup> percentile queue length of 231 feet were calculated in the AM peak hour and a 50<sup>th</sup> percentile queue of 341 feet and 95<sup>th</sup> percentile queue of 392 feet were calculated in the PM peak hour.

### 7.0 IDENTIFICATION OF PROGRAMMED PROJECTS

The *TIP*, *STIP*, *RTP*, and *GDOT's Construction Work Program* were searched for currently programmed transportation projects within the vicinity of the proposed development. Several projects are programmed for the area surrounding the study network.

1.	DK-217 GDOT # 0006883 (RTP, TIP, GDOT CWP) (DRAFT-Envision 6)	This project will include road widening from 4 to 6 lanes, intersection improvements as appropriate, bicycle lanes (through the use of signage) and pedestrian features to improve roadway operations by promoting alternative modes of transportation thereby improving mobility and accessibility.
2.	DK-301 (DRAFT-Envision 6)	Ashford Dunwoody Road at Perimeter Summit Parkway (Roadway Operational Upgrades)
3.	DK-302 GDOT # 0004410 (RTP, TIP, STIP, GDOT) (DRAFT-Envision 6)	Intersection improvements in the Ashford-Dunwoody corridor include improved crosswalks and signals. Part of GRTA's Community Improvement District Bond Funded projects.
4.	DK-303 GDOT #0004411 (RTP, TIP, STIP, GDOT) (DRAFT-Envision 6)	Intersection improvements in the Ashford-Dunwoody corridor include improved crosswalks and signals. Part of GRTA's Community Improvement District Bond Funded projects.
5.	DK-304 GDOT #0004412 (RTP, TIP, STIP, GDOT) (DRAFT-Envision 6)	Intersection improvements in the Ashford-Dunwoody corridor include improved crosswalks and signals. Part of GRTA's Community Improvement District Bond Funded projects.
6.	DK-305 (DRAFT-Envision 6)	Roadway operational upgrades along Ashford Dunwoody Road at Lake Hearn Drive.

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7.	DK-306 GDOT # 0004414 (RTP, TIP, STIP, GDOT) (DRAFT-Envision 6)	Intersection improvements in the Ashford-Dunwoody corridor include improved crosswalks and signals. Part of GRTA's Community Improvement District Bond Funded projects.
8.	GDOT #0004416 (GDOT CWP)	Perimeter Center West @ Perimeter Center Parkway - Intersection Improvement.
9.	GDOT #0004417 (GDOT CWP)	Perimeter Center West @ Bell South Entrance – Intersection Improvement.
10.	GDOT #0004418 (GDOT CWP)	Perimeter Center West @ Perimeter Mall Entrance – Intersection Improvement.
11.	DK-313 (DRAFT-Envision 6)	Roadway operational upgrades along Ashford Dunwoody Road at Ashford Gables Drive/Valley View Road.
12.	DK-317 (DRAFT-Envision 6)	Pedestrian facilities in the Perimeter Center area with sidewalks south of I-285 North.
13.	GDOT #0004831 (GDOT CWP)	Perimeter Center streetscape from Mount Vernon to Ashford-Dunwoody Road.
14.	AR-900A/AR-900B Multi-County	I-285 North Bus Rapid Transit (BRT) from Cumberland/Galleria Area in Cobb County to Perimeter Center in DeKalb County
15.	DK-AR-219A (DRAFT-Envision 6)	Interchange capacity for I-285 North from SR 400 to North Shallowford Road – Includes Ashford-Dunwoody Road interchange.
16.	DK-AR-BP047 (DRAFT-Envision 6)	Bicycle/Pedestrian facilities along Ashford-Dunwoody Road (sidewalks and bike lanes) from west Nancy Creek Road to Perimeter Summit Parkway and along Perimeter Summit Parkway to Lake Hearn Road.

These projects are displayed in Figure 10 and project fact sheets are included in the Appendix.

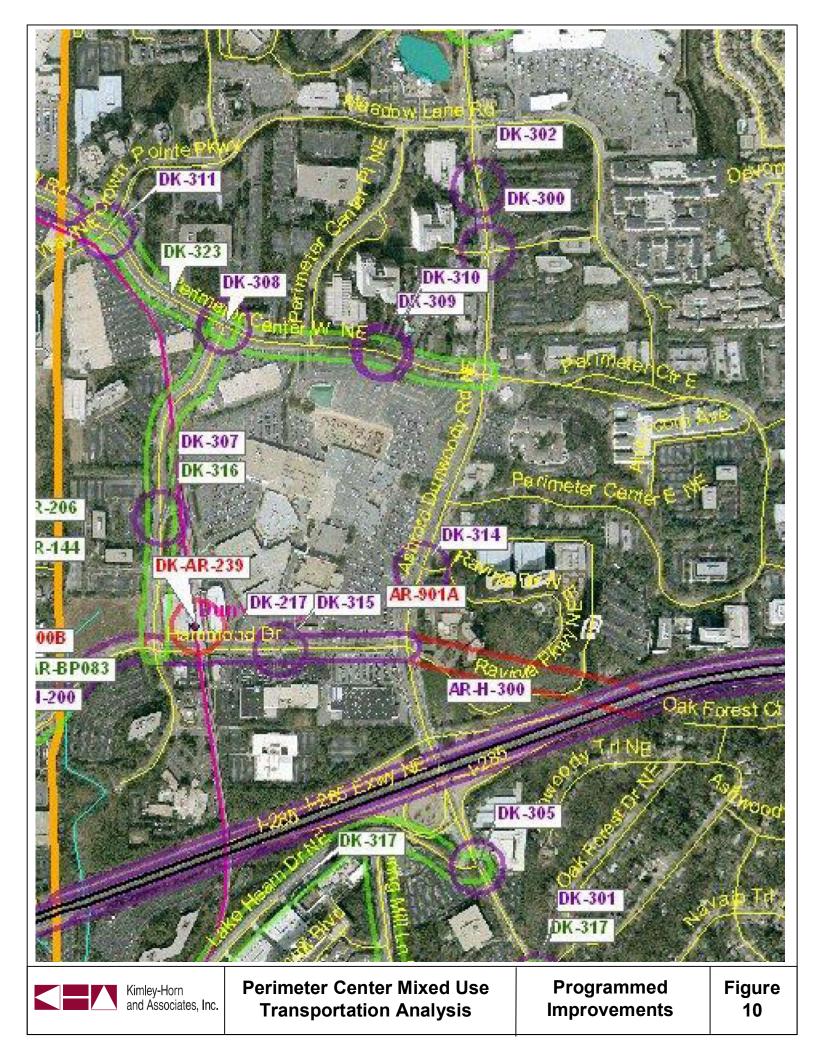
#### 8.0 INGRESS/EGRESS ANALYSIS

Two site driveways are currently proposed for the development, both of which are along Perimeter Center East. The first driveway (Driveway 1), located approximately 280' east of the intersection with Ashford Dunwoody Road, is an existing driveway. Driveway 1 will serve as the main entrance to the development. The second driveway (Driveway 2) is located approximately 260' east of Driveway 1. Driveway 2 will serve as a service entrance, as well as an entrance to the parking deck. An existing driveway, located approximately 285' south of Perimeter Center on Ashford-Dunwoody Road, will be removed.

Overall, the existing ingress and/or egress access points are projected to experience some delay. Long delays are expected at the intersection of Perimeter Center East at Driveway #1. With the proposed parking deck layout, Access to Perimeter Center East can be obtained from either Driveway #1 or Driveway #2. This overall performance is based on design features such as signalized access points, median divided highways, right-in/right-out access, multiple access points and entrance only driveways. The combination of these design features combined with adequate roadway infrastructure promotes optimal performance of vehicle, pedestrian, and transit interactions.

#### 9.0 INTERNAL CIRCULATION ANALYSIS

The proposed redevelopment will generate trips between the residential/hotel and restaurant/non-residential uses. The parking deck connects the mixed uses and will provide connectivity for internal trips. Using the *ITE Trip Generation Handbook, June 2004* as a reference, approximately 10.37% of the gross daily trips will be internal and approximately 12.41% of the gross PM peak hour trips will be internal.



# **10.0** COMPLIANCE WITH COMPREHENSIVE PLAN ANALYSIS

The DeKalb County's Land Use Plan designates this area as a regional activity center.

# **11.0 NON-EXPEDITED CRITERIA**

#### 11.1 Quality, Character, Convenience, and Flexibility of Transportation Options

The site is located approximately 2,600 feet east of the Dunwoody MARTA transit (bus + rail) station. The site is served by MARTA buses (route 150), local shuttle bus routes, GRTA Xpress Routes and Cobb Community Transit routes. Additionally, there are many local destinations, including Perimeter mall, within walking distance for residents, employees, and visitors to the site.

These stations lie on the North-South Marta rail line (10-20 minute headways) which intersects the East-West rail line (to the south) at the Five Points station. Five MARTA bus routes operate from the Dunwoody station including the following: Route 5-Sandy Springs (15-30 minute headways), Route 70- Chamblee-Dunwoody (varying headways), Route 87- Roswell Road (20-30 minute headways), Route 150- Perimeter Center (30-60 minute headways), and Route 305- Barfield Road (30 minute headways). The only MARTA bus route operating from the Sandy Springs station is Route 148- Powers Ferry (70-minute headways).

In addition to the MARTA bus routes, the development is also close to GRTA Xpress Route 428- Panola Road to Perimeter Center (30-minute headway). This route stops at the Dunwoody MARTA station. See the attached maps for detailed route descriptions for both the MARTA and Xpress routes.

Cobb Community Transit (CCT) Route #65 operates from the Marietta Transfer Center to the MARTA Dunwoody Transit Station during the AM and PM peak periods Monday through Friday.

Additionally, in cooperation with the Perimeter Transportation Coalition, many companies in the area operate shuttles that provide transportation between their properties, the MARTA stations, and Perimeter Mall. The Equity East Express Shuttle has a stop directly in front of the site. (see Appendix for site photos)

### 11.2 Vehicle Miles Traveled

The following table displays the reduction in traffic generation due to internal capture, pass-by trips, and alternative modes.

Table 8 Perimeter Center East Mixed Use DRI Trip Reductions		
Build-out Total		
Daily Gross Trip Generation	6,732	
(-) Mixed-use reductions (internal capture)	- 698	
(-) Alternative modes	- 446	
(-) Pass-by trips	- 354	
Net Trips	5,234	

# 11.3 Relationship Between Location of Proposed DRI and Regional Mobility

The proposed development is within walking distance to a transit stop (i.e. MARTA), is convenient to GRTA Xpress Route 428-Panola Road to Perimeter Center, GA 400, and I-285 (regional facilities). This route stops at the Dunwoody MARTA station which is located approximately ½ mile southwest of the proposed redevelopment. See the attached route maps for detailed route descriptions.

#### 11.4 Relationship Between Proposed DRI and Existing or Planned Transit Facilities

The proposed DRI is within walking distance to MARTA bus stops. A route map is included in the Appendix.

Additionally, the Dunwoody MARTA Station is located approximately  $\frac{1}{2}$  mile southwest of the proposed redevelopment.

#### 11.5 Transportation Management Area Designation

The proposed redevelopment is located within the Perimeter Transportation Coalition (PTC) Transportation Management Area (TMA) charged with relieving congestion by implementing and promoting transportation alternatives and improvements through a coordinated and comprehensive effort within the Central Perimeter Business District.

### 11.6 Offsite Trip Reduction and Trip Reduction Techniques

Mixed-use and pass-by trip reductions were taken according to the *ITE Trip Generation Handbook, 2003*. Approximately 10.37% of the gross daily trips will be internal and approximately 12.41% of the gross PM peak hour trips will be internal. A 10% alternative mode reduction (those using transportation modes such as walking, bicycling, transit, etc.) was taken for the residential and hotel uses and a 5% alternative mode reduction was taken for the restaurant and other non-residential uses. Additionally, for the projected new daily and PM peak hour trips, a 43% daily and PM peak pass-by reduction was used for the proposed restaurant portion of the development.

#### 11.7 Balance of Land Uses – Jobs/Housing Balance

Please refer to the Area of Influence Analysis, located in Section 12.0 of the report.

### 11.8 Relationship Between Proposed DRI and Existing Development and Infrastructure

The development is located in an area where the existing infrastructure is adequate to serve the needs of the development upon build-out (2010).

### **12.0** AREA OF INFLUENCE

This section will describe the Area of Influence (AOI) demographics, AOI average wage levels, expected DRI housing costs, and the availability of jobs within the AOI that would reasonably position employees to purchase housing within the proposed DRI.

#### 12.1 Criteria

As part of the non-expedited review process for a DRI, an Area of Influence Analysis must be performed to determine the impact of the proposed development on the balance of housing and jobs within the immediate area surrounding the proposed development. For this proposed development expansion, the non-expedited review criterion is as follows:

This section is included to satisfy the following GRTA Non-expedited review criteria:

#### 7. The proposed DRI:

(c) Is located in an area of influence with employment opportunities which are such that at least twenty-five percent (25%) of the persons that are reasonably anticipated to live in the proposed DRI and are reasonably expected to be employed will have an opportunity to find employment appropriate to such persons' qualifications and experience within the Area of Influence.

# *12.2 Study Area Determination and Characteristics*

The Area of Influence is comprised of the area within six road-miles of the proposed development. To determine the AOI, *TransCAD* was used to measure six road miles from the nearest intersection to the project (Ashford-Dunwoody Road at Perimeter Center East). The population and housing statistics for the AOI were determined by taking the area outlined in *TransCAD*, creating a boundary in GIS format, and overlaying the boundary with a GIS layer containing census tract information. The Area of Influence (located within Fulton, DeKalb, Gwinnett and Cobb Counties) can be seen in **Figure 11**. Information obtained from the census tracts can be seen in **Table 9**.

Table 9 Census Tract Information		
Total Households	80,545	
Population in Households	183,449	
Average household size	2.28	
Total Workers	105,950	
Workers per Household	1.32	
Owner Occupied	53.18%	
Rental Occupied	46.82%	

As can be seen from the table above, the total population within the Area of Influence is 183,449, residing within 80,545 households (an average of 2.28 people per household). The AOI area totals 44,781 acres.

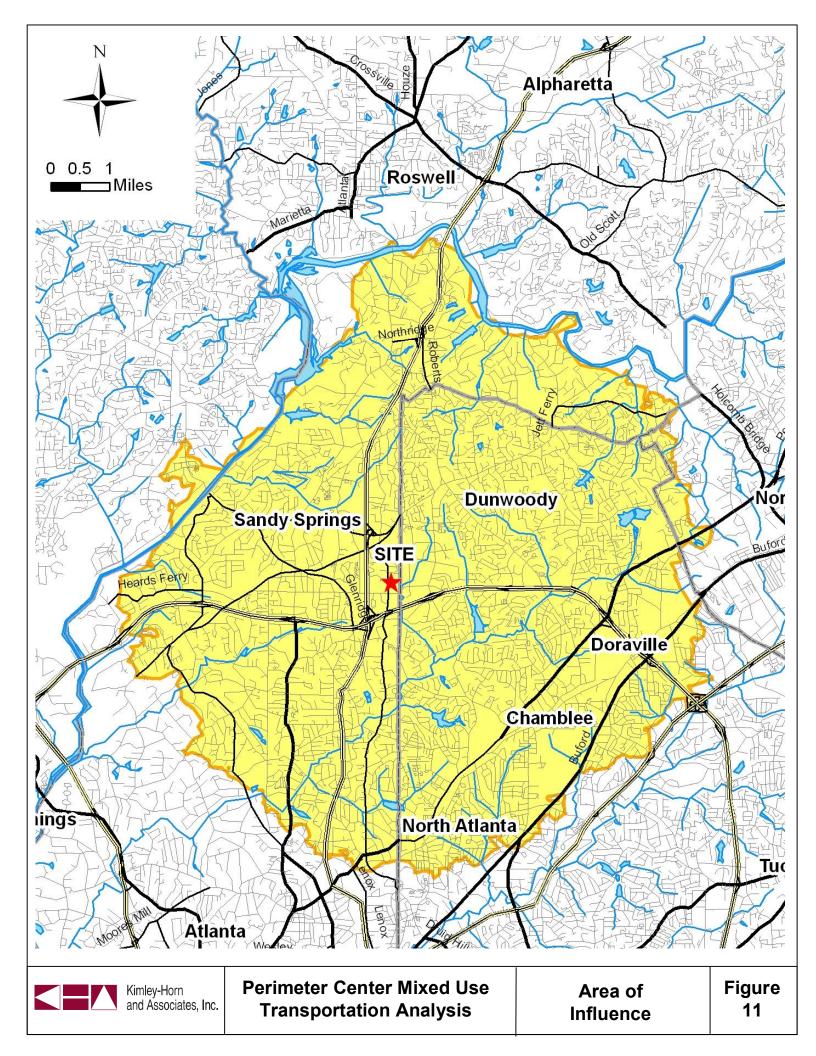
Using the above calculated average of 2.28 persons per household, it can be anticipated that the proposed DRI will house approximately 752 people (330 proposed dwelling units multiplied by 2.28). Based on information obtained from the Census Tracts, it is estimated that approximately 436 of these expected 752 residents would be workers. The remainder of this section will demonstrate the availability of jobs for these expected workers within the development at or above the necessary income level to afford housing within the DRI.

The Atlanta Journal-Constitution website was researched to find current listings of houses for sale in the vicinity of the proposed development (30328 Zip Code). At the time of this report, about 249 homes were listed for sale in the area, ranging in price from \$78,900 to \$2,390,000.

### 12.3 Development Housing Analysis

The development plan provides for houses for sale in three price ranges within the proposed development. **Table 10**, below, displays the number of units for sale, the average sale price for those units, and the number of workers expected to reside in the homes.

Table 10 Estimated Workers per Household					
Tier	Description	Number of Units	Average Price	Number of Workers	
1	Condominium Type 1	66	\$304,000	87	
2	Condominium Type 2	165	\$525,000	218	
3	Condominium Type 3	99	\$585,000	131	



In order to determine the number of jobs available within the AOI that would provide adequate income, information about the types of jobs within the AOI and the average salaries for these positions was collected first. Information about the types of jobs available within the AOI was obtained from Claritas, a data solutions company. A map with the boundary of the AOI was sent to Claritas, and a report containing the types of employment opportunities and number of each type of job was compiled. The Claritas report is included in the Appendix of this report. Next, the Georgia Department of Labor website was researched to obtain average salary information for the positions available within the AOI. Average salary information for jobs in Fulton, DeKalb, Gwinnett, and Cobb counties was matched to the jobs existing within the AOI. This information (also available in the Appendix), along with the information provided by Claritas, is included in **Table 11**, on the following page.

Table 11					
AOI Jobs and Average Salaries					
Industry / Business Type	# Businesses	# Employees	Average Salary		
Retail Trade	2,521	43,964	\$27,426		
Building Materials and Garden Supply	112	2,857	-		
General Merchandise Stores	47	3,446	-		
Food Stores	206	3,928	-		
Auto Dealers and Gas Stations	195	6,509	-		
Apparel and Accessory Stores	224	1,678	-		
Home Furniture, Furnishings, and Equipment	405	8,195	-		
Eating and Drinking Places	687	12,778	-		
Miscellaneous Retail Stores	646	4,574	-		
Finance	2,074	32,853	\$56,786		
Banks, Savings and Lending Institutions	489	7,896	-		
Securities and Commodity Brokers	287	3,406	-		
Insurance Carriers and Agencies	386	11,826	-		
Real Estate	857	8,274			
Trusts, Holdings, and Other Investments	857	0,274	-		
Services	6,668	95,048	-		
Hotels and Other Lodging	78	6,547	\$16,987		
Personal Services	1,243	6,206	-		
Business Services	2,331	33,229	\$67,770		
Motion Picture and Amusement	256	2,570	\$37,291		
Health Services	1,165	22,442	\$41,574		
Legal Services	578	3,530	\$67,770		
Education Services	223	8,521	\$39,558		
Social Services	221	3,023	\$41,574		
Miscellaneous, Membership	573	8,981	_		
Organizations and Nonclassified	575	0,901	-		
Agriculture	193	1,305	\$8,743		
Mining	3	31	\$27,439		
Construction	743	7,258	\$46,623		
Manufacturing	538	9,285	\$54,988		
Transportation, Communication/Public Utilities	547	9,646	\$92,207		
Wholesale Trade	588	6,758	\$61,550		
Public Administration	99	1,294	\$44,288		
Total	13,974	207,442	-		

# 12.4 Affordable Housing Analysis

Various mortgage calculators are available online to aid in determining affordable housing based on given incomes and income ranges. These calculators were used to determine the minimum income necessary to afford housing within the proposed Perimeter Center East development. It was assumed that no more than one third of an individual's income would be used for mortgage costs (principal + interest), that a 6.37% interest rate on a 30-year conventional loan could be obtained, and that a 10% down payment would be made. The income required to purchase a home at the approximate price range was calculated and is displayed in **Table 12**. Because there is an average of 1.32 workers expected per household, the required income was divided by 1.32 to determine the average salary each worker within the development would be expected to earn in order to provide their "fair share" of the housing costs. This methodology assumes an equal burden on all workers within the development, and is considered to be a conservative approach since it eliminates the lower paying positions within the AOI from consideration in the analysis. Table 12 also displays the number of workers expected in each price range, as well as the number of jobs available at the necessary average income level to afford housing within that price range. As can be seen in the table, there are more than enough positions available within the AOI for expected workers within the development to find employment at the required income level for the three levels of pricing within the development, thus satisfying the GRTA requirement of 25%.

	Table 12 Expected Workers					
	Average Sale Price	Necessary Income per Expected Worker	Expected Worker per Price Range	Jobs at or above Necessary Income		
1	\$304,000	\$46,690	87	95,301		
2	\$525,000	\$80,632	218	9,646		
3	\$585,000	\$89,847	131	9,646		
Per	cent of expected wo	100%				

# **13.0 ARC'S AIR QUALITY BENCHMARK**

The redevelopment is a mixed-use development, containing 330 residential units, 240 hotel rooms, a 75,000 square foot (SF) fitness club, and 8,000 SF of quality restaurant space on approximately 2.866 acres. Because residential is the dominant use and the dwelling units per acre ratio is approximately 116 units per acre, the development meets the ARC criteria (1 b) for a 6% reduction.

Additionally, the proposed redevelopment will connect with the existing sidewalks along Perimeter Center East, and Ashford Dunwoody Road. Pedestrians will also be able to access other uses within the proposed development via the parking decks and lots. This pedestrian network meets the ARC criteria (6 e) for a 5% reduction.

There are bus stops are within <sup>1</sup>/<sub>4</sub> mile of the project and meet the ARC criteria (4) for a 3% reduction.

According to ARC criteria, if the project is within 0.5 miles of a rail station, an additional 5% VMT reduction can be taken. The proposed redevelopment is approximately 2,600° from a rail station and therefore qualifies for the 5% reduction.

The proposed development meets the ARC criteria for a total 19% VMT reduction. These reductions are displayed below in **Table 12**.

Table 13 ARC VMT Reductions		
Mixed-Use Projects where Residential is the dominant use		
Greater than 15 dwelling units/acre	-6%	
Bike/ped networks in development that meet one Density 'target' and connect to adjoining uses	-5%	
Project is located within 1/2 mile of a rail station	-5%	
Project is located within 1/4 mile of a bus stop	-3%	
Total Reductions	19%	