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## **EXECUTIVE SUMMARY**

This report presents the analysis of the anticipated traffic impacts of a proposed +/-397-acre mixed-use development (The Preserve at Elijah Mountain; aka Daniels Bridge Road) in DeKalb County, Georgia. This report is being prepared as part of a submittal requesting rezoning from R-85 (Single-Family Residential) to PC-3 (Pedestrian Community). Because the mixed-use project will exceed 400,000 gross square feet, 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.

The proposed development is expected to consist of 304 single-family homes, 312 apartments, 616 townhomes, 1,921 senior adult units, and 730,857 square feet of retail space. The proposed land uses can be further broken down; 165 of the 616 townhomes are proposed to be senior units and of the 1,921 total senior units, there are 540 senior high-rise units and 1,381 senior mid-rise units.

The development is scheduled to be completed over a five-year period. For the purposes of the traffic analysis, one build-out phase will be analyzed for the year 2012.

While the proposed development is located in DeKalb County, the development property extends to the east into Rockdale County. However, the development of the approximate 261 acres of property located in Rockdale County is not included in the current rezoning application and is not included in this DRI transportation analysis. The only proposed improvement in Rockdale County is the construction of the proposed Vernon Jones Parkway tie-in to Daniels Bridge Road, thereby creating a secondary site access location.

Based on the existing 2007 conditions, three of the study area intersections currently operate below the acceptable Level of Service standard (LOS D). It is important to note there are two programmed intersection improvements projects at two of the study intersections. The programmed improvements at the intersection of Browns Mill Road (SR 212) @ Klondike Road (Intersection #2) include turn lanes and a traffic signal. There improvements are currently under construction. The programmed improvements at the intersection of Klondike Road @ Rockland Road (Intersection #3) include a single-lane roundabout. This project is currently in design. Both improvements are expected to be in place prior to 2012, and therefore were included in the 2012 No-Build Conditions Analysis.

The results of the detailed intersection analysis for the 2012 No-Build conditions (excluding the traffic associated with The Preserve at Elijah Mountain development) and 2012 Build conditions (including the traffic associated with The Preserve at Elijah Mountain development) identified improvements that will be necessary in order to maintain the Level of Service standard (LOS D or E) within the study network. Per GRTA's Letter of Understanding guidelines, improvements were made to the intersections until the Level of Service was elevated to an appropriate range. These improvements are listed below:

2012 No-Build recommended improvements (includes background traffic growth but does not include The Preserve at Elijah Mountain DRI project traffic):

Scott Highway (SR 212) @ Smyrna Road (Intersection #6):

- Install a southbound left-turn lane along Scott Highway (SR 212).
- Install a northbound right-turn lane along Scott Highway (SR 212).
- Install a westbound right-turn lane along Smyrna Road.
- Install a traffic signal when warranted. (Note: Peak hour volume warrants are projected to be met in the 2012 No-Build year during the AM and PM peak conditions.)

Browns Mill Road (SR 212) @ Evans Mill Road (Intersection #9):

- Install an eastbound left-turn lane along Browns Mill Road (SR 212).
- Install a southbound right-turn lane along Evans Mill Road.
- \* Note: To satisfy GRTA's level-of-service 'D' or 'E' standard, a traffic signal would need to be installed. However, a traffic signal will likely not be warranted based on the projected 2012 Build conditions due to low side street left-turning volumes. A traffic signal warrant analysis report should be performed prior to a traffic signal being installed at this location.

## 2012 Build recommended improvements (adds The Preserve at Elijah Mountain DRI project traffic to the 2012 No-Build conditions):

Browns Mill Road (SR 212) @ Panola Road (Intersection #1)

- Install an additional eastbound through lane along Browns Mill Road (SR 212).
- Install a westbound right-turn lane along Browns Mill Road (SR 212).
- Install an additional southbound left-turn lane along Panola Road (creating dual-left turn lanes).

Browns Mill Road (SR 212) @ Klondike Road (Intersection #2)

- Install an additional eastbound through lane along Browns Mill Road (SR 212).
- Install an additional westbound through lane along Browns Mill Road (SR 212).
- Install a northbound right-turn lane along Klondike Road.

Klondike Road @ Woodrow Drive (Intersection #4)

- Install an eastbound right-turn lane along Klondike Road.
- Install a northbound left-turn lane along Klondike Road.

Scott Highway (SR 212) @ O'Neal Road (Intersection #5)

- Install an eastbound right-turn lane along O'Neal Road (stop-controlled approach).
- Install a northbound left-turn lane along Scott Highway (SR 212).

Browns Mill Road (SR 212) @ Evans Mill Road (Intersection #9)

- Install an eastbound through lane along Browns Mill Road.
- Install a westbound through lane along Browns Mill Road.
- \* To satisfy GRTA's level-of-service 'D' standard, a traffic signal would need to be installed. However, a traffic signal will likely not be warranted based on the projected 2012 Build conditions due to low side street left-turning volumes. A traffic signal warrant analysis report should be performed prior to a traffic signal being installed at this location.

The following intersection geometry and improvements are recommended at the proposed project driveways and internal site intersections (Note: The attached site plan includes these improvements):

The proposed Vernon Jones Parkway is recommended to be a four-lane divided roadway between Browns Mill Road (SR 212) and Setters Way (approximately 2,500 feet). A two-lane divided roadway south of Setters Way is expected to provide an acceptable level of service for the projected traffic volumes. A 120-foot wide right-of-way, a raised landscaped median, and a 10 foot wide multiuse path along both sides of the parkway is proposed along the entire length of the proposed parkway, from SR 212 to the DeKalb/Rockdale County line.

Browns Mill Road (SR 212) @ Vernon Jones Parkway (proposed driveway, Intersection #11)

- Install dual northbound left-turn lanes along the proposed Vernon Jones parkway.
- Install dual westbound left-turn lanes along Browns Mill Road.
- Install dual eastbound right-turn lanes along Browns Mill Road.
- Install a traffic signal when warranted. (Note: Peak hour volume warrants are projected to be met in the 2012 Build year during the peak conditions; however, installation of a traffic signal at this location should be considered prior to full build-out.)

Proposed Vernon Jones Parkway @ Street 'B' (Intersection #12)

- Northbound: Install a left-turn lane, two through lanes, and a right-turn lane along Vernon Jones Parkway.
- Southbound: Install a left-turn lane, two through lanes, and a channelized (yield-controlled) right-turn lane along Vernon Jones Parkway.
- Westbound: Install a left-turn lane, one through lane, and a right-turn lane.
- Eastbound: Install dual left-turn lanes, one through lane, and a right-turn lane.
- Install a traffic signal when warranted. (Note: Peak hour volume warrants are projected to be met in the 2012 Build year during the peak conditions; however, installation of a traffic signal at this location should be considered when a majority of the retail space is opened.)

Proposed Vernon Jones Parkway @ Street 'F' (Intersection #13)

- Northbound: Install a left-turn lane, two through lanes, and a right-turn lane along Vernon Jones Parkway.
- Southbound: Install a left-turn lane, two through lanes, and a right-turn lane along Vernon Jones Parkway.
- Westbound: Install a left-turn lane and a shared through/right-turn lane; stop-controlled.
- Eastbound: Install a left-turn lane and a shared through/right-turn lane; stop-controlled.

Proposed Vernon Jones Parkway @ Morris Williams Parkway (Intersection #14)

- Northbound: Install a left-turn lane, one through lane, and a right-turn lane along Vernon Jones Parkway.
- Southbound: Install a left-turn lane, one through lane, and a right-turn lane along Vernon Jones Parkway.
- Westbound: Install a left-turn lane, one through lane, and a right-turn lane.
- Eastbound: Install a left-turn lane, one through lane, and a right-turn lane.
- Install a traffic signal when warranted. (Note: Peak hour volume warrants are projected to be met in the 2012 Build year during the peak conditions; however, installation of a traffic signal at this location should be considered prior to build-out.)

Proposed Vernon Jones Parkway @ Street 'JJ' (Intersection #15)

- Northbound: Install a left-turn lane and one through lane along Vernon Jones Parkway.
- Southbound: Install one through lane and a right-turn lane along Vernon Jones Parkway.
- Westbound: Install a left-turn lane and a right-turn lane along Street 'JJ'.

## **1.0 PROJECT DESCRIPTION**

#### 1.1 Introduction

This report presents the analysis of the anticipated traffic impacts of a proposed +/-397-acre mixed-use development (The Preserve at Elijah Mountain; aka Daniels Bridge Road) in DeKalb County, Georgia. This report is being prepared as part of a submittal requesting rezoning from R-85 (Single-Family Residential) to PC-3 (Pedestrian Community). Because the mixed-use project will exceed 400,000 gross square feet, 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.

The proposed development is expected to consist of 304 single-family homes, 312 apartments, 616 townhomes, 1,921 senior adult units, and 730,857 square feet of retail space. The proposed land uses can be further broken down; 165 of the 616 townhomes are proposed to be senior units and of the 1,921 total senior units, there are 540 senior high-rise units and 1,381 senior mid-rise units.

The development is scheduled to be completed over a five-year period. For the purposes of the traffic analysis, one build-out phase will be analyzed for the year 2012.

While the proposed development is located in DeKalb County, the development property extends to the east into Rockdale County. However, the development of the approximate 261 acres of property located in Rockdale County is not included in the current rezoning application and is not included in this DRI transportation analysis. The only proposed improvement in Rockdale County is the construction of the proposed Vernon Jones Parkway tie-in to Daniels Bridge Road, thereby creating a secondary site access location.

Table 1   Proposed Land Uses				
Single-Family Homes	304 dwelling units			
Apartments	312 dwelling units			
Condominium/Townhomes	616 dwelling units			
Senior Adult Mid-Rise and High-Rise Units	1,921 dwelling units			
Retail Space	730,857 SF			

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

The proposed development is located in DeKalb County along the south side of Browns Mill Road (SR 212), east of the South River, and along the Rockdale County Line to the east. **Figure 1** and **Figure 2** provide a location map and an aerial photograph of the site.

## 1.2 Site Plan Review

The development plan incorporates a mixture of retail and residential land uses. A large percentage of the retail space (544,280 SF) is proposed along the Browns Mill Road (SR 212) frontage. The proposed Vernon Jones Parkway will connect Browns Mill Road through site to Daniels Bridge Road. Apartments, townhomes, and single-family homes will be located either side of the proposed parkway. The senior units and a second retail area (143,377 SF) are proposed in the southern portion of the site. An additional 43,200 SF of retail space is proposed in the ground floor of the senior high rise units. The proposed parkway and other internal roads will provide internal connections between uses. Additionally, internal connections will be provided for pedestrian and non-

motorized users by sidewalks and a 10 foot wide multiuse path is proposed along Vernon Jones Parkway. A trail through pocket parks and along the South River is also proposed.

**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

Access to the development is proposed at three locations along three public roads. The main site driveway is proposed along Browns Mill Road (SR 212). A parkway is proposed through the site connecting Browns Mill Road to Daniels Bridge Road. The second proposed access location is at the end of Daniels Bridge Road. The third proposed access location is Setters Way (which is an internal road in the Chestnut Lake Preserve subdivision).

### 1.4 Bicycle and Pedestrian Facilities

Pedestrian / bicycle facilities currently do not exist along Brown Mill Road (SR 212). The proposed development will provide pedestrian access in accordance with DeKalb County development requirements.

#### 1.5 Transit Facilities

There are no existing transit facilities in the project area.

## 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 development, and growth rates of 2.0% per year along all roadways were agreed upon during the Pre-Application meeting with GRTA staff. This growth rate was recommended by the reviewing agencies to account for expected growth in the study area.

#### 2.2 Traffic Data Collection

Existing weekday peak hour turning movement counts were conducted at two signalized intersections and eight unsignalized intersections between 7:00-9:00 AM and 4:00-6:00 PM. The morning and afternoon peak hours varied between the intersections:

- o Browns Mill Road (SR 212) @ Panola Road (signalized) (AM Peak 7:15-8:15, PM Peak 5:00-6:00)
- o Browns Mill Road (SR 212) @ Klondike Road (unsignalized) (AM Peak 7:00-8:00, PM Peak 4:30-5:30)
- o Klondike Road @ Rockland Road (unsignalized) (AM Peak 7:15-8:15, PM Peak 5:00-6:00)
- o Klondike Road @ Woodrow Drive (unsignalized) (AM Peak 7:00-8:00, PM Peak 5:00-6:00)
- o Scott Highway (SR 212) @ O'Neal Road (unsignalized) (AM Peak 7:00-8:00, PM Peak 5:00-6:00)

- o Scott Highway (SR 212) @ Smyrna Road (unsignalized) (AM Peak 7:00-8:00, PM Peak 5:00-6:00)
- Scott Highway (SR 212) @ Stockbridge Highway (SR 138) (signalized) (AM Peak 7:15-8:15, PM Peak 5:00-6:00)
- o O'Neal Road @ Daniels Bridge Road (unsignalized) (AM Peak 7:30-8:30, PM Peak 5:00-6:00)
- o Smyrna Road @ McDaniel Mill Road (unsignalized) (AM Peak 7:00-8:00, PM Peak 5:00-6:00)
- Browns Mill Road (SR 212) @ Evans Mill Road (unsignalized) (AM Peak 7:15-8:15, PM Peak 4:00-5:00)

All raw count data is included in the Appendix.

Existing Saturday peak hour turning movement counts were conducted at two unsignalized intersections between 2:00-4:00 PM to capture the Saturday mid-day peak hour. The peak hours varied between the intersections:

- o Browns Mill Road (SR 212) @ Klondike Road (unsignalized) (Peak 2:15-3:15)
- O'Neal Road @ Daniels Bridge Road (unsignalized) (Peak 2:15-3:15)

#### 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 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 development is expected to consist of 304 single-family homes, 312 apartments, 616 townhomes, 1,921 senior adult units, and 730,857 square feet of retail space. For the purposes of the traffic analysis, one build-out phase will be analyzed for the year 2012.

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 The Preserve at Elijah Mountain DRI Gross Trip Generation								
Daily ITE Traffic AM Peak Hour PM Peak Hour SAT Peak H							ak Hour	
Land Use	Code	Weekday	Enter	Exit	Enter	Exit	Enter	Exit
Build-Out (Year 2012)								
304 Single-Family Detached Homes	210	2,892	56	166	184	108	152	129
312 Apartments	220	2,025	31	126	123	66	74	73
1,000 Townhomes *	230	4,544	55	271	266	131	180	153
1,537 Senior Adult Housing * 251 5,525 111 182 215 137 132 132					132			
730,857 SF Retail Space	820	24,742	315	201	1,117	1,210	1,640	1,513
Total		39,728	568	946	1,905	1,652	2,178	2,000

It is important to note per GRTA's requirement, the trip generation for the 1,921 Senior Adult housing units was calculated by using ITE Code 251 for 80 percent of the units and using ITE Code 230 for 20 percent of the units. This resulted in 1,537 units for ITE Code 251. The remaining 384 units were added to the 616 townhomes for a total of 1,000 units.

## 3.2 Trip Distribution

The directional distribution and assignment of new project trips was based on the project land uses, a review of land use densities in the area, combined with engineering judgment and discussions with GRTA staff at the Pre-Application meeting.

The traffic analysis includes the anticipated interaction between the retail and residential uses within the proposed development. The traffic analysis calculated 'internal capture' for the development uses and distributed the internal trips in the analyses of the internal site intersections. While some of these trips will be non-motorized, many of them will be utilizing vehicles due to the size of the entire site. Internal capture percentages for the project were calculated based on ITE's rates. The daily internal capture rate is 12%, the PM peak hour internal capture rate is 14% and the Saturday peak hour internal capture rate is 15%.

## 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.

#### 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) be considered for analysis. This general study area was agreed to during the Pre-Application meeting, and includes the following intersections:

- o Browns Mill Road (SR 212) @ Panola Road (signalized)
- o Browns Mill Road (SR 212) @ Klondike Road (unsignalized)
- Klondike Road @ Rockland Road (unsignalized)
- Klondike Road @ Woodrow Drive (unsignalized)
- o Scott Highway (SR 212) @ O'Neal Road (unsignalized)
- Scott Highway (SR 212) @ Smyrna Road (unsignalized)
- o Scott Highway (SR 212) @ Stockbridge Highway (SR 138) (signalized)
- O'Neal Road @ Daniels Bridge Road (unsignalized)
- Smyrna Road @ McDaniel Mill Road (unsignalized)
- o Browns Mill Road (SR 212) @ Evans Mill Road (unsignalized)

All ten intersections were analyzed for the weekday AM and PM peak hour. Two intersections Browns Mill Road (SR 212) @ Klondike Road and O'Neal Road @ Daniels Bridge Road were also analyzed for the Saturday peak hour.

Each of the above listed intersections was analyzed for the Existing 2007 Condition, the 2012 No-Build Condition, and the 2012 Build Condition. The 2012 No-Build condition represents the existing traffic volumes grown at 2.0% per year for five years. The 2012 Build condition adds the project trips associated with the Preserves at Elijah Mountain development to the 2012 No-Build condition.

Additionally, the proposed project driveway listed below was only analyzed for the 2012 Build Condition:

o Browns Mill Road (SR 212) @ Proposed Vernon Jones Parkway

This intersection was analyzed for the weekday AM, PM, and Saturday peak hour.

## 3.5 Existing Facilities

Panola Road is a four-lane north-south oriented roadway between Thompson Mill and 1-20. It is a two-lane north-south oriented roadway between Thompson Mill Road and Salem Road. The speed limit on Panola Road is 35 MPH.

SR 212 - Browns Mill Road (in DeKalb County) is a two-lane east-west oriented roadway between SR 155 – Snapfinger Road and the proposed project driveway.

SR 212 – Scott Highway (in Rockdale County) is a two-lane east-west oriented roadway. There is a four-lane section approximately 1 mile in length east of the Rockdale/DeKalb county line.

Klondike Road (DeKalb County) is a two-lane divided north-south oriented roadway between I-20 and Smyrna Road SW.

Woodrow Drive is a two-lane north-south oriented roadway between Klondike Road and Evans Mill Road with a 35 MPH posted speed limit.

Stockbridge Highway – SR 138 is a two-lane east-west oriented roadway between O'Neal Road and Ebenezer Road. There is a four-lane section between Tucker Mill Road and McDonough Highway. Stockbridge Highway – SR 138 has a 50 MPH posted speed limit.

Smyrna Road is a two-lane east-west oriented roadway between Klondike Road SW and SR 212 – Scott Highway with a speed limit of 45 MPH.

McDaniel Mill Road (in Rockdale County) is a two-lane north-south oriented roadway between Smyrna Road and Klondike Road.

O'Neal Road is a two-lane roadway between Scott Highway (SR 212) and Stockbridge Highway (SR 138).

Daniels Bridge Road is a rural two-lane east-west oriented roadway beginning at O'Neal Road and extending west approximately 6,500 feet. The existing pavement is less than 24 feet wide in some locations; however, the roadway currently handles two-way traffic.

Roadway	Road Type	Number of Lanes	Posted Speed Limit (MPH)	GDOT Functional Classification
Panola Road	Two-Way	2 / 4	35	Urban Minor Arterial
SR 212 – Browns Mill	Two-Way	2	45 / 55	Urban Minor Arterial
Road (DeKalb Co)				
SR 212 – Scott				
Highway	Two-Way	2/4	45 / 55	Urban Minor Arterial
(Rockdale Co)				
Klondike Road	Two Way	2	35 / 40	Urban Minor Arterial
(DeKalb Co)	1 w0- w ay	2	55740	Orban Winor Arteria
Woodrow Drive	Two-Way	2	35	Urban Minor Arterial
Stockbridge Hwy	Two Way	2/3/4	50	Urban Principal Artarial
(SR 138)	1 w0- w ay	2/3/4	50	Orban Fincipal Anteria
Smyrna Road	Two-Way	2	45	Urban Collector Street
McDaniel Mill Road	Two Wow	n		Urban Collector Street
(Rockdale Co)	1 wo-way	Z		Orban Conector Street
O'Neal Road	Two-Way	2	35	Urban Local Street
Daniels Bridge Road	Two-Way	2		Urban Local Street

## 3.6 Proposed Roadway Facilities

There are two proposed intersection improvement projects that impact the study area intersections. Intersection improvements are currently under construction at the intersection of SR 212 (Browns Mill Road) at Klondike Road. The improvements include new left-turn and right-turn lanes and a traffic signal.

A roundabout is under design at the intersection of Klondike Road at Rockland Road. This intersection improvement project is expected to be opened by year 2008. This project is part of the 2006 DeKalb Bond Initiative program.

These projects were assumed in the 2012 No-Build and 2012 Build conditions analysis, per GRTA's request. Available intersection improvement plans are included in the Appendix.

## 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.

Internal capture reductions were applied to trips between the residential and retail portions of the development. The internal capture worksheets are included in the Appendix.

Pass-by reductions were taken for the retail land uses according to the *ITE Trip Generation Handbook*, 1998 and GRTA guidelines. Based on GRTA's "Limit's Test", the total pass-by trips were limited to 10% of the adjacent roadway's existing traffic volumes. No alternate modes of transportation reductions were taken. The total trips generated and analyzed in the report are listed below in **Table 3**.

Table 3 The Preserve at Elijah Mountain DRI Net Trip Generation								
Trips	Daily Weekday Traffic		AM Peak Hour		PM Peak Hour		Saturday Peak Hour	
	Enter	Exit	Enter	Exit	Enter	Exit	Enter	Exit
Build-Out (Year 2012)								
Gross Trips	19,864	19,864	568	946	1,905	1,652	2,178	2,000
Internal Capture	-2,474	-2,474	-0	-0	-246	-246	-315	-315
Driveway Volumes	17,390	17,390	568	946	1,659	1,406	1,863	1,685
Pass-By Trips     -756     -756     -0     -0				-0	-65	-65	-50	-50
New Trips	16,634	16,634	568	946	1,594	1,341	1,813	1,635

## 5.0 TRIP DISTRIBUTION AND ASSIGNMENT

New trips were distributed onto the roadway network using the percentages agreed to during the Pre-Application 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 6A, 6B, and 6C**.

## 6.0 TRAFFIC ANALYSIS

## 6.1 Existing Traffic

The existing traffic volumes are shown in **Figures 7A**, **7B** and **7C**. These volumes were input in Synchro 6.0 and an Existing Conditions analysis was performed. The results are displayed below in **Table 4**.

	Table 4 The Preserve at Elijah Mountain DRI Existing 2007 Intersections Levels of Service (delay in seconds)							
	Intersection	Control	AM Peak Hour	PM Peak Hour	SAT Peak Hour			
1	Browns Mill Road (SR 212) @ Panola Road	Signalized	C (20.5)	C (23.2)				
2	Browns Mill Road (SR 212) @ Klondike Road	All-way Stop Control	F (*)	F (*)	F (72.4)			
2	Viendike Dood @ Dookland Dood	Side-Street	EB: C (18.4)	EB: C (22.0)				
3	Kionuike Koau @ Kockianu Koau	Stop Control	WB: C (20.8)	WB: C (21.5)				
4	Klondike Road @ Woodrow Drive	Side-Street Stop Control	EB: B (10.3)	EB: B (14.8)				
5	Scott Highway (SR 212) @ O'Neal Road	Side-Street Stop Control	EB: A (10.0)	EB: B (12.3)				
6	Scott Highway (SR 212) @ Smyrna Road (unsignalized)	Side-Street Stop Control	WB: D (28.7)	WB: F (*)				
7	Scott Highway (SR 212) @ Stockbridge Highway (SR 138)	Signalized	C (31.2)	C (26.8)				
8	O'Neal Road @ Daniels Bridge Road (unsignalized)	Side-Street Stop Control	EB: A (8.9)	EB: A (9.0)	EB: A(8.8)			
0	Browns Mill Road (SR 212) @ Evans	Side-Street	NB: F (*)	NB: D (29.7)				
9	Mill Road (unsignalized)	Stop Control	SB: D (33.3)	SB: C (15.4)				
10	Smyrna Road @ McDaniel Mill Road (unsignalized)	Side-Street Stop Control	SB: B (11.3)	B (10.5)				

Note: \* Long delays for side-street traffic

As you can see in the table, three of the intersections currently operate below the acceptable Level of Service standard (LOS D).

## 6.2 2012 No-Build Traffic

The existing traffic volumes were grown at 2.0% per year along all roadway links within the study network. The 2012 No-Build traffic 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.** The projected volumes for the year 2012 No-Build conditions are shown in **Figures 8A, 8B and 8C**.

	Table 5The Preserve at Elijah Mountain DRI2012 No-Build Intersection Levels of Service (delay in seconds)						
	Intersection	Control	AM Peak Hour	PM Peak Hour	SAT Peak Hour		
1	Browns Mill Road (SR 212) @ Panola Road	Signalized	C (28.3)	C (34.6)			
2	Browns Mill Road (SR 212) @ Klondike Road	Signalized	C (21.5)	B (18.3)	B (19.5)		
			NB: A	NB: A			
2	Klondike Road @ Rockland Road	Roundabout	SB: A	SB: A			
3			EB: B	EB: B			
			WB: B	WB: B			
4	Klondike Road @ Woodrow Drive	Side-Street Stop Control	EB: B (10.6)	EB: C (16.8)			
5	Scott Highway (SR 212) @ O'Neal Road	Side-Street Stop Control	EB: B (10.3)	EB: B (13.0)			
6	Scott Highway (SR 212) @ Smyrna Road (unsignalized)	Side-Street Stop Control	WB: E (41.8)	WB: F (*)			
7	Scott Highway (SR 212) @ Stockbridge Highway (SR 138)	Signalized	D (37.6)	C (31.4)			
8	O'Neal Road @ Daniels Bridge Road (unsignalized)	Side-Street Stop Control	EB: A (8.9)	EB: A (9.0)	EB: A(8.8)		
0	Browns Mill Road (SR 212) @ Evans	Side-Street	NB: F (*)	NB: E (37.3)			
9	Mill Road (unsignalized)	Stop Control	SB: F (53.3)	SB: C (17.9)			
10	Smyrna Road @ McDaniel Mill Road (unsignalized)	Side-Street Stop Control	SB: B (12.1)	SB: B (10.8)			

Note: The Level of Service Standard 'D' applies to all intersections except for Browns Mill Road (212) @ Klondike Road (#2) with a LOS Standard 'E' and Scott Highway (SR 212) @ Smyrna Road (#6) with a LOS Standard 'E'.

Note: \* Long delays for side-street traffic

It is important to note two programmed intersection improvements were included in the 2012 No-Build Conditions analysis. The programmed improvements at the intersection of Browns Mill Road (SR 212) @ Klondike Road (#2) include turn lanes and a traffic signal. There improvements are currently under construction. The programmed improvements at the intersection of Klondike Road @ Rockland Road (#3) include a single-lane roundabout. This project is currently in design. Both improvements are expected to be in place prior to 2012.

Two of the study intersections failed to meet acceptable Level of Service standards for the year 2012 No-Build condition. At unsignalized intersections, it is not uncommon for side-street traffic to experience delays at an intersection with a major street. Per GRTA's Letter of Understanding guidelines, improvements were made to the two intersections until the Level of Service was elevated to the GRTA standard. The 2012 No-Build with Improvement intersection Levels of Service are displayed below in **Table 6**.

	Table 6 The Preserve at Elijah Mountain DRI 2012 No-Build with Improvements Intersection Levels of Service (delay in seconds)							
Intersection Control LOS AM Peak PM Peak SAT Pe Standard Hour Hour Hour								
6	Scott Highway (SR 212) @ Smyrna Road (unsignalized)	Signalized	Е	A (7.0)	B (13.2)			
9	Browns Mill Road (SR 212) @ Evans Mill Road (unsignalized)	Side Street Stop Control	AM: E PM: D	NB: F (*) SB: E (42.5)	NB: E (37.3) SB: C (15.1)			

Note: \* Long delays for side-street traffic

The 2012 No-Build improvements made to the intersections are shown in Figures 8A, 8B and 8C, and are listed below by intersection:

Scott Highway (SR 212) @ Smyrna Road (Intersection #6):

- Install a southbound left-turn lane along Scott Highway (SR 212).
- Install a northbound right-turn lane along Scott Highway (SR 212).
- Install a westbound right-turn lane along Smyrna Road.
- Install a traffic signal when warranted. (Note: Peak hour volume warrants are projected to be met in the 2012 No-Build year during the AM and PM peak conditions.)

Browns Mill Road (SR 212) @ Evans Mill Road (Intersection #9):

- Install an eastbound left-turn lane along Browns Mill Road (SR 212).
- Install a southbound right-turn lane along Evans Mill Road.
- \* Note: To satisfy GRTA's level-of-service 'D' or 'E' standard, a traffic signal would need to be installed. However, a traffic signal will likely not be warranted based on the projected 2012 Build conditions due to low side street left-turning volumes. A traffic signal warrant analysis report should be performed prior to a traffic signal being installed at this location.

## 6.3 2012 Build Traffic

The traffic associated with the proposed development (The Preserve at Elijah Mountain) was added to the 2012 No-Build volumes. These volumes were then input into the 2012 No-Build with Improvement roadway network and analyzed with Synchro 6.0. The results of the analyses are displayed in **Table 7**. The projected volumes for the year 2012 Build conditions are shown in **Figures 9A, 9B, and 9C**.

	Table 7The Preserve at Elijah Mountain DRI2012 Build Intersection Levels of Service (delay in seconds)						
	Intersection	Control	AM Peak Hour	PM Peak Hour	SAT Peak Hour		
1	Browns Mill Road (SR 212) @ Panola Road	Signalized	F (99.8)	F (*)			
2	Browns Mill Road (SR 212) @ Klondike Road	Signalized	E (56.8)	F (*)	F (*)		
			NB: A	NB: A			
2	Klondike Road @ Rockland Road	Roundabout	SB: A	SB: A			
5			EB: B	EB: C			
			WB: B	WB: B			
4	Klondike Road @ Woodrow Drive	Side-Street Stop Control	EB: B (12.6)	EB: E (36.5)			
5	Scott Highway (SR 212) @ O'Neal Road	Side-Street Stop Control	EB: B (13.8)	EB: E (41.0)			
6	Scott Highway (SR 212) @ Smyrna Road (signalized)	Signalized	A (7.6)	C (27.7)			
7	Scott Highway (SR 212) @ Stockbridge Highway (SR 138)	Signalized	D (47.5)	D (38.7)			
8	O'Neal Road @ Daniels Bridge Road (unsignalized)	Side-Street Stop Control	EB: B (11.1)	EB: B (12.2)	EB: B (13.5)		
0	Browns Mill Road (SR 212) @ Evans	Side-Street	NB: F (*)	NB: F (*)			
7	Mill Road (unsignalized)	Stop Control	SB: F (*)	SB: F (69.6)			
10	Smyrna Road @ McDaniel Mill Road (unsignalized)	Side-Street Stop Control	SB: B (13.6)	SB: C (18.1)			

Note: \* Long delays for side-street traffic

As shown in Table 7, two signalized intersections and three unsignalized intersections failed to meet the Level of Service standard. As mentioned previously, it is not uncommon for side-street traffic to experience delays at an unsignalized intersection with a major street. Per GRTA's Letter of Understanding guidelines, improvements were made to the six intersections until the Level of Service was elevated to the GRTA standard. The 2012 Build with Improvement intersection Levels of Service are displayed below in **Table 8**.

Table 8 The Preserve at Elijah Mountain DRI 2012 Build with Improvement Intersection Levels of Service (delay in seconds)						
	Intersection Control LOS Standard AM Peak Hour PM Peak Hour Hour					
1	Browns Mill Road (SR 212) @ Panola Road	Signalized	D	C (30.3)	D (40.9)	
2	Browns Mill Road (SR 212) @ Klondike Road	Signalized	Е	C (21.8)	D (54.0)	D (38.7)
4	Klondike Road @ Woodrow Drive	Side-Street Stop Control	D	EB: B (11.8)	EB: D (31.0)	
5	Scott Highway (SR 212) @ O'Neal Road	Side-Street Stop Control	D	EB: B (12.8)	EB: D (29.8)	
9	Browns Mill Road (SR 212) @ Evans Mill Road	Side-Street Stop Control	AM – E PM - D	NB: F (*) SB: D (26.4)	NB: F (*) SB: D (28.2)	

The 2012 Build improvements made to the intersections are shown in Figures 9A, 9B and 9C, and are listed below by intersection:

Browns Mill Road (SR 212) @ Panola Road (Intersection #1)

- Install an additional eastbound through lane along Browns Mill Road (SR 212).
- Install a westbound right-turn lane along Browns Mill Road (SR 212).
- Install an additional southbound left-turn lane along Panola Road (creating dual-left turn lanes).

Browns Mill Road (SR 212) @ Klondike Road (Intersection #2)

- Install an additional eastbound through lane along Browns Mill Road (SR 212).
- Install an additional westbound through lane along Browns Mill Road (SR 212).
- Install a northbound right-turn lane along Klondike Road.

Klondike Road @ Woodrow Drive (Intersection #4)

- Install an eastbound right-turn lane along Klondike Road.
- Install a northbound left-turn lane along Klondike Road.

Scott Highway (SR 212) @ O'Neal Road (Intersection #5)

- Install an eastbound right-turn lane along O'Neal Road (stop-controlled approach).
- Install a northbound left-turn lane along Scott Highway (SR 212).

Browns Mill Road (SR 212) @ Evans Mill Road (Intersection #9)

- Install an eastbound through lane along Browns Mill Road.
- Install a westbound through lane along Browns Mill Road.
- To satisfy GRTA's level-of-service 'D' standard, a traffic signal would need to be installed. However, a traffic signal will likely not be warranted based on the projected 2012 Build conditions due to low side street left-turning volumes. A traffic signal warrant analysis report should be performed prior to a traffic signal being installed at this location.

The proposed project driveway along Browns Mill Road (SR 212) was analyzed for the 2012 Build condition. The results of the level of service analyses are presented in **Table 9.** The projected volumes and recommended intersection geometry are shown in Figures 9A and 9C.

Additionally, four major internal intersections along the proposed Vernon Jones Parkway were analyzed to provide recommended geometry and traffic control. This analysis was not required as part of GRTA's Letter of Understanding. With the intersection recommendations, the analyses indicate acceptable levels of service are expected at the four internal intersections. The results of the level of service analyses are presented in Table 9. **Figure 10** illustrates the projected traffic volumes and recommendations.

Table 9 The Preserve at Elijah Mountain DRI 2012 Build Intersection Levels of Service for Proposed Site Intersections (delay in seconds)						
	Intersection	Control	AM Peak Hour	PM Peak Hour	SAT Peak Hour	
11	Browns Mill Road (SR 212) @ Proposed Vernon Jones Parkway	Signalized	C (23.2)	C (21.8)	C (20.3)	
12	Vernon Jones Parkway @ Street 'B'	Signalized	B (10.2)	C (23.9)	C (33.3)	
13	Vernon Jones Parkway @	Side-Street	EB: B (14.1)	EB: C (17.6)		
15	Street 'F'	Stop Control	WB: B (11.8)	WB: B (10.9)		
14	Vernon Jones Parkway @ Morris Williams Parkway	Signalized	B (12.8)	B (16.4)		
15	Vernon Jones Parkway @ Street 'JJ'	Side-Street Stop Control	EB: A (9.8)	EB: B (10.2)		

The following intersection geometry and improvements are recommended at the proposed project driveways and internal site intersections (Note: The attached site plan includes these improvements):

The proposed Vernon Jones Parkway is recommended to be a four-lane divided roadway between Browns Mill Road (SR 212) and Setters Way (approximately 2,500 feet). A two-lane divided roadway south of Setters Way is expected to provide an acceptable level of service for the projected traffic volumes. A 120-foot wide right-of-way, a raised landscaped median, and a 10 foot wide multiuse path along both sides of the parkway is proposed along the entire length of the proposed parkway, from SR 212 to the DeKalb/Rockdale County line.

Browns Mill Road (SR 212) @ Vernon Jones Parkway (proposed driveway, Intersection #11)

- Install dual northbound left-turn lanes along the proposed Vernon Jones parkway.
- Install dual westbound left-turn lanes along Browns Mill Road.
- Install dual eastbound right-turn lanes along Browns Mill Road.
- Install a traffic signal when warranted. (Note: Peak hour volume warrants are projected to be met in the 2012 Build year during the peak conditions; however, installation of a traffic signal at this location should be considered prior to full build-out.)

Proposed Vernon Jones Parkway @ Street 'B' (Intersection #12)

- Northbound: Install a left-turn lane, two through lanes, and a right-turn lane along Vernon Jones Parkway.
- Southbound: Install a left-turn lane, two through lanes, and a channelized (yield-controlled) right-turn lane along Vernon Jones Parkway.
- Westbound: Install a left-turn lane, one through lane, and a right-turn lane.
- Eastbound: Install dual left-turn lanes, one through lane, and a right-turn lane.
- Install a traffic signal when warranted. (Note: Peak hour volume warrants are projected to be met in the 2012 Build year during the peak conditions; however, installation of a traffic signal at this location should be considered when a majority of the retail space is opened.)

Proposed Vernon Jones Parkway @ Street 'F' (Intersection #13)

- Northbound: Install a left-turn lane, two through lanes, and a right-turn lane along Vernon Jones Parkway.
- Southbound: Install a left-turn lane, two through lanes, and a right-turn lane along Vernon Jones Parkway.
- Westbound: Install a left-turn lane and a shared through/right-turn lane; stop-controlled.
- Eastbound: Install a left-turn lane and a shared through/right-turn lane; stop-controlled.

Proposed Vernon Jones Parkway @ Morris Williams Parkway (Intersection #14)

- Northbound: Install a left-turn lane, one through lane, and a right-turn lane along Vernon Jones Parkway.
- Southbound: Install a left-turn lane, one through lane, and a right-turn lane along Vernon Jones Parkway.
- Westbound: Install a left-turn lane, one through lane, and a right-turn lane.
- Eastbound: Install a left-turn lane, one through lane, and a right-turn lane.
- Install a traffic signal when warranted. (Note: Peak hour volume warrants are projected to be met in the 2012 Build year during the peak conditions; however, installation of a traffic signal at this location should be considered prior to build-out.)

Proposed Vernon Jones Parkway @ Street 'JJ' (Intersection #15)

- Northbound: Install a left-turn lane and one through lane along Vernon Jones Parkway.
- Southbound: Install one through lane and a right-turn lane along Vernon Jones Parkway.
- Westbound: Install a left-turn lane and a right-turn lane along Street 'JJ'.

## 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. Information on the projects is included in the Appendix. **Figure 11** illustrates the programmed projects listed below.

1.	ARC DK-065A, GDOT #0006880 ART RTP, TIP	Widen Panola Road from 2 to 4 lanes from SR 155 (Snapfinger Road) to SR 212 (Browns Mill Road). Completion date 2014. (Page 1, 7 in Appendix)
2.	ARC DK-065B, GDOT #0006879 ART RTP, TIP, CWP,	Widen Panola Road from 2 to 4 lanes from SR 212 (Browns Mill Road) to Thompson Mill Road. Completion date 2011. (Page 2, 8, 12 in Appendix)
3.	ARC DK-065C, GDOT #0005905 ART RTP, TIP, CWP,	Widen Panola Road from 4 to 6 lanes from Thompson Mill Road to Fairington Road. Completion date 2011. (Page 3, 8, 11 in Appendix)
4.	ARC DK-328 GODT #752760 ART RTP, TIP	This project will extend Lithonia Industrial Blvd from I-20 to Evans Mill Road. The roadway will be four lanes. Completion date 2010. (Page 4, 9 in Appendix)
5.	ARC RO-138A, GDOT #0007867 ART RTP	Widen SR 138 (Stockbridge Highway) from 2 to 4 lanes from East Fairview Road to Ebenezer/Stanton Road. Completion date 2030. (Page 5 in Appendix)
6.	ARC RO-138B, GDOT #0002040 ART RTP, TIP	Operational improvements to SR 138 (Stockbridge Highway) from Ebenezer/Stanton Road to Parker Road. Completion date 2016. (Page 6, 10, in Appendix)
7.	DeKalb Co CTP #44-S046 and #43-S090	SR 212 (Browns Mill Road) at Klondike Road. Intersection improvements (year 2007) and traffic signal installation (year 2007). Construction is underway. (Page 13 and 14 in Appendix) Also, two project plan sheets are included in Appendix.
8.	DeKalb Co CTP #43-S022	Klondike Road at Rockland Road. Intersection improvements (year 2008). (Page 14 in Appendix) Roundabout is currently under design. Preliminary plan included in Appendix.
9.	DeKalb Co CTP #44S116	Klondike Road at S. Goddard Road. Traffic signal upgrade (year 2010). (Page 13 in Appendix.)

## 8.0 INGRESS/EGRESS ANALYSIS

Access to the development is proposed at three locations along three public roads. The main site driveway is proposed along Browns Mill Road (SR 212). A parkway is proposed through the site connecting Browns Mill Road to Daniels Bridge Road. The second proposed access location is at the end of Daniels Bridge Road. The third proposed access location is Setters Way (which is an internal road in the Chestnut Lake Preserve subdivision). (See the site plan for detail.)

## 9.0 INTERNAL CIRCULATION ANALYSIS

The proposed development will generate trips between the residential and non-residential uses. Using the *ITE Trip Generation Handbook*, 2003, as a reference, approximately 12.45% daily (13.83% PM peak, 15.08% Saturday peak) of the gross daily trips would be internal.

## **10.0** COMPLIANCE WITH COMPREHENSIVE PLAN ANALYSIS

The DeKalb County Existing Land Use for the project site is LDR (Low Density Residential). The draft DeKalb County Future Land Use Plan (soon to be adopted) designates this area as Suburban with some greenspace. The proposed development does not appear to be located within an overlay district.

## **11.0 NON-EXPEDITED CRITERIA**

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

The network of roads provides travel in all directions and I-20 is located approximately 5.5 miles to the north. There are currently no transit opportunities in the vicinity of the proposed development.

## 11.2 Vehicle Miles Traveled

The following table displays the reduction in traffic generation due to pass-by trips.

	Build-out Total
Daily Gross Trip Generation:	39,728
(-)Mixed-use reductions (internal capture)	-4,948
(-)Pass-by trips	-1,512*
(-)Alternative modes	-0
Net Trips:	33,268

\* GRTA 10% limit

## 11.3 Relationship Between Location of Proposed DRI and Regional Mobility

The proposed development is not located within an urban core, activity center or town center; it is not within walking distance to a rail station or transit facility; and it is not part of an infill initiative. The Arabia Mountain National Heritage Area is northwest of the development and provides recreational uses.

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

The proposed DRI is not located near any existing or planned transit facilities or bus stops. People from the development have the opportunity to use the Panola Road Park and Ride Facility approximately 7.3 miles away. GRTA recently started Xpress bus service from the Panola Road Park and Ride Facility. Xpress bus route #422 travels to downtown Atlanta and Xpress bus route #428 travels to the Perimeter Center.

MARTA bus service is also provided at Stonecrest Mall, located approximately 6 miles to the north. MARTA bus routes #116, 216, and 316 operate at Stonecrest Mall.

### 11.5 Transportation Management Area Designation

The proposed development is not located within an established TMA.

### 11.6 Offsite Trip Reduction and Trip Reduction Techniques

Pass-by trip reductions were taken according to the *ITE Trip Generation Handbook, 2003*, however, according the GRTA's 10% limit test, pass-by trips were limited to 10% of the adjacent roadway volumes.

### 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 expected to be adequate to serve the needs of the development upon build-out (2012).

## **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 (SR 212 at the DeKalb / Rockdale County line). 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 DeKalb and Rockdale Counties) can be seen in **Figure 12**. Information obtained from the census tracts can be seen in **Table 10**.

Table 10 Census Tract Information		
Total Households	9,928	
Population in Households	28,460	
Average household size	2.87	
Total Workers	14,163	
Workers per Household	1.43	
Owner Occupied	82.7%	
Rental Occupied	17.3%	

As can be seen from the table above, the total population within the Area of Influence is 28,460, residing within 9,928 households (an average of 2.87 people per household). The AOI area totals 36,961 acres.

Using the above calculated average of 2.87 persons per household, it can be anticipated that the proposed DRI will house approximately 9,049 people (3,153 proposed dwelling units multiplied by 2.87). Based on information obtained from the Census Tracts, it is estimated that approximately 4,508 of these expected 9,049 residents would be workers. It should be noted that since 1,921 of the homes are classified as senior living, it would be reasonable to assume that there would be less than the average 2.87 people per household and less than the average 1.43 workers per household; however, in order to follow the GRTA AOI guidelines and in an attempt to be more conservative, the average values are used. 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 (30094 Zip Code). At the time of this report, about 185 homes were listed for sale in the area, ranging in price from \$104,000 to \$1,500,000.

## 12.3 Development Housing Analysis

The development plan provides for houses for sale in one price range within the proposed development. **Table 11**, 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 11 Estimated Workers per Household					
Tier	Description	Number of Units	Average Price	Number of Workers	
1	1 Bedroom Apartment	90	\$810/month	129	
2	2 Bedroom Apartment	132	\$890/month	189	
3	3 Bedroom Apartment	90	\$940/month	129	
4	Single Family 85' lots	59	\$330,000	84	
5	Single Family 60' lots	245	\$280,000	350	
6	Townhomes	451	\$170,000	645	
7	Senior Townhomes	165	\$180,000	236	
8	Senior High- rise Condo	540	\$110,000	781	
9	Senior Medium-rise Condo	1,381	\$140,000	1,975	

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 DeKalb and Rockdale 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 the **Table 12**, on the following page.

Table 12 AOL Jobs and Average Salaries				
Industry / Business Type # Businesses # Employees Average Sal				
Retail Trade	353	5,187	\$25,399	
Building Materials and Garden Supply	12	160	-	
General Merchandise Stores	19	1,099	-	
Food Stores	23	445	-	
Auto Dealers and Gas Stations	39	422	-	
Apparel and Accessory Stores	58	388	-	
Home Furniture, Furnishings, and Equipment	42	224	-	
Eating and Drinking Places	74	1,733	-	
Miscellaneous Retail Stores	86	716	-	
Finance	128	838	\$46,041	
Banks, Savings and Lending Institutions	35	305	-	
Securities and Commodity Brokers	10	38	-	
Insurance Carriers and Agencies	32	125	-	
Real Estate	51	270	_	
Trusts, Holdings, and Other Investments	51	570	-	
Services	585	5,819	-	
Hotels and Other Lodging	14	197	\$12,584	
Personal Services	152	636	-	
Business Services	156	2,137	\$51,581	
Motion Picture and Amusement	26	220	\$16,742	
Health Services	70	638	\$34,274	
Legal Services	17	67	\$61,282	
Education Services	21	1,109	\$28,577	
Social Services	33	335	\$28,517	
Miscellaneous, Membership	96	480	-	
Organizations and Nonclassified		100		
Agriculture	23	129	\$16,276	
Mining	1	8	\$61,724	
Construction	124	1,104	\$39,909	
Manufacturing	61	3,088	\$45,519	
Transportation, Communication/Public Utilities	75	867	\$62,806	
Wholesale Trade	71	704	\$50,827	
Public Administration	29	347	\$35,466	
Total	1,450	18,091	-	

## 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 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 6.13% 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 13**. Because there is an average of 1.43 workers expected per household, the required income was divided by 1.43 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 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 proposed development to find employment at the required income level for the one level of pricing within the development, thus satisfying the GRTA requirement of 25%.

Table 13 Expected Workers					
	Average Sale Price	Necessary Income per Expected Worker	Expected Worker per Price Range	Jobs at or above Necessary Income	
1	\$810/month	\$20,392	129	16,429	
2	\$890/month	\$22,406	189	16,429	
3	\$940/month	\$23,664	129	16,429	
4	\$330,000	\$45,455	84	7,709	
5	\$280,000	\$38,568	350	8,813	
6	\$170,000	\$23,416	645	16,429	
7	\$180,000	\$24,794	236	16,429	
8	\$110,000	\$15,152	781	16,778	
9	\$140,000	\$19,284	1,975	16,429	
Per	cent of expected wo	100%			

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

The development is a mixed-use development, consisting of 304 single-family residential homes, 407 apartment units, 618 townhome units (including 142 senior units), 2,066 senior adult units (Mid and High-Rise) and 743,059 square feet of retail space on approximately 397 acres. The project's residential component is the dominant use. The development meets the ARC criteria (1 b) for a 3% reduction because the residential is the dominant use providing 8 dwelling units/acre. Additionally, the development meets the ARC criteria (2 C) for a 4% reduction because the retail space is greater than 10% of the gross floor area.

The mixed-use development contains sidewalk, bicycle and trail connections between the residential and retail portions of the development. Pedestrians/bicyclists will be able to access other uses within the proposed development. This development meets the ARC criteria (6 d) for a 4% reduction.

The proposed development meets the ARC criteria for a total 11% VMT reduction. These reductions are displayed below in **Table 14**.

Table 14 ARC VMT Reductions		
Mixed-Use Project where Residential is the dominant use		
Projects that meet the relevant density target levels; where residential is the dominant use; with approximately 8 dwelling units/acre	-3%	
Projects that contain a mix of uses; where residential is the dominant use; with at least 10% of gross floor area is retail	-4%	
Bike/ped networks within the site; providing connections to uses within the site	-4%	
Total Reductions	11%	