



## Memorandum

**Date:** March 31, 2023

**From:** Marc R. Acampora, PE

**Subject:** Trip Generation Comparison for Proposed Multi-Use Development  
US 78 at Rosebud Road, City of Snellville, Georgia

The trip generation was calculated for a proposed multi-use development in the City of Snellville. The site is located in the southwest quadrant of the intersection of US 78 and Rosebud Road, as shown in Figure 1.



Figure 1 – Site Location Map

The site will be developed with 57,000 square feet of retail village, 300 multi-family residential units, and 25 residential townhomes. The project will have two accesses on US 78 and two accesses on Rosebud Road. The site plan is presented in Figure 2.



Figure 2 – Proposed Site Plan

The volume of traffic that will be generated by the multi-use development was calculated using the equations in the Institute of Transportation Engineers (ITE) *Trip Generation Manual*, 11<sup>th</sup> Edition (the current edition). ITE Land Use 215 – Single-Family Attached Housing was chosen for the townhomes and ITE Land Use 221 – Multifamily Housing (Mid-Rise) was chosen as representative of the multi-family use. ITE Land Use 821 – Shopping Plaza (40-150 kft<sup>2</sup>) was chosen for the retail.

An adjustment was made to the retail trips to account for the effect of pass-by trips. Pass-by trips are trips that are already driving by the property but will be intercepted by the retail in this project. These trips are new to the project

driveways, but do not represent new trips to the adjacent roadways, since they are currently occurring and are, therefore, included in the existing traffic volume counts. The ITE *Trip Generation Handbook, 3<sup>rd</sup> Edition* provides data and average rates for the pass-by percentages for Land Use 820 – Shopping Center, which is the most similar land use to the retail use chosen for this study, for which pass-by data is available. This use has an average p.m. peak hour pass-by percentage of 34%. Therefore, a 34% adjustment was applied to the p.m. peak hour trips, while a 24% reduction was applied to the a.m. and 24-hour trips.

The trip generation for the proposed development is presented in Table 1.

**Table 1 – Proposed US 78 at Rosebud Multi-Use Development Trip Generation**

Land Use	ITE Code	Size	A.M. Peak Hour			P.M. Peak Hour			24-Hour
			In	Out	Total	In	Out	Total	2-Way
Townhomes	215	25 homes	2	5	7	7	4	11	140
Multi-Family	221	300 units	28	92	120	72	45	117	1,386
<i>Residential Subtotal</i>		325 units	30	97	127	79	49	128	1,526
Retail Village	821	57,000 ft <sup>2</sup>	125	76	201	267	289	556	5,800
-pass-by trips		24/34/24%	-30	-18	-48	-90	-98	-188	-1,392
<i>Retail New Trips</i>			95	58	153	177	191	368	4,408
<b><i>Project Total New Trips</i></b>			<b>125</b>	<b>155</b>	<b>280</b>	<b>256</b>	<b>240</b>	<b>496</b>	<b>5,934</b>

The proposed multi-use development will generate 280 new a.m. peak hour new trips, 496 new p.m. peak hour new trips, and 5,934 new weekday new trips.

A previous retail development has been approved for the subject site. That development included a 113,531 square foot supermarket, 17,350 square feet of strip retail, and a gasoline station with 14 fueling positions. For comparison purposes, the trip generation for that development was also calculated. ITE Land Use 850 – Supermarket was chosen for the supermarket, ITE Land Use 822 – Strip Retail Plaza (<40K) was used for the retail shops, and ITE Land Use 944 – Gasoline / Service Station was used for the gasoline station. The pass-by percentages were taken from, or developed by applying the data in, the ITE *Trip Generation Handbook, 3<sup>rd</sup> Edition*. For the supermarket, 36% was applied to the p.m. while 26% was applied to the a.m. and 24-hour trips. For the retail plaza 34% was used for the p.m. while 24% was applied to the a.m. and 24-hour trips. For the gasoline station 58% was applied to the a.m. and 42% was used for the p.m. and 24-hour trips. The trip generation for the previously approved retail development is presented in Table 2.

**Table 2 – Previously-Approved Retail Development Trip Generation**

Land Use	ITE Code	Size	A.M. Peak Hour			P.M. Peak Hour			24-Hour
			In	Out	Total	In	Out	Total	2-Way
Supermarket	850	113,531 ft <sup>2</sup>	192	133	325	428	429	857	10,008
-pass-by trips		26/36/26%	<u>-50</u>	<u>-35</u>	<u>-85</u>	<u>-154</u>	<u>-154</u>	<u>-308</u>	<u>-2,602</u>
<i>New Trips</i>			142	98	240	274	275	549	7,406
Strip Retail Plaza	822	17,350 ft <sup>2</sup>	25	16	41	58	57	115	962
-pass-by trips		24/34/24%	<u>-6</u>	<u>-4</u>	<u>-10</u>	<u>-20</u>	<u>-19</u>	<u>-39</u>	<u>-230</u>
<i>New Trips</i>			19	12	31	38	38	76	732
Gasoline Station	944	14 pumps	72	72	144	97	98	195	2,408
-pass-by trips		58/42/42%	<u>-42</u>	<u>-42</u>	<u>-84</u>	<u>-41</u>	<u>-41</u>	<u>-82</u>	<u>-1,012</u>
<i>New Trips</i>			30	30	60	56	57	113	1,396
<b><i>Project Total New Trips</i></b>			<b>191</b>	<b>140</b>	<b>331</b>	<b>368</b>	<b>370</b>	<b>738</b>	<b>9,534</b>

The previously approved retail development would generate 331 new a.m. peak hour new trips, 738 new p.m. peak hour new trips, and 9,534 new weekday new trips.

Table 3 summarizes the differences in trip generation between the currently proposed multi-use development and the previously approved retail development.

**Table 3 – Trip Generation Comparison**

Land Use	A.M. Peak Hour			P.M. Peak Hour			24-Hour
	In	Out	Total	In	Out	Total	2-Way
Previously Approved Development	191	140	331	368	370	738	9,534
Currently Proposed Development	125	155	280	256	240	496	5,934
<b><i>Difference</i></b>	<b>-69</b>	<b>+15</b>	<b>-51</b>	<b>-112</b>	<b>-130</b>	<b>-242</b>	<b>-3,600</b>

The proposed multi-use development will generate 51 fewer a.m. peak hour new trips, 242 fewer p.m. peak hour new trips, and 3,600 fewer weekday new trips than the previously approved development.