



A&R Engineering Inc.

2160 Kingston Court, Suite O
Marietta, GA 30067
Tel: (770) 690-9255 Fax: (770) 690-9210
www.areng.com



Memorandum

To: Sid Tejpaul, SSD Properties LLC
From: Abdul Amer, PE.
Date: May 20, 2021
Subject: Trip Generation Memorandum for Proposed Residential Development at 11890 Douglas Road in Alpharetta, Georgia | A&R #21-075

The purpose of this memorandum is to provide a trip generation comparison that will result from converting a 3,000 sq ft of a 10,000 sq ft retail shopping center to 9 units of multi-family residential development, while maintaining 7,000 sq ft of retail shopping space. The current shopping center is located at 11890 Douglas Road in Alpharetta, Georgia. An aerial of the existing development at the site location is shown below as Figure 1.



Figure 1 – Site Aerial

METHODOLOGY

Trip generation estimates for the project were based on the rates and equations published in the 10th edition of the Institute of Transportation Engineers (ITE) Trip Generation Manual. This reference contains traffic volume count data collected at similar facilities nationwide.

EXISTING DEVELOPMENT TRIP GENERATION

The existing trip generation is based on the following ITE Land Use: 820 – *Shopping Center*. The calculated total trip generation for the development is shown in Table 1. The ITE published pass-by rate for the land use shopping center were also included in the trip generation calculation.

Land Use: 820 – Shopping Center: A shopping center is an integrated group of commercial establishments that is planned, developed, owned, and managed as a unit. A shopping center’s composition is related to its market area in terms of size, location, and type of store. A shopping center also provides on-site parking facilities sufficient to serve its own parking demands.

TABLE 1 - TRIP GENERATION FOR EXISTING LAND USE								
Land Use	Independent Variable	A.M. Peak Hour			P.M. Peak Hour			24-Hour
		Enter	Exit	Total	Enter	Exit	Total	2-way
820 – Shopping Center	10,000 sf	97	60	157	47	52	99	1,256
<i>Shopping Center Pass-by Trips (0%) 34%</i>		0	0	0	-16	-18	-34	-340
Total Trips with Reduction		97	60	157	31	34	65	916

*24 Hour pass-by trips estimated by considering PM pass-by as 10% of daily volume

PROPOSED DEVELOPMENT TRIP GENERATION

The proposed trip generation is based on the following ITE Land Use: 221 – *Multifamily Housing (Mid Rise)* and 820 – *Shopping Center* (previously mentioned). The calculated total trip generation for the development is shown in Table 2. The ITE published pass-by rates for the shopping center land use that were also included in the trip generation calculation.

Land Use: 221 – Multifamily Housing (Mid Rise): Mid-rise multifamily housing includes apartments, townhouses, and condominiums located within the same building with at least three other dwelling units and that have between three and 10 levels (floors).

The results of the analysis for the proposed development are shown in Table 2 below.

TABLE 2 - TRIP GENERATION FOR PROPOSED DEVELOPMENT								
Land Use	Independent Variable	A.M. Peak Hour			P.M. Peak Hour			24-Hour
		Enter	Exit	Total	Enter	Exit	Total	2-way
221 – Multifamily Housing (Mid-Rise)	9 units	1	2	3	2	2	4	47
<i>Mixed-Use Reductions</i>		0	-1	-1	-1	-1	-2	-17
820 – Shopping Center	7,000 sf	96	59	155	36	40	76	986
<i>Mixed-Use Reductions</i>		-1	0	-1	-1	-1	-2	-17
<i>Shopping Center Pass-by Trips (0%) 34%</i>		0	0	0	-12	-13	25	-250
Total Trips without Reductions		97	61	158	38	42	80	1,033
Total Trips with Reduction		96	60	156	24	27	51	749

*24 Hour pass-by trips estimated by considering PM pass-by as 10% of daily volume

TRIP GENERATION COMPARISON

A comparative analysis of the existing land use (10,000 sf retail) and proposed mixed use development (9 multifamily units and 7,000 sf of retail) is shown in Table 3.

TABLE 3 - TRIP GENERATION COMPARISON OF EXISTING AND PROPOSED LAND USE							
Land Use	A.M. Peak Hour			P.M. Peak Hour			24-Hour
	Enter	Exit	Total	Enter	Exit	Total	2-way
Existing Development (10,000 sf retail)	97	60	157	31	34	65	916
Proposed Development (9 multifamily units and 7,000 sf retail)	96	60	156	24	27	51	749
Difference	-1	0	-1	-7	-7	-14	-167
Reduction Percentage	-1%	0%	-1%	-23%	-21%	-22%	-18%

*24 Hour pass-by trips estimated by considering PM pass-by as 10% of daily volume

In comparison to the traffic that is estimated to be generated from the existing development (10,000 sf retail), the proposed development (9 multifamily units and 7,000 sf of retail) will generate 1% less traffic during the AM peak hour, 22% less traffic during the PM peak hour, and 18% less traffic during a 24-hour period.

RECEIVED
 RZ-21-006
 JUN 08 2021
 VC-21-006-01,02,03
 City of Johns Creek
 Community Development