

Ron Müller & Associates
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Ref.: 11039

August 19, 2011

Mr. Thomas Bierbaum
Volunteers of America - Massachusetts
441 Center Street
Jamaica Plain, Massachusetts 02130

Reg.: Veterans Supportive & Permanent Housing
1323 Broadway, Somerville, MA

Dear Mr. Bierbaum:

Ron Müller & Associates (RMA) has prepared this letter to summarize the anticipated traffic generation of the Veterans Supportive & Permanent Housing project to be located at 1323 Broadway in Somerville, Massachusetts and to estimate the impact that this additional traffic will have on the adjacent streets. Volunteers of America MA, the proponent of the project, proposes to renovate the existing building to provide transitional housing for homeless veterans in need of support. A total of 11 parking spaces are proposed on site with 7 spaces accessed via North Street and 2 spaces accessed via Broadway.

The existing 15,225 square foot building, which is currently occupied by the Wayside group home for kids, will be vacated and renovated to provide 22 beds for transitional housing and support services on the basement and first floor levels and 7 permanent apartment units on the second floor of the building. A total of five support and counseling staff will be employed with one staff person on duty 24 hours a day, 7 days a week.

To estimate the traffic to be generated by this use of the building, the Institute of Transportation Engineers (ITE) *Trip Generation*¹ report was utilized. The ITE provides trip generation rates for a variety of land use categories that can be applied to new developments, or reuse of existing developments, in estimating the volume of traffic to be generated. The proposed uses of the building can best be categorized by applying ITE Land Use Code 220 (Apartments) trip rates to the 7 apartment units proposed on the second floor and ITE Land Use Code 254 (Assisted Living) trip rates to the 22 bed transitional housing proposed on the basement and first floor of the building. Although the ITE does not have data specific for homeless veterans housing, the

¹ *Trip Generation*; Institute of Transportation Engineers; Washington, DC, 2008.

assisted living category is expected to closely mirror the proposed operation. According to the ITE: *“Assisted living complexes are residential settings that provide either routine general protective oversight or assistance with activities necessary for independent living to mentally or physically limited persons. They commonly have separate living quarters for residents and services include dining, housekeeping, social and physical activities, medication administration and transportation.....The rooms in these facilities may be private or shared accommodations, consisting of either a single room or a small apartment-style unit with a kitchenette and living space.”* Accordingly, the expected traffic generation of the building was estimated using these land use codes and the resulting trips are summarized in Table 1. All trip generation calculations are attached for reference.

Table 1
Trip Generation Summary

Time Period	Apartments 7 Units ^a	Transitional Housing 22 Beds ^b	Total
Weekday Daily	46	60	106
Weekday AM Peak Hour			
Enter	1	3	4
<u>Exit</u>	<u>3</u>	<u>1</u>	<u>4</u>
Total	4	4	8
Weekday PM Peak Hour			
Enter	3	3	6
<u>Exit</u>	<u>1</u>	<u>3</u>	<u>4</u>
Total	4	6	10

^a ITE Land Use Code 220 (Apartments).

^b ITE Land Use Code 254 (Assisted Living).

As shown in the table, using the ITE database, the proposed reuse of the building would be expected to generate a minimal volume of traffic with 106 total vehicle trips on a weekday daily basis (53 entering and 53 exiting). During the critical peak hours, when traffic on the adjacent streets is greatest, the project would generate between 8 and 10 trips (total entering and exiting) distributed onto Broadway and North Street. This increase in traffic will not have any noticeable effect on traffic operations along Broadway or North Street.

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Based on information supplied by Volunteers of America MA regarding their anticipated operation, the project will likely generate far fewer trips than the ITE would suggest. The 22 transitional housing units will be for veterans who do not own a car and therefore do not generate individual trips. There will be a van available for scheduled trips and public transportation is available in the immediate area. The residents that occupy the 7 permanent housing units will be low-income, formerly homeless veterans who will not likely be able to afford more than one car. The residence will be staffed by one person at a time and trips are therefore generated only during scheduled shift changes. Accordingly, the actual traffic generation and resulting impacts on the adjacent roadways will be far lower than suggested by the ITE.

It is important to note that the existing building is currently used as a group home and is also generating traffic. Therefore, although the volume of existing traffic generation is not known, the increase in traffic over that generated by the building today will be even less than as stated above.

If you have any questions regarding the above evaluation, please don't hesitate to contact me.

Sincerely,

Ron Müller & Associates



Ronald Müller, P.E.
Principal

Attachments

Institute of Transportation Engineers (ITE)
Land Use Code (LUC) 220 - Apartment

Average Vehicle Trips Ends vs: Dwelling Units
Independent Variable (X): 7

AVERAGE WEEKDAY DAILY

$T = 6.65 * (X)$
 $T = 6.65 * 7$
 $T = 46.55$
 $T = 46$ vehicle trips
with 50% (23 vpd) entering and 50% (23 vpd) exiting.

WEEKDAY MORNING PEAK HOUR OF ADJACENT STREET TRAFFIC

$T = 0.51 * (X)$
 $T = 0.51 * 7$
 $T = 3.57$
 $T = 4$ vehicle trips
with 20% (1 vph) entering and 80% (3 vph) exiting.

WEEKDAY EVENING PEAK HOUR OF ADJACENT STREET TRAFFIC

$T = 0.62 * (X)$
 $T = 0.62 * 7$
 $T = 4.34$
 $T = 4$ vehicle trips
with 65% (3 vph) entering and 35% (1 vph) exiting.

SATURDAY DAILY

$T = 6.39 * (X)$
 $T = 6.39 * 7$
 $T = 44.73$
 $T = 44$ vehicle trips
with 50% (22 vpd) entering and 50% (22 vpd) exiting.

SATURDAY MIDDAY PEAK HOUR OF GENERATOR

$T = 0.52 * (X)$
 $T = 0.52 * 7$
 $T = 3.64$
 $T = 4$ vehicle trips
with 50% (2 vph) entering and 50% (2 vph) exiting.

Institute of Transportation Engineers (ITE)
Land Use Code (LUC) 254 - Assisted Living

Average Vehicle Trips Ends vs: Occupied Beds

Independent Variable (X): 22

AVERAGE WEEKDAY DAILY

$$T = 2.74 * (X)$$

$$T = 2.74 * 22$$

$$T = 60.28$$

$$T = 60 \text{ vehicle trips}$$

with 50% (30 vpd) entering and 50% (30 vpd) exiting.

WEEKDAY MORNING PEAK HOUR OF ADJACENT STREET TRAFFIC

$$T = 0.17 * (X)$$

$$T = 0.17 * 22$$

$$T = 3.74$$

$$T = 4 \text{ vehicle trips}$$

with 73% (3 vph) entering and 27% (1 vph) exiting.

WEEKDAY EVENING PEAK HOUR OF GENERATOR

$$T = 0.38 * (X)$$

$$T = 0.38 * 22$$

$$T = 8.36$$

$$T = 8 \text{ vehicle trips}$$

with 36% (3 vph) entering and 64% (5 vph) exiting.

WEEKDAY EVENING PEAK HOUR OF ADJACENT STREET TRAFFIC

$$T = 0.29 * (X)$$

$$T = 0.29 * 22$$

$$T = 6.38$$

$$T = 6 \text{ vehicle trips}$$

with 52% (3 vph) entering and 48% (3 vph) exiting.

SATURDAY DAILY

$$T = 2.2 * (X)$$

$$T = 2.2 * 22$$

$$T = 48.40$$

$$T = 48 \text{ vehicle trips}$$

with 50% (24 vpd) entering and 50% (24 vpd) exiting.

SATURDAY PEAK HOUR OF GENERATOR

$$T = 0.36 * (X)$$

$$T = 0.36 * 22$$

$$T = 7.92$$

$$T = 8 \text{ vehicle trips}$$

with 510% (4 vph) entering and 49% (4 vph) exiting.