

SECTION 10

TRAFFIC IMPACT ASSESSMENT

(UNDER SEPARATE COVER)

MEMORANDUM

TO: Mr. Robert Roth
Roth Family LLC
172 Dean Road
Brookline, MA 02445

FROM: F. Giles Ham, P.E., Managing Principal
Vanasse & Associates, Inc.
35 New England Business Center Drive
Suite 140
Andover, MA 01810
(978) 474-8800

DATE: April 15, 2016

RE: 7323

SUBJECT: 40 Centre Street, Brookline, MA

INTRODUCTION

Vanasse & Associates, Inc. (VAI) has prepared this Transportation Assessment in order to identify the traffic impacts associated with a proposed residential development located at 40 Centre Street in Brookline, Massachusetts. This report identifies traffic generation, reviews safety conditions and identifies any related mitigation.

PROJECT DESCRIPTION

The project entails a transit oriented development of 45 apartments to be located at 40 Centre Street in Brookline, Massachusetts. The project site is situated on the west side of Centre Street just north of Beacon Street. Access to the project site will be provided by way of a 20-foot wide driveway onto Centre Street. Parking will be provided for 17 vehicles.

ROADWAYS

Centre Street

Centre Street, in the vicinity of the site, is a roadway under local jurisdiction that generally travels in a north/south orientation in Brookline Massachusetts. Centre Street accommodates a single-lane roadway in each direction with travel separated by a single yellow centerline. Metered parking is provided along the east side of Centre Street with operation Monday to Saturday, 8:00 AM to 6:00 PM with a maximum of three (3) hours. Concrete sidewalks are provided along both sides of Centre Street. Land use along Centre Street consists primarily of residential and commercial properties.

PUBLIC TRANSPORTATION

Public transportation services are provided within the study area by the Massachusetts Bay Transit Authority (MBTA). The MBTA operates fixed-route bus services in the vicinity of the site. Bus Route 66 – Harvard Square – Dudley Station via Allston and Brookline stops at the intersection of Beacon Street at Harvard Street.

The MBTA Green Line B Branch runs along Beacon Street with local stops at Summit Avenue and Coolidge Corner. The C Branch runs from Cleveland Circle to North Station.

PROJECT-GENERATED TRAFFIC

The project entails the development of 45 apartments. In order to develop the traffic characteristics of the proposed project, trip-generation statistics published by the Institute of Transportation Engineers (ITE)¹ for LUC 220 – Apartment used to develop the traffic characteristics of the project. Based upon US Census data, the following mode split is assumed: 57% auto; 31% transit; 10% walk; and 2% bicycle.

**Table 1
TRIP GENERATION SUMMARY: RESIDENTIAL**

Time Period	Residential Trips ^a	Vehicle Occupancy ^b	Person Trips	Transit ^b Trips (31%) ^c	Walk ^b Trips (10%) ^c	Bicycle ^b Trips (2%) ^c	Vehicle Trips 57%	
							New Person Trips	New Vehicle Trips
Average Weekday Daily Traffic	300	1.08	324	100	34	6	184	170
<i>Weekday Morning Peak Hour:</i>								
Entering	5	1.08	5	2	0	0	3	3
Exiting	18	1.08	20	6	2	1	11	10
Total	23	1.08	25	8	2	1	14	13
<i>Weekday Evening Peak Hour:</i>								
Entering	18	1.08	20	6	2	1	11	10
Exiting	10	1.08	10	3	1	0	6	6
Total	28	1.08	30	9	3	1	17	16

^aBased on ITE LUC 220, Apartments.

^bBased on journey to work data for Brookline obtained from the United States Census Bureau in 2000.

As can be seen in Table 1, the Project is expected to generate approximately 170 vehicle trips on an average weekday (two-way, 24-hour volume, or 85 vehicles entering and 85 exiting), with approximately 13 vehicle trips (3 vehicles entering and 10 exiting) expected during the weekday morning peak-hour. During the weekday evening peak hour the Project is expected to generate approximately 16 vehicle trips (10 vehicles entering and 6 exiting).

DRIVEWAY SIGHT DISTANCE

The driveway sight distance was reviewed in order to determine the safety of the driveway. Assuming a 30 mph design speed, the measured sight distance of 200 feet is required. The following pictures depict the sight distance in both directions.

¹*Trip Generation Manual*, Ninth Edition; Institute of Transportation Engineers; Washington, DC; 2012.





Sight Distance from Driveway Looking North



Sight Distance from Driveway Looking South

Looking north, the minimum sight distance requirements of 200 feet can be obtained with the existing shrub cut back. The shrub should be no more than 3 feet in height and should be cut back to the sidewalk edge. Looking south, adequate sight distance exists with no obstructions.

CONCLUSIONS

Vanasse & Associates, Inc. (VAI) has prepared this Transportation Assessment in order to identify the traffic impacts associated with a proposed transit oriented residential development located at 40 Centre Street in Brookline, Massachusetts. As currently proposed, the project will consist of the development of 45 apartments. Based upon the results of this study, the following can be concluded:

- The Project was shown to generate approximately 170 vehicle trips on an average weekday (two-way, 24-hour volume, or 85 vehicles entering and 88 exiting), with approximately 13 vehicle trips (3 vehicles entering and 10 exiting) expected during the weekday morning peak-hour. During the weekday evening peak hour the Project is expected to generate approximately 16 vehicle trips (10 vehicles entering and 6 exiting).
- Safe traffic operations will exist at the new site driveway onto Centre Street.

Overall, the project can safely be accommodated in the area with the implementation of following recommendations.

RECOMMENDATIONS

The following improvements have been recommended as a part of this evaluation to provide safe and efficient access to the project.

Site Access

Access to the Project site will be provided via a single 20-foot wide driveway onto Centre Street. To the north of the site driveway, the existing shrub should be cut back to the sidewalk edge to maintain adequate sight lines.

Parking

Parking will provided for 17 spaces.

Transit/Bicycle

Bike racks should be installed in the garage and transit schedules should be posted on site.

Trash Services

Resident trash pick-up will be handled by the city and located on Centre Street.

With implementation of the above recommendations, safe and efficient access and egress will be provided and the planned development can be accommodated safely.