



ENGINEERING SUCCESS **TOGETHER**

August 28, 2014 (updated October 14, 2014)

Ms. Allison Steinfeld
Planning Director
Town of Brookline
333 Washington Street
Brookline, MA 02445

3294-12

Subject: Traffic Impact Assessment Peer Review for the Updated
Proposed Residence of South Brookline 40B Development

Dear Ms. Steinfeld:

As requested by the Town of Brookline, BETA Group, Inc. (BETA) has continued to review the above referenced project. Our letter date March 20, 2014 (March letter) provided the findings of our initial review and preliminary comments regarding the traffic, parking, and access impacts. The March letter requested additional data to be collected. MDM Transportation Consultants, Inc. (MDM) provided the requested data and analysis. Based on this data and analysis, BETA submitted a second review letter dated May 7, 2014 (May letter) in which we provided recommendations to offset the impact of the project.

The recommendations from the May letter included:

1. The traffic volumes (both existing and future) and the intersection operations analysis conducted as part of the traffic impact evaluation are appropriate for this project.
2. An official commitment to the TDM measures should be enacted (expanding the shuttle service, providing on site bike storage, and expanding Zipcar supply if demand is needed). The Town should require a signed TDM agreement as part of the permitting process.
3. Discuss potential traffic calming measures for the residential streets east of the site.
4. Off site mitigation measures should include a complete streets design for Independence Drive with a cross section that includes a northbound bicycle lane, a striped buffer, a parking lane, a northbound travel lane, a southbound travel lane, a parking lane, a striped buffer, and a southbound bicycle lane. This cross section should be implemented between the West Driveway to the north and Hancock Village property line in Boston to the south. Pedestrian accommodations should be provided at the East Driveway and Thornton Road/Sherman Road including raised bump outs, crosswalks, and pedestrian activated flashing beacons.

Since the May letter was submitted and discussed at a public hearing on May 8, 2014, the site plan has been modified. The number of units has been reduced from 192 to 184 and the units have been relocated within the site. MDM submitted an updated traffic analysis dated July 1, 2014 and July 17, 2014 documenting the traffic impacts of site revisions.



The reduction in units will result in a slight reduction of the trip generation. However, the relocation of the units will result in some of the access points seeing an increase or decrease in intensity. Table 1 shows the former expected traffic volumes for the three access points with the current expected traffic volumes during the weekday morning and weekday evening peak hours.

TABLE 1: TRIP GENERATION COMPARISON

Component	Previous (AM/PM)	Updated (AM/PM)	Net Change (AM/PM)
West Site Driveway	19/23	10/12	-9/-11
East Site Driveway	5/8	6/8	+1/0
Asheville Road	74/92	78/99	+4/+7
TOTAL	98/123	94/119	-4/-4

As shown in Table 1, the proposed modifications are minor. For instance, during the weekday peak hours, the trip generation of the previous and updated building programs are expected to decrease four trips. Asheville Road is expected to see an increase of four to seven vehicle trips during the peak hours.

TRIP ASSIGNMENT NETWORKS (FIGURES 10)

At the May 8th public hearing the trip assignment of motorists leaving the site via Asheville Road was discussed. BETA believes that vehicles leaving via Asheville Road and destined for the VFW Parking would utilize the signal at South Street since this provides access to the east. Therefore, referencing Figure 10, it is likely that the 26 vehicles turning right on Russett Road would travel straight through to South Street and turn then right. Likewise, the eight vehicles shown accessing South Street would utilize Russett Road to VFW Parkway. BETA reviewed and discussed the trip distribution and assignment with MDM. Based on the existing observed documented traffic distributions, approximately 35% of the site traffic would destine for VFW Parkway. Of the 35%, approximately 30% head west of VFW Parkway and the remaining 5% head east. Therefore, the observed traffic data is consistent with the traffic assignment shown in Figure 10.

VFW ACCESS

The potential for a connection from the site directly to the VFW Parking westbound has been investigated. This new driveway would provide benefits to the residential neighbors along Russett Road and Asheville Road. In the July 1st memorandum, the study assumes only the closest units would utilize the new connection. It is likely that all site traffic between westbound VFW Parkway and Asheville Road would use the new site driveway. In the July 17th memorandum, the study included a higher number of vehicle trips (38) compared to the 6 to 8 trips identified in the July 1st memorandum. The July 1st memorandum and the July 17th memorandum stated that the connection will have no significant or material change in traffic on the adjoining neighborhood streets. While there is no change in level of service, any reduction in traffic will minimize traffic impacts and provide a safer neighborhood. We understand that the VFW connector would require DCR approval.

TRAFFIC CALMING

Traffic calming was preliminarily discussed at the May 8th hearing. The Town of Brookline has a detailed procedure and guidelines for the implementation of traffic calming measures. We recommend that the Town’s traffic calming process be used to ensure the successful implementation of traffic calming measures. This should occur independent of the proposed development. In addition, the possibility of the VFW Site



Driveway would further minimize the impact of the project on those streets, decreasing the need for new measures.

CONCLUSION AND RECOMMENDATIONS

As requested by the Town of Brookline, BETA has reviewed the submitted traffic documents associated with the updated Hancock Village 40B residential development. The July 17, 2014 updated traffic impact assessment for the proposed project has adequately addressed the following key components of the traffic study.

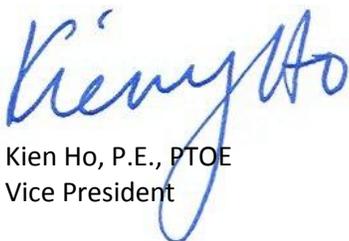
- a. Study Area – The proponent has expanded the study area and we find the study area acceptable. Therefore, this issue is resolved.
- b. Data Collection – Additional data was collected and included in the analysis. We reviewed the additional data and analysis and we find this acceptable. Hence, this issue is resolved.
- c. Trip Generation/Distribution/Assignment - The proponent updated the trip generation/distribution and assignment accordingly as part of the updated development. We reviewed the information and find the updated traffic generation/distribution and assignment acceptable.
- d. Traffic Analysis – The proponent updated the traffic analysis to reflect the updated development. Additional evaluation was also provided to reflect the proposed VFW Parkway Driveway connection. We reviewed the analysis and have no further comments. The analysis is acceptable.
- e. Mitigations – Based on the traffic analysis results and the traffic impact assessment, the proponent has provided safety and traffic operational improvements for pedestrians, bicycles and vehicles. The following is a summary of our recommendations and associated safety improvements:
 1. An official commitment to the TDM measures should be enacted (expanding the shuttle service, providing on site bike storage, and expanding Zipcar parking spaces).
 2. The Town should require a signed TDM agreement as part of the permitting process.
 3. The Town’s traffic calming procedures should be followed for the independent implementation of traffic calming measures along residential roadways (Beverly Road, Bonad Street, Russett Street, Asheville Road). This should occur independently of the proposed development and a funding source should be established to accomplish the traffic calming process and implementation. The fund should be established as follows:
 - a. Traffic Calming Study = \$15,0000
 - b. Traffic Calming Implementation (Design and Construction) = \$64,000 (for planning purposes, assume 2 speed humps per street at \$16,000/street)

The traffic calming study should be conducted 6 to 12 months after project completion and a minimum of 90% occupancy.

4. Off site mitigation measures should include a complete streets design for Independence Drive with accommodation for pedestrian, bicycle and vehicle safety. Accommodation for on-street parking lane and travel lane reduction. This cross section should be implemented between the West Driveway to the north and Hancock Village property line in Boston to the south. Prior to finalizing the cross section design, the plans shall be submitted to the Town of Brookline Engineering Department for final approval.
5. Pedestrian accommodations should be provided at the East Driveway and Thornton Road/Sherman Road including raised bump outs, crosswalks, and pedestrian activated flashing beacons. The HAWK signal system will also be considered during the design phase.
6. Protected Bicycle Lanes such as a striped buffer or Cycle tracks should be considered during the design phase.
7. Independence Drive travel lane reduction from four to two lanes will be considered as part of the complete street design. Other travel lane cross-section configuration should also be evaluated during the design phase to ensure that the directional traffic volumes demand are accommodated particularly the southbound direction. Prior to finalizing the cross section design, the plans shall be submitted to the Town of Brookline Engineering Department for final approval.
8. Investigate the VFW Parkway Site Driveway connection with the appropriate agencies as this option would reduce traffic to the neighborhood, provide safety, and minimize traffic impacts to the Russett Road/Asheville Road neighborhood. Coordination with DCR will be required. The proponent shall notify and invite Town officials to participate any coordination meetings with DCR officials.
9. Site circulation roadway system approved by Brookline Fire Department.
10. Pedestrian connection to Baker School, additional crosswalks provided to enhance pedestrian safety.
11. Coordinate truck route with Town official prior to construction

If we can be of any further assistance regarding this matter, please contact us at our office.

Very truly yours,
BETA Group, Inc.



Kien Ho, P.E., PTOE
Vice President

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