

W-2125-020-03  
February 5, 2023

Meghan C. Jop, AICP  
Executive Director  
Town of Wellesley  
888 Worcester Street  
Wellesley, MA 02482

Re: **Traffic Peer Review – 200 Pond Road**

Dear Ms. Jop:

On behalf of the Town of Wellesley, Tighe & Bond has conducted this Traffic Peer Review for the proposed development consisting of a 130 unit (up to 150 beds) Senior Housing Community. The Natick-Wellesley town line bisects the site. The proposed building is located in Natick, while access to the site will be provided by a single driveway on Pond Road in Wellesley, approximately 200 feet south of Route 135.

On-site parking is proposed for 89 vehicles. Tighe & Bond visited the project site on February 2, 2024, and to review and observe the traffic conditions in and around the project site and to verify and compare the results presented in the report to what was observed in the field.

The project proponent retained VHB to prepare a Traffic Impact and Access Study (TIAS), dated December 6, 2023, evaluating the expected traffic impacts of the project. Our review focused on the adequacy of the study with regard to industry best practices for analyzing traffic operations, estimating project generated trips and related traffic impacts including pedestrian and bicycle accommodations.

In general, we find that the TIAS has been prepared in a professional manner that is generally consistent with standard traffic engineering guidelines for the preparation of a traffic impact assessment.

## Study Area

The study area in the TIAS includes the following intersections:

- East Central Street (Route 135) at Union Street and Marion Street (Natick)
- East Central Street (Route 135) at Penacook Lane (Natick)
- East Central Street (Route 135) at University Drive (Natick)
- Central Street (Route 135) at Pond Road (Wellesley)
- Central Street (Route 135) at Bacon Street (Wellesley)
- Central Street (Route 135) at Wellesley College Road (Wellesley)
- Central Street (Route 135) at Weston Road (Wellesley)
- Washington Street (Route 16) at Pond Road (Wellesley)

**The study area is sufficient to evaluate the potential impact of the project based on the expected trip distribution pattern for the Project.**

## Traffic Volumes, Data Collection and Seasonal Adjustment

Traffic volume data was collected at the study area intersections by means of manual turning movement counts and automatic traffic recorder counts in November 2022 and October 2023.



1. Seasonal adjustment factors should be evaluated, and volumes factored as appropriate. October and November represent lower than average months for both an urban arterial such as East Central Street (Route 135) and a local roadway such as Pond Road.

### **Crash Data**

Motor vehicle crash data was obtained for the study area intersections from MassDOT for the 6-year period of 2015-2020. The intersections of East Central Street at Union Street and Marion Street (Natick), Central Street at Bacon Street (Wellesley), and Central Street at Weston Road (Wellesley) were all noted to have higher than average crash rates. The intersections of East Central Street at Union Street and Marion Street (Natick) and Central Street at Weston Road (Wellesley) were both noted to be HSIP eligible crash clusters.

2. Crashes at the intersection of Central Street increased from 0 crashes in 2015-2018 to 4 crashes in 2019. Is there any known reason for the increase in crashes?
3. Potential safety improvements should be explored at the intersections of East Central Street at Union Street and Marion Street (Natick), Central Street at Bacon Street (Wellesley) and Central Street at Weston Road (Wellesley). Road Safety Audits (RSA) should be considered at both HSIP locations to help identify potential safety issues and possible countermeasures to improve safety for road users.

### **General Background Growth**

A background growth rate of 1.0% per year was assumed based on previous studies in the area.

**We agree with using a 1% per year background growth rate.**

### **Specific Development by Others**

Several other development projects were identified in the report and trips associated with the projects were applied to the study area.

No further information is needed on this topic.

### **Project-Generated Traffic**

The assumptions used to estimate weekday daily and peak hour traffic volumes was based on standard ITE trip generation factors, using Land Use Code (LUC) 254 Assisted Living with 150 bed count to develop the basic number of daily and peak hour vehicle trips to the site.

Based on the calculated volumes, the project is expected to generate 390 new automobile trips (195 in/195 out) per day, 27 trips (16 in/11 out) during the morning peak hour and 36 trips (14 in/22 out) during the evening peak hour.

**We concur with the calculation of trip generation traffic volumes.**

4. In the conclusion of the report, the following statement was made, which we find to be misleading. "While the peak hour analysis in this study is based on Institute of Transportation Engineers (ITE) guidelines for vehicle trip estimates for such developments, actual Site traffic would likely be less than the ITE estimates as most employees would already be on the Site by the time the morning and evening commuting peak hours start in the area. This is because of the expected staggered employee shift times for the development in relation to the roadway peak traffic time periods." We find it to be misleading to state that the traffic would likely be lower than

ITE studies due to the shift changes occurring outside peak hours. This effect is already accounted for in the ITE data. The ITE trip generation has two sets of data, peak hour of adjacent traffic (7-9 AM and 4-6 PM), as well as peak hour of generator. The peak hour of generator is indeed higher, with 33 trips in the morning and 45 trips in the evening, but that data was not used in the study as it fell outside the critical 7:00-9:00 AM and 4:00-6:00 PM time period.

### Trip Distribution

The project generated trips were distributed through the project area based on the calculated trip distribution for this project. The distribution was based on US Census Journey to Work Data, which is the accepted approach.

- Unless turn restrictions are implemented, it is our opinion that a slightly higher percentage of trips will use Pond Road between Washington Street and East Central Street. In the trip distribution spreadsheet included in the report Appendix, the distribution would be more accurate if the Natick-to-Natick data point were increased from 0% to 25-33% for Washington Street to/from the south. This would result in increasing the trip distribution on Pond Road south of the project site from 4% to 7-8%

### Traffic Volume Increase

One way to visualize the impacts of a proposed development is to calculate the traffic increase on a particular segment of roadway. Table 1 is a summary of traffic volume increases at four key segments.

Roadway Segment	No Build Volumes		Project Generated Traffic		Percentage Increase	
	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
East Central Street West of Pond Road	813	951	8	12	1.0%	1.3%
Central Street East of Pond Road	903	1,008	17	22	1.9%	2.2%
Pond Road North of Site Drive	94	73	25	34	26.6%	46.6%
Pond Road South of Site Driveway	89	80	2	2	2.2%	2.5%

As shown in Table 1, the project results in a traffic increase of 1% to 2.2% on Route 135. On Pond Road, for the short segment north of the site driveway, the traffic volumes would increase 27% to 47%. South of the site driveway, the Pond Road traffic volumes would increase by 2.2% to 2.5%. We note that these volumes were based on the data in the TIAS, but may vary based on prior comments related to seasonal adjustment and trip distribution. If implemented, suggested trip distribution revisions would result in higher percentage increases south of the site driveway and lower increases north of the driveway.

### Sight Distance Assessment

Table 5 in the TIAS presents the sight distance information for the proposed sight driveway at 200 Pond Road. The analysis shows that based on an 85<sup>th</sup> percentile speed of 34 mph,



there is not sufficient sight distance on Pond Road at the location of the proposed site driveway due to a horizontal curve, stone wall and vegetation.

6. Required stopping sight distance (SSD) and desirable intersection sight distance (ISD) should be provided at the proposed site driveway. The applicant should propose geometric improvements and/or speed reduction measures on Pond Road, or find an alternate location for the proposed site driveway.

### **Pond Road**

7. Pond Road is a narrow, winding roadway with no sidewalks. The Applicant should identify whether it will be desirable for residents to walk to nearby destinations, and consider pedestrian-focused improvements as appropriate.

### **Traffic Operations Analysis**

Capacity analyses were performed for Existing, 2030 No-Build and 2030 Build conditions at study area intersections. Utilizing the observed roadway geometry, the traffic volumes (both existing and projected), and the appropriate traffic control at each location, the TIAS utilized the most appropriate version of the highway capacity software and presents an accurate description of the Level of Service terms.

In reviewing the operational analysis, the following information was noted:

8. The intersection of East Central Street/ Union Street/ Marion Street appears to have been analyzed without a pedestrian phase, which will artificially reduce the calculated delay. Analysis should be updated with a pedestrian phase. Please verify the number of pedestrian actuations assumed per hour, which is not included in the capacity analysis worksheets included in the Appendix.
9. The intersection of Central Street/ Weston Road was analyzed using a 15 second pedestrian phase. The crosswalk is 52 feet wide which requires a 15 second clearance phase, in addition to the Walk phase. Please update the analysis to include the entire pedestrian time.
10. Update additional analysis output as necessary based on recommended seasonal adjustment and trip distribution comments contained herein.

### **Site Access**

The applicant should provide a detailed site plan showing how emergency vehicles, delivery vehicles and refuse vehicles will access and circulate around the site.

### **Conclusions & Recommendations**

Tighe & Bond has reviewed the TIAS's conclusions and generally agrees that the project will not have a significant impact on traffic capacity in the area. However, we have concerns about the sight distance at the proposed site driveway as well as concerns about the existing condition of Pond Road and its ability to physically accommodate additional vehicle or pedestrian traffic.

Project mitigation has not been proposed. Potential mitigation should be focused on safety rather than capacity. We recommend the following improvements:

- Potential safety improvements should be explored at the intersections of East Central Street at Union Street and Marion Street (Natick), Central Street at Bacon Street (Wellesley) and Central Street at Weston Road (Wellesley). Road Safety

Audits (RSA) should be considered at both HSIP locations to help identify potential safety issues and possible countermeasures to improve safety for road users.

- Reconstruct the curb ramps at the intersection of Central Street and Pond Road. Add a marked crosswalk.
- The applicant should propose geometric improvements and/or speed reduction measures on Pond Road, or find an alternate location for the proposed site driveway.

Revisions to the proposed design and traffic study to address review comments may result in additional comments not realized under this review.

We appreciate the opportunity to assist the Town of Wellesley in their review of this project. If you have any questions or require additional information, please feel free to contact me directly at any time. Once responses to the initial comments noted above have been received and reviewed, T&B will respond to this information as appropriate.

Very truly yours,

**TIGHE & BOND, INC.**



Alan T. Cloutier, PE, PTOE  
Senior Traffic Engineer

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