MEMO

TO: Susan Noyes, Newbury Zoning Board of Appeals

FROM: Jennifer Conley, PE, PTOE

SUBJECT: **Peer Review of Proposed Residential Development in Newbury, MA**

DATE: **June 23, 2017**

WSP has been retained to review the transportation submittal provided with the application for a proposed residential development in Newbury, Massachusetts. WSP is in receipt of the Traffic Assessment Memorandum prepared by TEPP LLC. (TEPP) dated October 20, 2016 (TAM). WSP is also in receipt of the site plans entitled 40B Comprehensive Permit, Byfield Estates, dated March 22, 2017 (site plan). WSP has completed the review and the findings are provided below:

OVERALL METHODOLOGY AND STUDY AREA

PB has reviewed the TAM for its completeness and methodology. The TAM does not follow all of the typical steps included in a Traffic Impact Study.

PROPOSED DEVELOPMENT

This section of the TAM outlines the proposed uses on the site as well as their access points. The number of dwelling units and the land use was checked against the site plan. The site plan illustrates 24 dwelling units of detached residential condominiums accessed via Pearson Drive. The proposed residential development dwelling units described in the TAM matches what is shown on the site plan.

SIGHT DISTANCE

The TAM includes a discussion of sight line analysis. WSP confirmed the sight distance calculations followed the appropriate guidelines. The field measured sight lines noted in Table 1 of the TAM were significantly higher than the required minimum stopping sight distance. Intersection sight distance requirements were not satisfied for vehicles on the site driveway looking to the south from the proposed site driveway. WSP confirmed that the sight distance table used the appropriate ASSHTO guidelines for a 30 mile per hour roadway. The TAM indicates that the SSD *will be* met at both intersections and in both directions *with appropriate roadside and vegetation maintenance*. No further information was provided as to whether the vegetation is in the public right of way and/or if the maintenance will be performed regularly as a part of the condominium maintenance. The only limitation identified is the intersection sight

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distance to the south. Traffic may in fact be traveling at less than 30 miles per hour when approaching from the south due to the curvature of the roadway. The SSD and ISD presented in the TAM have not been independently verified in the field by WSP.

TRIP GENERATION

The TAM determined the impact of the proposed residential development based on industry standards. WSP researched the industry standard, the Institute of Transportation Engineers Trip Generation Manual for appropriate land use codes. Land Use Code (LUC) 210, Single Family Detached Housing and LUC 230, Residential Condominium/Townhouses are the closest uses provided in the manual. Based on the ITE trip generation for single family detached housing, a development this size would generate 19 vehicle trips (5 trips in and 14 trips out) during the weekday AM peak hour, 24 vehicles trips (15 trips in and 9 trips out) during the weekday PM peak hour, and 22 vehicular trips (12 trips in and 10 trips out) during the Saturday midday peak hour.

Based on the ITE trip generation for residential condominiums/townhouses, a development this size would generate 11 vehicle trips (2 trips in and 9 trips out) during the weekday AM peak hour, 12 vehicles trips (8 trips in and 4 trips out) during the weekday PM peak hour, and 11 vehicular trips (6 trips in and 5 trips out) during the Saturday midday peak hour. WSP confirmed that the trip generation presented in the TAM were the anticipated site related trips based on 24 dwelling units of LUC 210 which were conservatively higher than the site related trips based on LUC 230. WSP confirmed that the trip generation were based off of the fitted curve equation and not the average rate resulting in a higher trip generation. WSP verified the trip generation presented in the TAM is appropriate and conservatively high.

POTENTIAL TRAFFIC IMPACTS

WSP concurs that the proposed development is anticipated to generate less than 100 peak hour vehicle trips. This project may not be a project of regional impact or significance, however, locally there is a potential impact on the existing traffic on Pearson Drive.

CONCLUSION

As presented, WSP has found that the TAM does not follow the industry standard steps for completion of a traffic impact assessment. The sections that were completed were completed accurately but a number of items were not included. WSP's outstanding concerns are listed below:

1. Traffic Impact Studies typically include an assessment of the existing conditions of the study area including descriptions of intersection geometry, existing pedestrian facilities, existing traffic volumes, and crash data. Traffic volumes should be collected at a minimum of the intersection of Orchard Street at Pearson Drive during the weekday AM (7:00 AM to 9:00 AM) and weekday PM (4:00 PM to 6:00PM) peak hours, the peak times for a residential development to provide context for the traffic increases anticipated with the project. Seasonal traffic patterns near the study area should be researched to determine the appropriate seasonal adjustment. Raw traffic count data should be adjusted seasonally to represent the existing conditions. Crash data for the intersection of Orchard Street at Pearson Drive should be reviewed.

2. Because the project is relatively small, an assessment of the future condition without the project may not be required. However, an analysis of the impact of the project related traffic on the intersection of Orchard Street at Pearson Drive is appropriate. The anticipated trip generation should be distributed through the study area to determine the future condition with the proposed development.

3. The operation of the study area intersection should be analyzed to determine the impacts of the project related traffic. Deficiencies should be identified and improvements proposed.