

TRAFFIC-IMPACT AND ACCESS STUDY

EATON LAKEVIEW APARTMENTS READING, MASSACHUSETTS

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Prepared for Eaton Lakeview Development, LLC

TEPP LLC

TRANSPORTATION ENGINEERING, PLANNING AND POLICY

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EXECUTIVE SUMMARY

PROJECT DESCRIPTION

Eaton Lakeview Development, LLC has retained TEPP LLC to prepare this traffic-impact and access study (TIAS). This TIAS regards the proposed Eaton Lakeview apartments in the Town of Reading, Massachusetts (“Project”).

The proposed Project site includes 120 apartment units consisting of a mix of 1-, 2-, and 3-bedroom units. The Project site will be accessed via one unsignalized driveway along the south side of Lakeview Avenue, one unsignalized driveway near the east end of Lakeview Avenue, and one unsignalized driveway along the east side of Eaton Street.

STUDY SCOPE

The TIAS study area consists of the following unsignalized intersections and connecting road segments:

- Walkers Brook Drive/John Street
- Walkers Brook Drive/Lakeview Avenue
- Eaton Street/Pleasant Street
- Lakeview Avenue/Eaton Street/Site Driveways (to be built)

These intersections were selected based upon consultation with the Town of Reading Engineering Department and the Reading Police Department. The study of these intersections included left turns from/to each of the road segments studied.

This TIAS analyzes traffic operations for the weekday AM street peak hour, the weekday PM street peak hour, and the weekend (Saturday) midday peak hour under the following scenarios:

- 2017 existing conditions
- 2024 “no-build” (i.e., 2017 existing conditions plus projected future background traffic growth)
- 2024 “build” (i.e., 2017 existing conditions plus projected future background traffic growth and projected new traffic attributable to the proposed apartments)

Traffic counts for 2017 existing conditions are based on in-field measurements taken at the above-noted intersections in October of 2017, during which period traffic is reported higher than average according to Massachusetts Department of Transportation (MassDOT) data. Future

background traffic growth for the 2024 no-build and 2024 build scenarios are based on projections agreed-to by Town officials. For new traffic projections in the 2024 build scenario, the TIAS used trip generation models contained in the ninth edition of the *Trip Generation Manual*, the authoritative profession publication issued by the Institute of Transportation Engineers (ITE).

The data were then analyzed to indicate the Level of Service (LOS) of each intersection and turn studied. The LOS of an intersection or turn is a measure of the overall quality of traffic service based upon such performance standards as traffic delays and queue times. LOS is measured on a scale of “A” to “F”, with “A” indicating the best service.

Comparative differences in traffic operations and LOS between the 2017 existing conditions and the 2024 no-build scenario approximate normal traffic growth that is projected to occur whether or not the Project is built. Comparative differences in traffic operations and LOS between the 2024 no-build and 2024 build conditions approximate traffic impacts of the proposed redevelopment.

TRIP GENERATION

Calculated vehicle-trips due to the proposed apartments under the 2024 build scenario are:

- weekday daily, 851 (total of in and out)
- weekday AM-street-peak hour, 63 (13 in and 50 out)
- weekday PM-street-peak hour, 84 (54 in and 30 out)
- Saturday daily, 686 (total of in and out)
- Saturday site-peak hour, 68 (34 in and 34 out)

CAPACITY ANALYSIS

Based upon the data noted above, the following is the analysis of the projected impact of the Project in the 2024 build scenario as compared to the 2024 no-build scenario and 2017 existing conditions:

Walkers Brook Drive/John Street:

- Under both the 2024 build and 2024 no-build scenarios, projections indicate minimal delays for left turns from the southbound Walkers Brook Drive approach onto John Street. These delays are more or less equivalent to 2017 existing conditions.
- The 2017 existing condition measurements indicate delayed operations for the westbound John Street approach onto Walkers Brook Drive. Under both the 2024 build and 2024 no-build scenarios, projections continue to indicate delayed operations for this approach.

However, the 2024 build condition indicates no decrease in the LOS as compared to the 2024 no-build condition.

Walkers Brook Drive/Lakeview Avenue:

- Under both the 2024 build and 2024 no-build scenarios, projections indicate minimal delays for left turns from the southbound Walkers Brook Drive approach onto Lakeview Avenue. These delays are more or less equivalent to 2017 existing conditions.
- The 2017 existing conditions measurements indicate moderately delayed operations for the westbound Lakeview Avenue approach onto Walkers Brook Drive. Under both the 2024 build and 2024 no-build scenarios, projections continue to indicate moderate delays for this approach. However, the 2024 build scenario indicates only a minor increase in delays for this approach as compared to the 2024 no-build scenario.
- The proximity of the Walkers Brook Drive/General Way signalized intersection does affect the Walkers Brook Drive/Lakeview Avenue intersection because, under certain traffic conditions, the proximity of these intersections can make left turn maneuvers at the Walkers Brook Drive/Lakeview Avenue intersection more challenging for drivers to make. Nonetheless, it should be noted that the data for Walkers Brook Drive/Lakeview Avenue indicate that it does not presently—and will not in the future—experience a significant negative impact (in terms of LOS and crash frequency).

Eaton Street/Pleasant Street:

- Under both the 2024 build and 2024 no-build scenarios, projections indicate minimal delays for all movements. These delays are more or less equivalent to 2017 existing conditions.

Lakeview Avenue/Eaton Street/Site Driveways (to be built):

- Calculations conservatively combine the volumes of all three proposed driveways into one driveway.
- Calculations show minimal delays.

SAFETY

In addition to assessing present and future traffic quality, the TIAS included an analysis of the most current MassDOT accident data (covering the years 2011-2015) for the three existing intersections included in the study: Walkers Brook Drive/John Street, Walkers Brook Drive/Lakeview Avenue, and Eaton Street/Pleasant Street.

For the Walkers Brook Drive/John Street intersection, MassDOT data showed a total of 7 accidents between 2011 and 2015 (1.4 per annum), of which 5 involved property damages only, and

none involved any fatality. This accident history represents a rate less than one-half of the statewide and districtwide averages.

For the Walkers Brook Drive/Lakeview Avenue intersection, MassDOT data showed a total of 3 accidents between 2011 and 2015 (0.6 per annum), all of which involved property damages only (no personal injury or fatality). This accident history represents a rate less than one-fourth of the statewide and districtwide averages.

For the Eaton Street/Pleasant Street intersection, MassDOT data showed zero accidents between 2011 and 2015.

Based upon the above-described traffic projections, and given the already-low accident rates of the intersections studied, the additional traffic generated by the Project is not anticipated to present any significant safety concerns.

FINDINGS

The intersections studied as part of the TIAS do not represent significant safety concerns. In fact, not only do accident rates for these intersections fall well below state and district averages, but most reported accidents were minor (involving property damage only), and none included any fatalities.

The Project is not anticipated to have a significant impact on area traffic operations. In fact, for all but one of the movement groups studied, the LOS under the 2024 build scenario will be identical to that of the LOS under the 2024 no-build scenario.

The Applicant is willing to reconstruct Lakeview Avenue and add a sidewalk.

The Applicant is willing to contribute to a study of potential improvements by others to the Walkers Brook Drive/Lakeview Avenue intersection area.