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Ref.: 24001

January 16, 2024

Mr. Edward L. Pesce, P.E., LEED AP
Pesce Engineering & Associates, Inc.
43 Porter Lane
West Dennis, MA 02670

Reg.: Traffic Peer Review
Bridle Crossing Residential Development
Ferry Street, Marshfield, MA

Dear Ed:

Chappell Engineering Associates, LLC (CEA) has initiated an independent peer review of the traffic assessment supplement and site plan prepared for the proposed Bridle Crossing residential development to be located off Ferry Street in Marshfield, Massachusetts. As proposed, 56 multifamily dwelling units are proposed on site amongst eight buildings. In 2016, 20 residential units were proposed on site called Bridle Path Village, but the project was never constructed. Site access will be provided by way of a new driveway on Ferry Street, north of Waltham Avenue.

The submitted traffic assessment and site plan were reviewed with respect to capacity and safety of the surrounding roadways, the proposed site access points, and nearby intersections to accommodate the increase in traffic from the development as well as assess the adequacy of on-site circulation and site access design. Based on a review of the submitted materials, we have some comments and recommendations that require further action from the applicant. Once these items are addressed, we will be able to finalize the traffic review of the project. The following lists the documents reviewed as part of the independent peer review:

- *Traffic Assessment Supplement, Proposed Bridle Path Village Residential Development, Marshfield, MA;* prepared by TEPP LLC; November 15, 2023.

- Site Plan set for *Bridle Crossing off Ferry Street, Marshfield, MA;* prepared by Grady Consulting, LLC; November 9, 2023, as well as the revised site plan set submitted January 8, 2024.

Below are our comments on both the traffic study and site plan. Comments in bold indicate where additional information is requested from the applicant.

Traffic Assessment Supplement Review

1. The Project consists of constructing 56 multifamily residential units amongst eight buildings. Site access will be provided by way of a new driveway on Ferry Street, north of Waltham Avenue.

2. A sight distance analysis was performed at the site driveway intersection with Ferry Street. Sight distances north and south of the site driveway exceed 500 feet, assuming the removal/maintenance of overgrown vegetation. Based on a field review of available sight distances, CEA concurs with these findings. These sight distances are adequate to accommodate speeds upwards of 50 mph. Speed data, specifically the 85th percentile speeds, are typically collected to determine if sight lines at the site driveway meet or exceed minimum requirements. Since the speed limit on Ferry Street is posted at 30 mph, it is expected that the available sight lines far exceed the minimum requirements for actual 85th percentile speeds. **To ensure these sight lines are maintained, it is recommended that any existing and potential future obstructions such as landscaping, fences, walls, or signs in the vicinity of the site driveways be set back outside the sight triangles (as defined by AASHTO) so as not to impede the available sight distances.**

3. The trip generation of the development was estimated using the Institute of Transportation Engineers (ITE) *Trip Generation Manual*[1] for Land Use Code 220 (Multifamily Housing – Low Rise). Based on this land use, the study estimates that the site will generate 256 weekday daily vehicle trips (half entering and half exiting) of which 40 vehicle trips will occur during the weekday AM peak hour (10 entering and 30 exiting) and 45 vehicle trips will occur during the weekday PM peak hour (28 entering and 17 exiting). Based on our review of the ITE data, it appears that 434 vehicle trips can be expected on a weekday daily basis. **It is recommended that the applicant confirm the weekday daily vehicle volume expected to be generated by the site.**

Site Plan Review

4. Access to the site is proposed via a new driveway on Ferry Street located north of Waltham Avenue. The driveway exit is proposed provide dedicated left- and right-turn lanes. **Considering the anticipated low volume of traffic exiting the site, it is recommended that a single exit lane be provided for both left- and right-turning vehicles to assure that a vehicle waiting in the left-turn lane does not block the sight line of a vehicle in the**

[1] *Trip Generation Manual, 11th Edition;* Institute of Transportation Engineers; Washington, DC; 2021.

right-turn lane, and vice versa. The reduced driveway width can then be used to "square off" the intersection so that the site driveway intersects Ferry Street at more of a 90-degree angle.

5. The existing Bridle Trail crossing will be slightly relocated to cross perpendicular to the site driveway. Motorists on the site driveway will be directed to yield to pedestrians via signing and pavement markings. A STOP sign and stop line are proposed on the driveway exit to Ferry Street. **It is recommended that the proposed double yellow centerline on the site driveway near Ferry Street extend to the yield line at the Bridle Trail crossing.**

6. A sidewalk is proposed along the east side of the site driveway connecting the buildings on site to the existing Bridle Trail.

7. Sheet 12 of the site plan set shows portions of the sight triangles, looking both north and south of the site driveway, and calls out these areas to be trimmed or pruned to enhance sight lines. **It is also recommended that these areas remain clear of any obstructions including snow windrows that exceed 3.5 feet in height.**

8. **It is recommended that the proponent coordinate with the Marshfield Fire Department regarding adequate accessibility to the site and all sides of the building.**

9. A large amount of material removal is expected as part of construction of the site. This material removal requires construction vehicles to travel to and from the site regularly during construction. The travel routes for these construction vehicles are highlighted in the report. **It is recommended that AutoTurn or vehicle tracking be used to show the critical turning movements at intersections along these travel routes to ensure that the largest construction vehicle expected can make these turning movements under existing intersection configurations.**

Once the above comments have been addressed, we will be able to finalize our independent traffic peer review of the proposed residential development. Please feel free to contact me if you have any questions regarding this review.

Sincerely,

Chappell Engineering Associates, LLC

Kirsten Braun, P.E.
Project Manager