CHAPPELL ENGINEERING ASSOCIATES, LLC
Civil • Structural • Transportation • Surveying

201 Boston Post Road West, Suite 101
Marlborough, MA 01752
Tel.: (508) 481-7400
Fax: (508) 481-7406
www.chappellengineering.com

Ref.: 23045

September 13, 2023

Mr. Michael McKnight, Chairman
Town of Wrentham Planning Board
79 South Street
Wrentham, MA 02093

Reg.: Proposed Gas Station & Convenience Store
Wrentham Business Park
10 Commerce Boulevard, Wrentham, MA

Dear Chairman McKnight:

On behalf of our client, Phillips & Angley, as counsel for the statutory abutters, 574 Washington Street, LLC and Helping Hands of America Foundation, Inc., ***Chappell Engineering Associates, LLC (CEA)*** submits this letter to document our review of the site plan[1] and associated traffic impact study[2] for the proposed expansion of the existing Wrentham Business Park, in order to accommodate a proposed gas station and convenience store. Specifically, as part of our effort, the following documents were reviewed:

- *Site Development Plan of Land, 10 Commerce Boulevard, Wrentham, MA*; Bay Colony Group, April 19, 2023.

- *Traffic Impact Study, Proposed Gas Station & Convenience Store, Commerce Boulevard, Wrentham, Massachusetts*; McMahon, May 2023.

In general, the traffic impact study submitted for the project adheres to both Massachusetts Department of Transportation (MassDOT) and industry guidelines for the preparation of traffic impact assessments. However, in order to allow for a more comprehensive review of the project's

[1] *Site Development Plan of Land, 10 Commerce Boulevard, Wrentham, MA*; Bay Colony Group, April 19, 2023.
[2] *Traffic Impact Study, Proposed Gas Station & Convenience Store, Commerce Boulevard, Wrentham, Massachusetts*; McMahon, May 2023.

anticipated traffic impacts, and ensure that any impacts of the project are fully mitigated, it is respectfully recommended that the Board require the applicant to provide the following information:

Expanded Study Area

The study area evaluated as part of the May 2023 traffic impact study included only the intersection of Route 1 with Commerce Boulevard and Hawes Street, with Commerce Boulevard serving as the sole point of access to and from the proposed gas station and convenience store via Route 1. In conjunction with the project, a new traffic signal is proposed at this location, which would be coordinated with the upstream and downstream intersections of Route 1 with Thurston Street and Madison Street.

It is recommended that the applicant expand the study area to include the signalized intersections of Route 1 with both Madison Street and Thurston Street, as well as the unsignalized intersection of Thurston Street with Hawes Street. As the two identified traffic signals are proposed to operate under coordinated traffic signal operations with the proposed traffic signal at Commerce Boulevard and Hawes Street, evaluation of both project-related traffic impacts, and the impact of any proposed modifications to the current signal timing and phasing at these locations to allow for coordinated operations, should be identified.

Trip Distribution

Of particular concern is whether the introduction of a new traffic signal at Hawes Street will result in new traffic patterns within the study area, including the diversion of current traffic from the Route 1 corridor to Hawes Street to access Thurston Street, or generation of new project-generated traffic along the Hawes Street corridor. The May 2023 traffic impact study indicates no project-related traffic will utilize Hawes Street, either to arrive at or depart from the site, with all traffic instead utilizing Route 1 from the north or south to access the project. As the project includes a convenience store that is likely to draw traffic from the residential neighborhoods on the opposite side of Route 1, it is likely that some level of local traffic will arrive to the site via either Thurston Street or Madison Street, the two residential corridors located north and south of the project that provide signalized access to Route 1.

Should the delays for either existing traffic or project-related traffic be shorter by utilizing Hawes Street as a means of avoiding the traffic signal at Route 1 and Thurston Street, the Hawes Street corridor may become a more convenient travel route both to and from the site, as well as for motorists traveling to and from Thurston Street to Route 1 to the south.

Evaluation of projected future delays at Route 1 and Thurston Street, after accounting for project-related traffic increases and any proposed signal timing modifications, will allow for refinement

of the trip distribution assumptions, if warranted, to identify any level of current traffic that may be diverted, or project-generated traffic that would use Hawes Street to access the site.

Conclusion

In conclusion, it is recommended that the applicant expand the current traffic impact study scope to include the intersections of Route 1 with Thurston Street and Madison Street, which are proposed to be coordinated with the new traffic signal at Route 1 with Commerce Boulevard and Hawes Street, and the intersection of Thurston Street with Hawes Street. The expanded scope would ensure the impacts of the project are fully identified and would provide the necessary information to verify the project's expected distribution of traffic, including any potential increases to the Hawes Street corridor.

Sincerely,

Chappell Engineering Associates, LLC

Shaun P. Kelly

Shaun P. Kelly
Senior Project Manager