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January 13, 2021

Patrick G. Brennan, P.E. Amory Engineers, P.C. 25 Depot Street P. O. Box 1768 Duxbury, MA 02331-1768

> Reference: Traffic Study Peer Review of Response Country Club Estates 314 Plymouth Street, Halifax, MA

Dear Mr. Brennan:

At your request, we have reviewed the "Traffic Impact and Access Study" review response for the residential 30-unit Development currently planned for 314 Plymouth Street in Halifax.

Document reviewed include:

Response to Traffic Peer Review letter by Green International Affiliates, Inc., January 11, 2021

In general, the proponent and I agree the traffic impact study for the proposed development was done according to standard practices and represented a reasonable assessment of impact of the proposed residential development of 30 units of housing. Moreover, there was general concurrence in regard to the study area, based data and adjustments, site traffic forecasts and the key analysis findings related to site the access.

My primary concern was the location of the site access point as related to the traffic signal operation and the signal synchronization along the Plymouth Street corridor. As originally submitted, the site drive would be opposite the Stop & Shop (S&S) Drive but with a slight offset in relation to the S&S Drive centerline. After examining both the turning movement volumes and the projected delay, I felt signal timing could resolve the off-set issue and I suggested a signal timing option that would "split" the signal phases for each drive. I also suggested the final signal improvement plans should be provided to the town for approval <u>prior</u> to construction and the need for the applicant to commit to design and construction of the modifications as approved by the Town at this intersection.

In response, the proponent completed additional signal timing analyses along Plymouth Street incorporating "split" phasing at the site drive intersection as well as testing various timing plans for the signal coordination. The analysis results showed that using split phasing at the site drive will more than adequately address the slight offset in alignment and maintain more than acceptable operating conditions. It will also be better given the large differential in volumes on the two opposite approaches.

Furthermore, the analysis showed that the split phasing along with optimized signal coordination timing would maintain acceptable levels of service at the 3 intersections as well as manage the peak hour vehicle queues as well as possible. The most recent signal analysis calculation sheets were provided within the submittal.

CONCLUSION

The proponent has agreed the traffic signal at the Plymouth Street/Stop & Shop Drive will be modified to include a separate signal phase for the project drive. The applicant will be responsible for the design and construction of these modifications. All traffic control will conform to the MUTCD.

- Traffic signal timing plans will be further refined during the design process and submitted for review by the town in order to reach agreement on the optimal signal timing.
- With the construction of the site drive, ADA compliant ramps will need to be constructed at the sidewalk locations and a crosswalk marked across the driveway to facilitate crossing Plymouth Street from the site to the Stop & Shopsite. The proponent must make these improvements.
- Any new vegetation or site signage adjacent to the site driveway on Pine Street should be kept low- lying (less than two feet tall) and/or set back sufficiently to maintain adequate sightlines.

In essence, this project is better than other land-uses that may have been proposed for this site in terms of traffic generation and impact. However, it is essential that it be introduced as safely as possible as I believe the above conditions will assure.

JOHN THOMAS

CIVIL

Sincerely, GILLON ASSOCIATES

John T. Gillon, P.E.