Hayes Engineering, Inc.
603 Salem Street
Wakefield, MA 01880
Tel: (781) 246-2800
Fax: (781) 246-7596
Nantucket, MA 02554
Tel: (508) 228-7909

Refer to File # WEL-0011A

To: Robert W. Levy
Vice Chairman
Wellesley Zoning Board of Appeals
525 Washington Street
Wellesley, Ma. 02482

From: William R. Bergeron, P.E.
Project Engineer

April 9, 2019

Re: 680 Worcester Street, Wellesley response to Engineering Memo dated March 26, 2019. The following provides a point by point response for the issues outlined.

Circulation – while the entrance driveway from Route 9 to the property has been widened to 28 feet, it remains a single point of access, in which turning, snow management, short term deliveries, pickups / drop offs and trash pick up all occur, any combination of which seems like a potential to create backing up onto Route 9. Further, we understand that the largest vehicles that can be accommodated are SU-30 vehicles, which is a large box truck. This will likely prohibit most trash trucks, typical moving vans, furniture deliveries and emergency vehicles. While we are aware that this is a compromise made in urban areas and for higher density developments, it is particularly concerning here as repercussions may cause a Route 9 public safety issue. Further, we expect that this may be a concern for the required MassDOT curb cut approval.

The proposed design has been reviewed and approved by the Town of Wellesley's peer review consultant VHB. The submission of the Traffic Report by Vannese Associates and the peer review by VHB also agreed that there would be minimal to no stacking issues at the driveway and Route 9. The modifications suggested by VHB to widen the entrance to 28 feet only enhanced the ability of the driveway to allow SU-30 vehicles to enter or exit at the same time as a car.
The turning movement analysis submitted with the final plans demonstrate that rubbish collection, deliveries and moving vehicles will not be an issue or block normal onsite passenger car movements.
The issue of snow removal being a problem for the exposed pavement area that is not much more than a single family home would be is something that will not be an issue for this site.
The Wellesley Fire Department has repeatedly indicated that there is no issue in their ability to service this site for emergency vehicles or to fight a major fire.

Impingement of the existing sewer easement – the proposed building foundation appears to be located on the easement line, which likely means that the footing will encroach. The DPW does not allow this. Further, we have stated, and continue to believe that the proposed building and site plan result in a condition that permanently limits our ability to sewer a sewer lateral, and is a problem for the DPW.

The proposed building foundation including the footings do not encroach into the existing sewer easement. The existing sewer easement access is not reduced from the present legal access.

Construction Management – we remain concerned that there is too much building for this site, and that during construction there will be impacts to abutting lots and to Route 9, which is a significant safety concern. The layout of the building prohibits the placement of heavy equipment such as cranes, stockpiles, material loading and storage. It also prohibits workers from parking at or near the site, which seems unrealistic. The Construction Management Plan should discuss groundwater management.

The soil testing on site indicate that there will be little to no excavations below the water table for the construction of this building.
The Construction Management Plan submitted for this project explains how the project will be constructed and how the anticipated vehicle management for the work activities will be handled. This project and site size is not unique for construction projects. Hayes Engineering Inc. has been involved with two projects that have been completed in the last year that were similar in size.

Required sewer main upsizing – the sewer lateral that currently serves the lot is a 6-inch clay pipe that should be upgraded to an 8-inch PVC sewer line from 680 Worcester Street to Francis Road. This is the municipal standard for sewer mains, which is effectively what this pipe becomes with the proposed change of use.

I provided hydraulic information for this project in a letter dated October 17, 2018 which is in the submittal record. This letter indicated that even under peak flow conditions, using the outdated MassDEP sewer use generations, with the new building in place that the total flow to the sewer main would only be approximately 19.5 gallons per minute. The capacity of the existing line is approximately 138 gallons per minute. This represents approximately 7 times the peak flow requirement. Mr. David J. Hickey, Jr. P.E. Town Engineer confirmed that there was not a capacity issue at one of the public hearings. I also indicated that our monitoring of recently constructed projects with current water and energy saving devices result in significantly less flows. The results of those investigations would indicate that the peak flow for this project would be approximately 7.75 gallons per minute. Therefore it is realistic that there will actually be approximately 17.8 times the required peak flow. It is understood that if there was a new sewer main to be constructed in Town that it would be a minimum of an 8 inch line due to modifications by the Massachusetts Department of Environmental Protection. There are many miles of 6 inch sewer mains throughout Massachusetts that are in use with no requirement to have them replaced. In this case the requirement to replace an existing sewer main that has ample capacity and will require disruption to the back yards of three homes that have driveways and other items located within the existing 20 foot wide narrow easement project simply to change a 6 inch line to an 8 inch line will cause unnecessary disruption to these homeowners. The replacement requirement offers no benefit but would add unnecessary costs to an affordable housing project.

Groundwater and Surface Water Management – the information submitted is not sufficient for us to understand how groundwater and surface water will be managed during construction and, given the intensity of the proposal, the proximity to abutting properties and limits access, we are concerned that there could be offsite impacts.

The soil testing done on site indicates that there will be little to no construction that will be below the observed water levels. During construction the siltation controls will be installed and maintained. A low area in the vicinity of the stormwater management area will be installed until the actual stormwater management systems are in place.

Sincerely,

William R Bergeron PE

William R. Bergeron, P.E.
Hayes Engineering, Inc.