



~~November 30, 2022~~ February 2, 2023

Stow Zoning Board of Appeals  
380 Great Road  
Stow, MA 01775

Re: Stormwater Review  
Special Permit Lot 2, Harvard Road  
Places Project No. 528

Dear Board Members,

This office has reviewed the Stormwater Management Plan Report for Lot 2 Harvard Road submittal. While this single lot is technically not subject to the DEP Stormwater Regulations, we have used some of the basic criterion such as the 2,10 and 100 year storm analysis in our review.

We understand the frustrations of the abutters to the volume and rate of runoff off the hillside. However, we have reviewed the calculations with the standards in the DEP Stormwater Handbook and industry standards and this single lot provides attenuation of both the rate and volume of runoff. These calculations have utilized the latest rainfall rates from NRCC which have been updated to reflect the more current rainfall rates (versus the old rates from the 1970's). The engineer's drainage calculations reflected the pre-development conditions as wooded, so that full impact of lot development is considered, not just from the cleared lot.

Given the on-going drainage issues experienced by the neighbors, the development of this lot will not improve the current situation as they have mitigated the impact of impervious surfaces for their property. Based on my own observations from a site walk with the Planning Board, there is significant runoff flowing from the upgradient golf course, across this site and into the neighboring property and Harvard Road.

I would also like to comment that rainfall events over the past several years have resulted in multiple rainstorm events with very intense rainfall. More intense rainfall has less time to soak into the soil, especially on steep slopes. These types of storms often overwhelm drainage systems and detention basins. The proposed drainage system on this site may experience this same situation, particularly if we have multiple days of back to back rainfall events. These types of events are not the standard used to evaluate the impacts of large or small projects.

Our comments have been addressed with the revised submittal dated December 30, 2022. We have two comments remaining:

1. The outlet elevation of the swale from the trap rock basin is illegible (overlapping text).
2. We would recommend that the bottom of the basin be  $\frac{3}{4}$ -1/2" washed stone where possible as it is much easier to walk on for maintenance purposes than trap rock.

It is strongly recommended that if the Board approves this lot, that the decision include the following items as conditions:

1. the roof area cannot exceed 2828 s.f. as documented in the drainage calculations without further evaluation of the recharge system.

2. The remaining impervious surfaces cannot exceed 3580 for the driveway area.
3. There can be no further clearing, grading or ledge removal on the westerly side of the lot.
4. Limit of clearing should be staked prior to initiation of construction.
5. An as-built plan should be required, to be submitted to the Building Commissioner, prior to occupancy by a Professional Land Surveyor or Engineer certifying that the site was constructed in compliance with the approved drainage calculations including basin volumes, roof and impervious areas.
6. The future homeowner(s) should be made aware of the maintenance requirements for the stormwater provisions.

Please contact this office should you need any clarification of these comments or have any other questions.

Thank you.

Very truly yours,  
PLACES ASSOCIATES, INC.  
BY:

Susan E. Carter, P.E., LEED AP  
President, Director of Engineering