Project Narrative

97 Main Street

Topsfield, Massachusetts

The subject property is located at 97 Main Street in Topsfield located within the Central Residential Zoning District. It is currently an undeveloped lot covered by trees and undergrowth with an intermittent stream on the northeasterly portion of the lot.

The proposal is to construct a four-bedroom single family house on the 20,000 square-foot lot. Coinciding with this proposal will be the construction of a paved driveway, regrading a portion of the lot, a proposed septic system and subsurface stormwater management area to capture roof runoff.

The work is proposed outside of the 100-foot buffer zone that is jurisdictional under the local wetland bylaw only. Approximately 12,500 square-feet of the lot will be disturbed. A 12-inch mulch sock is proposed around the north and easterly portion of the lot to capture any sediment from leaving the site during construction.

The dwelling is proposed to be serviced by connecting to the existing water main on Main Street. Sewage discharge will be to private septic system on the left side of the house. The septic system proposed is a 52-foot long by 25.5-foot wide Presby Enviro-Septic Wastewater Treatment system consisting of six 50-foot leach lines on the northerly portion of the lot.

Due to the increase of impervious area, additional stormwater runoff will be created. A subsurface infiltration system is proposed to capture the proposed roof runoff constructed behind the house. The proposed system consists of two rows of three units each, six total, of Cultec R-330XLHD units placed on a 6-inch bed of stone that extends 1-foot around the footprint of the Cultec units with 6-inches above the units. (A detail is provided on the plan)

We have analyzed the 2-year, 10-year, and 100-year storm events. The proposed stormwater management system is effective for mitigating the total peak flow rates and total volumes from the limit of the watershed analysis for these storm events. As shown below, there is a reduction in off-site flow for the respective storms.

Total Peak Runoff Tables

Table 1.0: Total Peak Rate of Runoff | Comparison Location 3L

Description	2 Year	10 Year	100 Year
Existing Peak Rate of Runoff (cfs)	0.16	0.86	2.38
Proposed Peak Rate of Runoff (cfs)	0.16	0.84	2.31
Difference	**-0.00**	**-0.02**	**-0.07**

Table 1.1: Total Peak Volume of Runoff | Comparison Location 3L

Description	2 Year	10 Year	100 Year
Existing Peak Volume of Runoff (cf)	935	3,097	7,822
Proposed Peak Volume of Runoff (cf)	917	2,962	7,425
Difference	**-18**	**-135**	**-397**