



Planning & Development
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Memo

Date: October 28, 2022

To: Planning Board
Patrick Johnson

From: Michael Livingston, PE

Re: The Timbers Subdivision (Map 55, Lot 13-1 and 13-2) – Stormwater Management Design and Analysis

Description:

The proposed development is located on a 10.6 acre vacant lot and includes one single family home and three buildings consisting of 3 dwelling units each. The site development includes the construction of an access road and utilities. The developed areas will create approximately 33,000 SF of new impervious area divided between 3 drainage basins.

Ordinance Requirements:

202-9B. Submissions:

(15) A stormwater management plan, prepared by a registered professional engineer in accordance with the most recent edition of Stormwater Management For Maine: BMPS Technical Design Manual, published by the Maine Department of Environmental Protection, 2006. Another methodology may be used if the applicant can demonstrate it is equally or more applicable to the site.

202-12.F(4). Stormwater management.

(c) The developer shall provide a statement from the designing engineer that the proposed subdivision will not create erosion, drainage or runoff problems either in the subdivision or in other properties. The engineer shall certify that peak runoff from the subdivision onto other properties shall not be increased either in volume or duration from the peak runoff characteristics existing prior to development.

Information Provided:

- Existing Drainage Plan, Sheet E2
- Proposed Drainage Plan, Sheet E3

Comments:

- Tables 1 and 2 reference only one analysis point or basin. The existing and proposed contours indicate at least 3 basins and analysis points required.
- Table 3 indicates the Modified Rational Method is being utilized. The data in the Table does not provide peak elevation information or how pond outflow combines with basin outflow.

- The drainage basins and flow paths (directional arrows) are not correct to the contours, see attached plans with existing and proposed basins and analysis points to be modelled.
- The current version of the MDEP Stormwater Design Manual is Volume III published in May 2016.
- A written report with supporting calculations of the hydrologic model was not provided. Soils, slopes, drainage paths, surface cover, etc. need to be quantified within the basins to determine the weighted CN and flow travel path/ time of concentration/ travel time.
- An analysis is needed for the culvert sizing at Station 2+60.
- The current project plans do not coincide with Sheets E2 and E3 on the width of the cul-de-sac road.

Conclusion:

The information submitted does not meet the Town requirements.

Additional/revised information is required.