

July 21, 2023
6842

Groton Zoning Board of Appeals
173 Main Street
Groton, MA 01450

**Re: Additional Information relative to Offsite Drainage
Groton Farms – 500 Main Street
Groton, MA**

Dear Members of the Board,

On behalf of the Applicant, 500 MG LLC, Dillis & Roy Civil Design Group, Inc. has prepared this letter to provide additional information relative to the offsite runoff resulting from the project. Specifically, we are providing the below information relative to the existing drainage ditch that begins on the project site and conveys flows to the North onto the abutting property.

Most of the existing site drains in the direction of this drainage ditch. Some of the site directly discharges to the ditch, and other portions of the site flow toward wetland areas on and adjacent to the property and then to the drainage ditch. The Stormwater Calculations provided by the office were setup to compare the pre-developed and post-developed flows at this point. It was indeed established as the design point (Design Point A) for the stormwater calculations.

The stormwater calculations that have been provided document that both the peak **rate** and **volume** of runoff will be reduced at this location as a result of the proposed project. As such, after construction of the proposed project is complete, the flow rates (amount of flow per time typically reported in Cubic Feet per Second) will be reduced, and the volume (typically reported in Acre-Feet) will also be less. The following tables list the comparisons of Rate and Volume respectively:

Table 1: Flow Rate Runoff Summary - Design Point A

	Pre-Developed (ft³ / sec)	Post-Developed (ft³ / sec)
2-Year	20.88	13.42
10-Year	38.37	27.87
25-Year	53.28	42.05
100-Year	85.26	76.09

Table 2: Volume Summary – Design Point A

	Pre-Developed (acre-feet)	Post-Developed (acre-feet)	Reduction in runoff Volume (acre-feet)
<i>Design Point "A"</i>			
2-Year	3.067	2.596	-0.471
10-Year	5.690	5.043	-0.647
25-Year	7.911	7.202	-0.709
100-Year	12.748	11.979	-0.769

We trust this meets your needs at this time. If you have any questions or require any additional information, please do not hesitate to contact me.

Regards,

DILLIS & ROY
CIVIL DESIGN GROUP, INC.



Gregory S. Roy, P.E.
Vice President

cc: Mr. John Amaral – 500 MG LLC (via email)
Ms. Leslie French – 500 MG LLC (via email)
Mr. Robert Anctil – Perkins & Anctil PC (Applicant’s Counsel)