

July 22, 2024

Groton Planning Board
c/o Mr. Takashi Tada
Land Use Director/Town Planner
173 Main Street
Groton, MA 01450

RE: Nitsch Project #5687.1
Monarch Path Subdivision
Stormwater Review
Groton, MA

Dear Planning Board Members:

Nitsch Engineering (Nitsch) has received and reviewed the following documents:

1. The revised Grading and Drainage Plan (1 Sheet) dated, July 2, 2024, and prepared by TFMoran;
2. The revised Drainage Details plan (1 Sheet) dated, July 2, 2024, and prepared by TFMoran;
3. The Pre-Development Drainage Figure, dated May 23, 2007, and prepared by TFMoran;
4. The Post-Development Drainage Figure, dated July 2, 2024, and prepared by TFMoran;
5. Drainage Analysis Report (133 Sheets), dated July 2, 2024, and prepared by TFMoran; and
6. The revised Easement Plan (1 Sheet) dated July 2, 2024, and prepared by TFMoran.

Nitsch has reviewed the plans and supporting documents to determine conformance to the following:

1. "Earth Removal Stormwater Advisory Committee" Regulations, Chapter 352, Article II, Stormwater Design Criteria from the Code of the Town of Groton; and
2. The Massachusetts Stormwater Management Standards.

This peer review was conducted to determine if the proposed deletion of Detention Basin 5 and its associated components has an impact on the performance of the stormwater management system. The regulations and standards in effect at the time of the subdivision approval (May 2007) were utilized for this peer review. Based on our review, Nitsch offers the following comments:

GROTON STORMWATER DESIGN CRITERIA AND THE MASSACHUSETTS STORMWATER MANAGEMENT STANDARDS

1. Section 352-13 states at each analysis point, the post-development peak discharge rate shall be equal to or less than the pre-development peak discharge rate.

The post-development peak discharge rate for the 2-year storm at Design Point C exceeds the pre-development peak discharge rate. The Drainage Analysis Report notes to add a drywell to Detention Basin #4 to remove at least 0.05 cfs. This drywell is not shown on the plans, nor is it included in the HydroCAD report. The Applicant should update the applicable documents to confirm the post-development peak discharge rate does not exceed the pre-development peak discharge rate.

GENERAL COMMENTS

2. Based on the as-built plans and past site observations, Flared End Sections (FES) 23 and 24 have not been installed. The Applicant should confirm if these flared end sections and connecting pipe will be installed. Per the revised Grading and Drainage Plan and Drainage Analysis Report, they are needed to convey runoff in this area to Design Point C.

3. The Applicant provided the full HydroCAD analysis for a 10-year storm event but should also provide the full HydroCAD analysis for the 2- and 100-year storm events, since they are listed in the report. Only summaries of the 2- and 100-year storm events were provided.

RECOMMENDATIONS

Nitsch recommends the Applicant address the above comments prior to the Planning Board granting approval of this Amendment to the Definitive Subdivision Plan.

If the Planning Board has any questions, please let us know.

Very truly yours,

Nitsch Engineering, Inc.



Rones Lubin
Project Designer

Approved by:



Jared E. Gentilucci, PE, CPESC, LEED AP BD+C
Deputy Director of Civil Engineering

RL/jeg