



February 9, 2024

Bruce Easom, Chair  
Zoning Board of Appeals  
173 Main St  
Groton, MA 01450

Re: “Heritage Landing” – Comprehensive Permit Application  
Cow Pond Brook Road

Dear Chair Easom and the Groton Zoning Board of Appeals,

This correspondence is intended to be the primary response to Nitsch Engineering letter to this Board dated January 24, 2024.

As mentioned at several meetings and in various correspondence from Attorney Alphen and myself, including letters dated 7-26-23 and 8-8-23 by Attorney Alphen, the requirements for the various civil / site plans are intended to be preliminary plans and not final design. The plan requirements are governed under Commonwealth of Massachusetts regulations for Comprehensive Permits pursuant to 760 CMR 56.05 (2)(a) which states:

760 CMR 56.05(2)(a): Preliminary site development plans showing the locations and outlines of proposed buildings; the proposed locations, general dimensions and materials for streets, drives, parking areas, walks and paved areas; and proposed landscaping improvements and open areas within the site. An Applicant proposing to construct or rehabilitate four or fewer units may submit a sketch of the matters in 760 CMR 56.05(2)(a) and (c) which need not have an architect's signature. All Projects of five or more units must have site development plans prepared by a registered architect or engineer;

and local Town of Groton, Board of Appeals regulations which states:

Preliminary site development plans showing the locations and outlines of proposed buildings; the proposed locations, general dimensions and materials for streets, drives, parking areas, walks and paved areas; type and location of proposed sewage disposal and proposed landscaping improvements; trash disposal; open areas within the site, including but not limited to school bus shelters and parks or other play areas for children; proposed stormwater management system; proposed property lines and rights-of-way of any proposed streets; and proposed lighting plans.

Letter to Chair Easom & Groton ZBA  
"Heritage Landing" Comprehensive Permit Application  
Response to Nitsch Letter dated 1-24-23  
February 9, 2024

As clearly written in these regulations, these are preliminary plan requirements and not intended to be used for final design or for construction. Most every one of Nitsch comments require final engineering design. We had hoped that they could have commented on the preliminary plans with an indication that the project preliminary design is feasible with comments on conditions of approval.

The submitted plan set under Revision 2, dated 01-30-2024 responds to Nitsch Engineering letter of 1-24-2024 to a degree that the applicant feels is more than required under the regulations listed above and appropriate for conditional approval. The following narrative explains the revisions in response to Nitsch letter with guidance to the Board underlined.

### **Nitsch Comment 1: Streets**

The plans entitled "Heritage Landing, Preliminary Plan Set by Meisner Brem Corp., Revision 2, dated January 30, 2024" show the horizontal control of the proposed roadway, Rosie Lane with stations labeled every 100 feet and tic marked every 50 feet. Full mathematical horizontal control is established with a total length of roadway when measured around the cul-de-sac as 936.31 feet (Sta 9+36.31). The radii and curve length is shown on this revision.

Additionally, full vertical control is shown with the profile grade shown and the vertical curve parabolas labeled with PVI station and elevations are shown. The vertical curve lengths, BVC & EVC stationing, and "K" values are all depicted on all curves. The K values represent the stopping sight distance per AASHTO. Proposed street grades are shown. Existing ground and finished ground elevations at the centerline are shown every 50 feet, as is typical for final road design. The profile is complete.

The comment regarding cuts and fills in excess of seven feet is allowed under the subdivision control regulations as a finding of the Planning Board and we do not feel a waiver is required since it is not required for conventional subdivisions with Planning Board approval.

Therefore, under Revision 2, dated 1-30-2024, the street, Rosie Lane, is fully designed, both horizontally and vertically. We expect Nitsch engineering to concur. The Board can provide a general condition for the project for the applicant to provide any construction details to meet the current subdivision standards in a final construction set, unless otherwise waived.

### **Nitsch Comment 2: Stormwater Management**

In any event, as mentioned, we recently completed preliminary stormwater design and calculations and are enclosing same with this transmittal in response to Nitsch comment #2 on page 2. The following items are completed and included on the "Heritage

Letter to Chair Easom & Groton ZBA  
"Heritage Landing" Comprehensive Permit Application  
Response to Nitsch Letter dated 1-24-23  
February 9, 2024

Landing, Preliminary Plan Set by Meisner Brem Corp., Revision 2, dated January 30, 2024", and in the corresponding "Preliminary Stormwater Report, dated 01-30-2024, by Meisner Brem Corporation" as follows:

**Plans:**

The following information is now shown on "Heritage Landing, Preliminary Plan Set by Meisner Brem Corp., Revision 2, dated January 30, 2024":

- a) Location of all drainage structures.
- b) Rims and invert elevations for all drainage structures.
- c) Storm drain connections with invert elevations.
- d) Size and material of all drainage structures, pipes, and stormwater BMPs.

**Stormwater Report – Hydrologic and Hydraulic Calculations**

The following information is now shown on "Preliminary Stormwater Report, dated 01-30-2024, by Meisner Brem Corporation":

- a) MassDEP Stormwater Checklist (unstamped – preliminary only).
- b) Web soil survey.
- c) Existing and proposed area delineations (simplified – preliminary only).
- d) A hydrologic model for the 2, 10, 25, and 100 year storms (simplified – preliminary only).
- e) Stormwater recharge calculations.
- f) Water quality calculations.

**Other**

The following plans are not being submitted herewith because they are related to construction and long term maintenance and are considered part of final design or construction. These plans are:

- g) an Operation and Maintenance Plan (to be included with the Condominium Association documents).
- h) A Long-Term Pollution Prevention Plan (to be included with the Condominium Association documents).
- i) A Stormwater Pollution Prevention Plan (for construction activities).

The Nitsch review stated that “the applicant will need to confirm SMF 1 is large enough to comply with all applicable regulations”. The submitted Preliminary Plans and Preliminary Stormwater Report does confirm that SMF 1 is sized properly.

In summary, it is the applicant’s position that the Board has enough information on the stormwater design, through the revised plans and with the Stormwater Report, to approve the plans with conditions.

### **Nitsch Comment #3: Water**

The plans submitted do show the proposed water line throughout the site along the northerly side of the proposed road. Also submitted with to the Board of Appeals by this office on 10-17-2023 was a sketch plan of the proposed water line extension pursuant to the MassWorks grant applied for the water extension from its current terminus to the project site. From this point, the plan set does show a n 8” ductile iron water main throughout the site with proposed fire hydrants shown no longer than every 500 feet.

The location of the valves and services to each house with corresponding individual corporation stops is certainly part of final design. The Board can condition the project to provide the water valve, services, and corporation stop information as part of the construction set.

The applicant is working with the Groton Water Department in paying the town’s consultant to update the hydraulic model to ensure adequate pressure and flow rate is adequate with the water line extended to the site. Again, this is a final design issue and the final water design should be conditioned if the Board of Appeals concurs with the Water Department comment.

### **Nitsch Comment #4: Sanitary Sewers**

The plans show a gravity sewer system providing the location of every manhole and location of all proposed sewer lines to each of the four (4) septic treatment locations (A,B,C,D). The rim and invert elevations of the manholes, the size and material of the pipe (which will be the typical 8” diameter PVC), the profile and grades of the piping, and the service connections to each unit are all part of final design.

The total daily sewage flow is 9240 GPD and is now under the 10,000 GPD threshold for a Groundwater Discharge Permit, and, as such, a septic system approved by the local Board of Health is allowed.

The Board can condition the project to provide the final design information for the gravity sewer transmission system as part of the construction set.

#### **Nitsch Comment #5: Other Improvements**

The plans do show the location of the driveways. No sidewalks are proposed. The location of the curbing is at the edge of the roadway. The locations of street signs are final design. The curbing details, pavement cross section, sign details, and other related details of construction are part of the final design for construction. The Board can condition the project to provide street construction details as part of the construction set.

#### **Nitsch Comment – Site Plan Review**

Site Plan review is not applicable to this project and therefore the applicant is not intending to submit the following noted items:

- a. A cut and fill analysis
- b. The location of electrical, telecommunication, ductbanks, etc. (this is usually done post approval by the utility companies directly as part of the construction plans anyway).
- c. Snow removal and storage areas – this is a private site, not necessarily open to the public as would be for a business and will be maintained by the eventual Condominium Association.

#### **Comprehensive Permits**

The applicant provided a statement in Attorney Alphen’s original transmittal letter dated on or about February 14, 2023 as follows:

- (i) Although not specifically required by the Bylaw nor the Rules and Regulations, the submission will not include “...a development impact report that may include, but not be limited to, analysis of the impacts of the proposed project on the environment (i.e., wetlands, water resources, open space), and infrastructure and services (i.e., roadways, wastewater, schools)”, and such standards are more applicable to commercial projects.

Pursuant to the comment received, we hereby formally request the Board to determine if an environmental analysis pursuant to Section 338-34. B of your regulations is required.

Letter to Chair Easom & Groton ZBA  
"Heritage Landing" Comprehensive Permit Application  
Response to Nitsch Letter dated 1-24-23  
February 9, 2024

## General Comments

The erosion control and sediment controls are part of final design and will be included in the plans pursuant to Comment 2 above. Rosie Lane is approved by the Town Manager, see separate email. A waiver will be requested to allow a 14% grade prior to the close of the hearing.

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As discussed at the hearing on January 24, 2024, the applicant contends that Nitsch Engineering now has enough information to render that the project design is feasible and is constructable. Any other information can be conditioned for inclusion on a final construction set. We expect that the Board will request Nitsch Engineering to provide guidance directly to the Board on these conditions.

Pursuant to your logistical directives, we are sending this letter and the revised set of plans to the Planning Office for them to distribute to the Board members and to Nitsch Engineering directly.

Also, I would request that the Planning Office inform Nitsch Engineering that they are allowed to communicate directly with our office on any clarification or the need for additional information pursuant to the Board's previous directive.

Thank you.

Sincerely  
MEISNER BREM CORPORATION



Jeffrey A. Brem  
Principal Engineer

Cc: Paul Alphen via email  
Client via email