

# ***PGB ENGINEERING, LLC***

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February 9, 2024

Mr. Edward L. Pesce, P.E.  
Pesce Engineering & Associates, Inc.  
43 Porter Lane  
West Dennis, MA 02050

Subject: **Bridle Crossing – Comprehensive Permit**

Dear Mr. Pesce:

In response to your request, this letter is to advise that we have reviewed the following documents in support of the proposed Comprehensive Permit application for the development on Parcel G12-29-02, off Ferry Street:

- Site Plan (15 Sheets), revised February 9, 2024, prepared by Grady Consulting, LLC (Grady)
- Stormwater Management Design Calculations, revised January 4, 2023<sup>1</sup>, prepared by Grady
- Nitrogen Loading Memorandum, dated January 6, 2024, prepared by TMDL Solutions
- Response to comments letter, dated January 9, 2024, prepared by Grady
- Response to comments letter, dated February 9, 2024, prepared by Grady

The documents have been prepared to address comments contained in our December 31, 2023 letter to you as well as comments from others. Below are the comments from our December 31<sup>st</sup> letter in plain text, followed by the current status of each in **bold text**.

1. The proposed stormwater system is designed to fully store all runoff from impervious surfaces during the 100-year storm, without taking infiltration into account.  
**Informational, no response required.**
2. The HydroCAD calculations do not account for all of the proposed garage roofs. The calculations include 6,846 square feet (s.f.) of garage roofs and we calculate 10,208 s.f. of garage roofs. **Addressed – the HydroCAD calculations have been revised to account for all roof area.**
3. We note the following issues with the subsurface infiltration systems:
  - a. System 2 is modeled at 78 feet long, but it is drawn at 75 feet long. **Addressed – the system is now drawn at 78 feet long.**

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<sup>1</sup> The date on the report is January 4, 2023 but it was revised January 4, 2024.

- b. The side sections of System 3 are modeled at 50 feet long by 15.2 feet wide but drawn at 52.5 feet long by 17 feet wide. **Addressed – the side sections are now drawn to match the dimensions modeled in HydroCAD.**
  - c. The note on the Proposed Galley System Detail on Sheet 10 specifies LC-6 chambers and dimensions associated with those chambers. The systems are modeled with 4x4x4 galleys and the detail should reflect this. **Addressed – the detail now specifies the 4x4x4 galleys.**
  - d. The Operation and Maintenance Plan, Proposed Drainage System – Post Construction specifies inspection of the subsurface system twice per year in the narrative, but the Inspection Schedule and Evaluation Checklist specifies annual inspections. The checklist should be revised to twice per year to match the narrative. **Addressed – the checklist has been revised accordingly.**
4. An oil/water (oil/grit) separator detail should be provided on the plans. The detail should specify an oil/grit separator similar to the separator included in the MassDEP Stormwater Handbook, Volume 2, Chapter 2, Pages 6-8. **Addressed – an Oil/Grit separator detail has been added to Sheet 10.**
5. In Section II of the Stormwater Management Design Calculations, we note the following:
  - a. Standard 6: it is stated that the site is not located within Zone II. This should be changed since the site is within Zone II of a public well. **Addressed – the language under Standard 6 has been changed to acknowledge that the site is within Zone II.**
  - b. Standard 8: it states that erosion and sediment controls are detailed within the erosion control plan. However, there is very little information on erosion controls on the Erosion Control / Phasing plan, Sheet 13. **Addressed – erosion controls are shown and detailed on Sheet 13.**
6. Section I.3 (also II.8 and IV.4) of the MassDEP Certification for General Use for the Singlair 960 DN advanced treatment system identifies two effluent total nitrogen concentrations, 19 mg/L<sup>2</sup> and 25 mg/L. However, there is nothing in the literature that differentiates between the 19 or 25 mg/L treatment level. The Nitrogen Loading Limitations on Sheet 1 (Cover Sheet) references a loading rate of 660 GPD per acre, which reflects the 19 mg/L total nitrogen treatment level. Grady should explain how this will be achieved. **Not applicable. Grady has now proposed the use of a different denitrifying septic system that complies with the standards and is the Nitrogen loading calculations indicate that the nitrogen concentration generated from the development will be less than the Town's 5 mg/L limit.**
7. The Applicant should provide a calculation of the total nitrogen load from the project, as required by ZBL §305-13.03.G(1) and as described in Chapter 417, §417-5.C. We have also asked the Planning Board's water scientist, Mr. Eduard Eichner of TMDL Solutions

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<sup>2</sup> mg/L = Milligrams per liter

LLC to perform a nitrogen loading analysis and comment on the WRPD aspects of this project, consistent with the analyses that he performs and comments he provides to the Planning Board on all WRDP applications. We will forward Mr. Eichner's analysis and comments when we receive them. **Addressed – as noted above, the site nitrogen loading calculations, prepared by Mr. Eichner, indicate a nitrogen concentration of less than 5 mg/L, which meets the WRPD regulations.**

8. Section II.2 of the MassDEP Certification for General Use for the Singlair 960 DN advanced treatment system requires a pretreatment septic tank for flows over 1,000 gallons per day (GPD). The flows to each of the proposed septic systems are all 1,320 GPD or greater, therefore an additional septic tank is required for pretreatment. **Not applicable, a new system is being proposed and it is sized correctly.**
9. Septic Design note 2 on Sheet 9 correctly shows that the minimum size of the septic tank should be 2,640 GPD, however, it also specifies use of a 1,500-gallon tank. This should specify a 3,000-gallon tank, which would be the pretreatment tank described in Comment 8, above. **Addressed – the note has been corrected for the new system design.**
10. Water demand for the proposed use will be 9,680 GPD. We believe that the Town has sufficient capacity to provide water to the project. **Informational, no response required.**

Please give us a call should you have any questions.



Very truly yours,

*PGB Engineering, LLC*

By:

A handwritten signature in black ink that reads "Patrick G. Brennan".

Patrick G. Brennan, P.E.

PGB

enc.

cc: Marshfield Zoning Board of Appeals  
Grady Consulting, LLC