



FUSS & O'NEILL

October 28, 2019

Mr. Richard Harris, AICP
Town Planner
Town of South Hadley
116 Main Street
South Hadley, MA 01705

RE: Peer Review of the Stormwater Management
Skinner Woods Flexible Development
Fuss & O'Neill Reference No. 20150214.P32

Dear Mr. Harris:

Fuss & O'Neill has conducted a review of the documents submitted by The Zengineer related to the development of a residential condominium with ten detached single family homes. The overall concept of the project appears to be feasible; however, there are several technical items which need to be addressed in order to verify the proposed design meets the South Hadley Stormwater Bylaws. We have conducted a review of the following materials as they relate to the stormwater management and standard engineering practice.

Materials Reviewed

1. Plan Set, "Skinner Woods Flexible Development Preliminary Plan," prepared by The Zengineer, revised through 10/22/2019 total 13 Sheet.
2. Skinner Woods Flexible Development Stormwater Report, prepared by The Zengineer, dated revised through October 22, 2019.
3. Transmittal Letter, prepared by The Zengineer, addressed to Richard Harris, dated October 23, 2019, regarding updated submittal – Fuss & O'Neill Response.
4. Transmittal Letter, prepared by The Zengineer, addressed to Richard Harris, dated October 23, 2019, regarding updated submittal.
5. Letter prepared by The Zengineer, address to Richard Harris, dated October 22, 2019, regarding Response to 10/7/19 Fuss & O'Neill Letter.

Fuss & O'Neill has believes the Applicant has address our outstanding comments and concerns based on our review of the revised documents listed above addressing Fuss & O'Neill's previous comments dated July 10, 2019 and October 7, 2019, with the exception of the following comments that have been acknowledged or require further review from the Planning Board. For tracking and clarification purposes, the numbering for the remaining comments have remained the same and comments that have been addressed have been removed. Responses provided by The Zengineer are in *italic* lettering and additional comments by Fuss & O'Neill are in **bold** lettering.

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Stormwater Management

8. Per Section 200-22 B of the Stormwater Bylaws, the operation and maintenance agreement must be recorded by the Applicant in the land records of the Registry of Deeds. Once the agreement has been finalized, the Applicant shall ensure it gets recorded and provide proof to the Planning Board.

The OMI Agreement will be recorded and proof provided to the Planning Board.

Acknowledged.

10. Per Section 200-24 A, the Planning Board shall require from the developer/applicant/owner a financial guarantee in a form acceptable to the Planning Board prior to any site work for the construction of a development requiring a stormwater management facility. We defer to the Planning Board to request the financial guarantee.

The Planning Board shall establish a financial guarantee, as required.

Acknowledged.

General

11. Based on the Construction General Permit (CGP), site construction activities, that will disturb one or more acres of land, shall provide a Stormwater Pollution Prevention Plan (SWPPP). The Applicant has provided a Long Term Pollution Prevention Plan; however, this does not provide all the required information that must be in a SWPPP. Before beginning of construction the Applicant shall provide a copy of the SWPPP to the Board to ensure proper erosion and sedimentation control measures are provided. It is at the discretion of the Board if review of the SWPPP is required by Fuss & O'Neill.

A SWPPP will be provided before beginning construction. This document references specifics of the contractor and final design. As such, it cannot be generated at this time

Acknowledged

21. Throughout the provided materials, the Stormwater Basin referred to as different types of BMPS. On the Site Plans it is shown as a detention basin, in all calculation applicant refers to it as an infiltration basin, and within Section 4.4 (c) of the Long-Term Operation Maintenance Plan it is referred to as an extended dry detention basin. To ensure the design meets the intent of the Stormwater Bylaws and the MassDEP Standards, please confirm if

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a detention basin or infiltration basin is proposed. Update Plans, details, the Long-Term Operation and Maintenance Plan, and calculation accordingly.

BMP component terminology will be clarified with the next iteration of the design.

Additional basin details shall be provided to ensure proper compaction, earth materials, and seeding is provided within the basin.

The provided "Typical Built-Up Basin Berm" detail includes notes on compaction earth materials and seeding. A revised version is included with this letter indicating erosion control blankets for slopes steeper than 3H:1V.

The detail has been revised and includes grass seed shall be installed immediately, however does not provide a seed mix. To ensure a seed mix that is tolerable to wet conditions a note indicating a seed mix similar to a New England Wildflower Mix or a Detention Basin Seed Mix shall be added to the plans prior to the start of construction. No further review is required by Fuss & O'Neill.

Additional Comments

28. Per the MassDEP Standards, to achieve 80% TSS treatment for an infiltration basin pretreatment must be provided, examples include a forebay or stone filter strip. In addition, the stormwater features used to provide pretreatment may not be used to calculate the required 80% TSS. Please review and revise as need to demonstrate pretreatment is provided for the infiltration basin and show the site still meets the 80% TSS requirements.

The assumption that the TSS pre-treatment for the infiltration basin counted for the overall treatment train has been modified. Instead of the effective 87% TSS removal prior to the infiltration basin being counted in the overall treatment train, this is reduced by 44%, which is the amount assumed to be included in the infiltration basin's required pre-treatment. The result is 89% TSS removal for the project.

A Pre-Treatment TSS Removal Calculation Worksheet was included to show required pretreatment is provided. However, the TSS Removal Calculation Worksheet includes the pretreatment within the table. Per the Stormwater Handbook, BMPs only receive TSS removal credit if pretreatment is provided. The TSS credit they received includes the pretreatment, therefore the BMP used to provide pretreatment should not be included within the overall required 80% TSS removal.



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The project does provide the required 80% TSS from the Infiltration Basin which receives 80% TSS removal credit. No further review is required by Fuss & O'Neill.

The above comments are based on plans and documentation received at the time of review. Any revisions to the plans and documentation will require further review. Please feel free to contact us with any questions.

Sincerely,

Aimee Bell

Project Manager