

February 8, 2021

**UPDATED** March 3, 2021, March 11, 2021 & April 15, 2021

Town of Lynnfield Conservation Commission  
c/o Ms. Emilie Cademartori, Director of Planning and Conservation  
Town Hall, 55 Summer Street  
Lynnfield, MA 01940

Re: **THIRD UPDATED** Review of Stormwater Permit Application and plans, calculations, and report  
Bali Hai Site, 160 Moulton Drive, Lynnfield, MA

Dear Commission Members:

This **THIRD UPDATED** peer review letter report is submitted to you in accordance with our proposal dated Monday, February 1, 2021. This **THIRD UPDATED** report is based on project information received by email from the Applicant's Engineer on Friday, April 9, 2021 and the letter by ESS Group dated March 16, 2021.

### **PROJECT REVIEW**

The following are our **UPDATED** comments and observations on the **UPDATED** Site Design Plans, Stormwater Design, Calculations, Report and Management Plan with respect to the requirements of the regulations and standard engineering practice. The comment numbers below refer to our original comments in our February 8, 2021 peer review letter report and our March 3, 2021 and March 11, 2021 **UPDATED** reports.

### **GENERAL ISSUES:**

**Comments 1 to 8 previously satisfied by the UPDATED response to comments letter, information, and plans.**

**Comment 9 – Comment satisfied by the UPDATED response to comments letter which included the test pit forms by a Massachusetts Licensed Soil Evaluator for the two test pits proximate to the proposed infiltration system.**

**Comment 10 - 12 previously satisfied by the UPDATED response to comments letter, information, and plans.**

**Comment 13 satisfied by the UPDATED response to comments letter, information, and plans. The septic system leaching fields are shown but there are no distances shown indicating the separation between the leaching field and the roof drain pipe and between the leaching field and the infiltration system and the elevations of the septic system leaching field are not shown. A condition regarding this information has been added to the Special Conditions in the Stormwater Permit requiring the submission of further details for the proposed septic system prior to any construction work on the site.**

**Comments 14 - 16 previously satisfied. by the UPDATED response to comments letter, information, and plans.**

**Comment 17 satisfied by the UPDATED response to comments letter, information, and plans.**

**Comment 18 satisfied by the UPDATED response to comments letter, information, and plans.**

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**Comments 19 to 21 previously satisfied by the UPDATED response to comments letter, information, and plans.**

**NEW COMMENT A, B & C previously satisfied.**

**Comments 22 - 41 previously satisfied by the UPDATED response to comments letter, information, and plans.**

**Comment 42 satisfied by the UPDATED response to comments letter, information, and plans.**

**Comment 43 – 44 previously satisfied. by the UPDATED response to comments letter, information, and plans.**

**Comment 45 previously addressed by the inclusion of a condition in the Special Conditions of the Stormwater Permit (no response from the Applicant or his Engineer is required).**

**Comment 46 previously satisfied by the UPDATED response to comments letter, information, plans.**

With respect to the comments contained in the letter from the ESS Group dated March 16, 2021 we have the following comments and observations:

ESS#1 The change of the catch basin in the parking lot to a double catch basin has eliminated the need for the walkway as a routing overflow.

ESS#2 The erosion controls have been modified so that the only work done outside the erosion controls is in the lower flat area where erosion is not a major concern and silt sacks are being deployed in the catch basins where the runoff from this area will flow. The revised plan provides for the installation of a jute mat in this area to control erosion.

ESS#3 We believe that the documentation provided is adequate to demonstrate that the project will not increase peak flows. The project results in a decrease in the impervious areas and is infiltrating the runoff from the proposed building area for a 100 year storm.

ESS#4 The project is a Redevelopment Project and is only required to meet standard #3 to the maximum extent practicable. In our opinion the proposed project has done this.

ESS#5 The LCC has issued approvals of many projects with Special Conditions requiring some plan additions or revisions or additional information prior to any work. Based on the latest submission by the Applicant's Engineer the post approval submission of information has been eliminated.

ESS#6 The offsite areas were taken into account in the previous revision even though the watershed map was not revised.

ESS#7 The calculations were based on a direct entry time of concentration of 6 minutes. We did not raise this issue as we looked at several travel paths for the watersheds and concluded that the calculated times of concentration would all be less than 6 minutes and therefore using the minimum time of concentration for the methodology was appropriate.

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ESS#8 It is not necessary to include every pipe in the HydroCAD analysis for the overall impact of the site development to be adequately demonstrated. We checked the capacity of the proposed 12" HDPE pipe at a 2% slope and it has more than adequate capacity to handle the runoff.

ESS#9 – See ESS#7 above.

ESS#10 This was an error on the part of the Applicant's Engineer. Based on the soil tests we agree that the 8.27 inch/hour rate is appropriate.

ESS#11 The Town of Lynnfield uses Tech Paper #40 rainfall as their standard which is what the Applicant's Engineer used in his calculations.

ESS#12 The MADEP 2008 Stormwater Handbook does state, "Use a minimum draining time of 6 hours to ensure pollutant removal". The soils at the site are good sands and gravels with excellent exfiltration rates. We are not aware of any instances where MADEP has asked that poorer soil be brought in to slow the runoff exfiltration. This system is infiltrating roof runoff only (not parking lot runoff) and is located more than 4 feet above the Estimated Seasonal High Groundwater Table. Therefore we are not concerned with the more rapid exfiltration rate.

ESS#13 This has been addressed by the test hole forms for the holes completed by a Massachusetts Licensed Soil Evaluator that have been provided.


ESS#14 The revised plans show the infiltration system being 26 feet from the septic system soil absorption system (25 feet is required). The roof drain needs to be moved slightly to be a minimum of 10 feet from the septic system soil absorption system.

We look forward to discussing the project, this report, and any questions that the LCC may have at the continued public hearing. If you have any questions regarding this matter, or should you require any additional information, please do not hesitate to contact our firm.

Very truly yours,

**LINDEN ENGINEERING PARTNERS, LLC**

  
William A. Jones, Sr. Partner

  
Richard G. Cutts, P.E., President

Cc: Mr. Charles L. Richter, P.E., Lynnfield Town Engineer