

Memo

To: Ms. Julia Junghanns, R.S., C.H.O., Director of Public Health:
Town of Wayland

From: David Formato, PE, Onsite Engineering, Inc.

CC: *Jim Lambert, David Moore, Carlton Quinn, PE, Paul Brinkman, PE*

Date: November 4, 2019

Re: *Alta at Rivers Edge Effluent Disposal System Layout*

Ms. Junghanns;

As requested, we are providing this memo to you for your information relative to the proposed layout of the effluent disposal field planned for the Alta at Rivers Edge site on Route 20 in Wayland. As you are aware, the Board gave the project proponent relief from the setback requirements contained in the Town's local WWTF bylaw, Sections 4.40; Wetlands & Floodplains and 4.51; Distances, as it relates to the siting of the effluent disposal system. The relief, as discussed at several public hearings and memorialized in the letter from you to the Board of Selectman dated May 16, 2019, was to waive the local requirements provided that all setback and distance requirements in the MassDEP regulations were maintained (or exceeded).

As you are aware, since May the Town has requested several modifications to the project from the project proponent in an effort to maximize the site. One of the changes requested was to increase in the number of units at the site, which in turn, increased the overall sewage generated from the project. The original development plan included 288 bedrooms and a small leasing office for a Title 5 flow of 31,737 gpd. The current plan unit count was increased to now include 339 bedrooms and the leasing office, which results in the revised Title 5 flow of 37,380 gpd.

This increase in sewage (and thereby effluent to be disposed of) required modifications to the effluent disposal system as originally proposed and discussed during the public meeting process to accommodate the greater flow. The hydrogeological report and supporting documentation currently under review by your office and MassDEP reflects the increased flows and unit counts, as well as the modifications we made to the effluent disposal system to accommodate these changes. It is important to note that the proposed effluent disposal system under review does meet all the required MassDEP standards as required in the waiver approval.

While we had to increase the capacity of the effluent disposal field to accommodate the increase in flow, we were able to minimize the impacts to the site layout and still accomplish this by using higher capacity leaching chambers. This was accomplished by using chambers that are deeper than the ones previously proposed, which provides more leaching capacity. We were able to use these chambers because the significant depths to seasonal high groundwater (as shown in the hydrogeological model report) allowed us to use higher capacity chambers with no effect on the overall profile and grading of the leaching field. In essence, we were able to increase the flow by using larger chambers with a higher loading rate than what was shown in the preliminary design. Because of this, the increase in flow actually ended up reducing the overall footprint of the leaching area (even though the proposed area is 5-feet wider than what was shown on the preliminary plan). The preliminary leaching area had dimensions of 95-feet by 178.5-feet. The final area as submitted to you in the hydrogeological Evaluation Report is 100-feet by 159-feet.

The net result of this change in flow and leaching loading rate was that the overall leaching footprint is now smaller than what was reviewed and approved by the BOH while still meeting all the state setbacks to buildings, wetlands, property lines, etc., as was required in the waiver approval process.

We trust this information adequately details the changes made since the waiver approval was issued and that the approval relative to setbacks and MassDEP standards is still being met with the final design. Please let me know if you have any other questions or concerns.