

STATEMENT OF:

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I am a professional civil engineer licensed in the State of Washington who lives on the ravine above the proposed development. I have provided comments on a number of previous occasions and provided testimony at the last hearing. Drainage issues are very much a part of my work. I am unable to participate in the hearing on December 2 because I must fly to California on the morning of December 2 for a previously scheduled construction inspection. I have therefore prepared the following statement:

Revised Plan Submittal:

During the last hearing the Hearing Examiner noted that the RUE application was not vested prior to 12-2018 and the published requirements should be included in the plan set for the application to be considered complete. (Exhibit 75a) The RUE application must include plans that comply with the City of Mercer Island requirements that I introduced during the last hearing. Whereas some of the additional items have been provided, the following submittal items required by the City for a complete RUE application are still not shown on the plans:

Site Plan:

E. Designate areas with greater than six (6) feet of cut and/ or fill

Critical Area Study:

D. Stormwater and erosion control management plan consistent with MICC 15.09. (Whereas there is a TESC plan included in the updated set, it does not reflect allowances for the large excavations that will be required as well as the storm drainage connection and other utility work. It also does not address the pumping and temporary storage of turbid water that will be required as many of these excavations will be made within soils that are typically saturated).

Conceptual Grading and Utility Plan:

J. The number of cubic yards of soil to be added, removed, and relocated;
K. Type and location of fill origin, and destination of any soil to be removed from site, including the foundation areas;

Further, the plan that shows the pile locations incorrectly shows this work occurring directly over the stream location.

Drainage Impacts on the Steam and Surrounding Wetlands:

Whereas the Critical Area Enhancement Plan has been updated with the corrected stream location and the revised building footprint, the impact areas shown around the proposed construction continue to be shown exceedingly tight, considering the deep excavation that will be required for the retaining walls and storm water detention facilities. In my opinion, the negative impacts to the surrounding wetland area and the adjacent stream are not accurately depicted on this plan and will far exceed what is currently shown.

The storm water detention pipe and associated drainage structures that have been shown on the plan will require a large excavation to an elevation of 167. This is nearly 9 feet below the existing adjacent stream that is approximately 15 feet away. The depth of this excavation will be 15 feet below the existing grades at the west end of the detention structure. Construction of such a deep storm structure in a sloping wetland within 15' of a stream will certainly have a much wider impact than what is currently delineated on the plan especially considering the presence of saturated soil conditions as the area is a wetland. Further, the geotechnical report shows low blow counts for the soils in this area that corresponds to very soft soil conditions making these excavations potentially significantly larger.

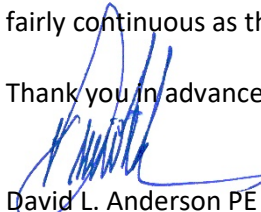
The impacts to the adjacent wetlands for the grading and perforated piping for both the detention system and the foundation drains around the building have still not been addressed and are not accounted for in the plans. These drains will intercept the water that was previously tributary to the adjacent stream and surrounding wetlands and direct it to the piped storm drainage system. Despite our repeated efforts these impacts are not addressed or accounted for in the submittal materials. The only responses to our previous comments are that the impacts will be re-evaluated in the future and that the existing soils "do not appear prone to drainage".

As previously noted, I disagree with the 10-30-19 response from Mr. Sewall that the foundation drainage system will not impact the hydrology of wetland as the site has "soils that do not appear prone to drainage". The Geotechnical Engineering Study prepared by GEO Group Northwest dated March 13th, 2015 as well as the supplemental information provided in the responses to third party review dated July 30th, 2015 and October 28th, 2015 appear to contradict this statement. This information shows sandy outwash soils to a depth in excess of 16 feet. The report indicates that this sand contains relatively small percentage of silt and fines. As mentioned above, the logs also show very low blow counts which indicate the outwash sand layer is soft and relatively uncompacted. These sandy outwash soils should be considered permeable. I am very surprised by these responses given the previously documented geotechnical report.

If the impacts are not evaluated until the future after the excavations and drainage systems have been installed, what recourse do the adjacent property owner have after the fact? It is entirely possible that the existing adjacent trees and vegetation be impacted by significant changes to the soil moisture and hydrology. Will the adjacent property owners be responsible for trees that are on their property that are now potential safety issues because of the impacts to the wetland hydrology? Waiting to evaluate this until after the fact does not appear to be an acceptable solution.

The recommendations included in Section 5.6 of the geotechnical report for drainage is not acknowledged on the site plan or in the tabulated areas of wetland disturbance. This includes a recommendation to slope the ground surface away from the proposed building at a gradient of at least 3% for a distance of at least 10' away from the building for all areas that are not paved. This would include grading and surface impacts to the existing wetland areas south and west of the building site. Use of a drainage matt with a geotechnical fabric as shown on the current plan set in place of positive surface drainage may work in the short term but over time it will lose the ability to convey water as the fabric collects silt and colloidal material. Once this occurs, the area around the walls will need to be re-graded to direct surface water away from the structure. Keep in mind, this flow will be fairly continuous as the walls are located within a sloping wetland that is feeding the adjacent stream.

Thank you in advance for your consideration of these comments.



David L. Anderson PE
December 1, 2021