



Roger MacPherson Design

Date: April 5, 2025

To: City of Mercer Island – Development Services
9611 SE 36th Street
Mercer Island, WA 98040

Re: **Butterworth Residence – Critical Areas Review**
5320 Butterworth Rd.
Parcel #: 866140-0040

Site Description

The site was originally part of a larger double lot, 5330 Butterworth Rd. (82,328 sf), where an original lot line was resurrected and a lot line adjustment (SUB24-003) was approved to divide the existing parcel into 2 lots - Lot 1 to the south, Lot 2 to the North. On Lot 1 (5330), a building permit (2405-053) was approved to demolish the middle portion of the house and remodel the south portion of the existing house. Lot 2 (5320) is the site pertaining to this application which currently contains a large single family residence and a detached sports pavilion connected by a breezeway/trellis structure. The parcel is 59,029 sf and zoned R-15.

Critical areas on and adjacent to the site consist of a Type F watercourse along the southern boundary of the existing lot and Lake Washington along the easterly boundary. Additionally, The City of Mercer Island GIS maps indicate that the site contains potential slide and seismic hazard areas. The parcel is currently served by City (public) water, storm and sewer utilities as well as power and natural gas.

Proposed Work

This project proposes to remodel and expand the existing residence. There is no proposed structure expansion into the stream buffer/setback areas or the shoreline setback. A separate demo/remodel permit has been submitted to the City of Mercer Island for the remodel work. There will be some new driveway areas and sidewalks in the stream buffer. The existing shared access drive for both lots will utilize the existing curb-cut along Butterworth Rd. and new work includes an emergency vehicle turnaround. New 2' wide gravel shoulders will be added to the existing access drive for a total width of 16'. This access configuration is the minimum necessary to meet zoning code criteria.

The proposed project is expected to have no measurable negative impact on the environment. The project will comply with all applicable shoreline regulations and will not result in any shoreline alteration, habitat loss, or degradation of water quality. 75% of the 20' shoreline vegetation area will be planted with native vegetation to further enhance the shoreline area. The project will also adhere to best management practices to minimize any potential impacts during construction.

Proposed Impacts

Geologic hazard areas are addressed in the Geotechnical Evaluation by Cobalt Geosciences and included in this submittal. The potential landslide hazard designation is likely due to the presence of older non-glacial deposits of variable composition and density. Slope magnitudes are generally low in this area; however, groundwater is at shallow depths, which could result in instability with specific geologic conditions present. Seismic hazards are moderate to high, increasing from west to east toward Lake Washington. This is due to the presence of loose sediments with a high groundwater level. Deep foundations will be utilized to support new foundation elements to minimize the risk of liquefaction induced settlement.

The stream and lake buffer/setback areas are approximately 24,580 square feet on site and impact approximately 42% of the site. A Critical Areas Report has been prepared by Altmann Oliver Associates, LLC and discusses the minimization and avoidance of impacts. To compensate for the necessary impacts a compensatory mitigation planting plan has been prepared which will increase the habitat functions of the stream buffer over the current conditions. Mitigation will include the removal of all invasive species and planting supplemental trees and native groundcovers.

There are numerous trees on-site, as shown on the tree site plan and identified in the Arborist Report by Layton Tree Consulting (included). Several trees will need to be removed due to impacts from the new house footprint, new utilities and and/or due to their condition. The proposed tree removal & retention is shown on sheet A1.0 - Tree Site Plan. While the development will have impacts to trees that will result in removal, the proposal retains more than the number of trees required by MICC 19.10.060. In particular, the trees along the north side of the existing shared driveway as well as the trees between the stream and the existing house. These appear to be the best candidates for retention and would also be high-value to the ultimate redeveloped site conditions. Proposed site plan reflects the intended tree retention and show drip line limits of the significant trees proposed to be retained. Tree protection fencing has been established by the project arborist to help ensure that the limits of disturbance fall outside of areas that would potentially harm the trees that are to be retained.

Water, storm and sewer for the project be connected to the existing infrastructure, with existing stubs/connections utilized wherever feasible. The project proposes to reuse the existing side sewer connection to the main in Lake Washington, assuming the existing line is suitable (to be verified later). The nearest fire hydrant that will serve the site is on the west side of Butterworth Road approximately 220 feet north of the driveway access. Storm water runoff for the project will be collected and routed through (2) storm pipes running west/east and discharged at the Lake, as shown on Civil Plan C3-0. A drainage report (TIR) is included in the application as well.

Thank you for your consideration of our application. Please don't hesitate to contact our office if you have any questions or need any additional information.

Dan Buchser – VP, Senior Design Manager
21626 SE 28th Street
Sammamish, WA 98075
Ph (425) 391-3333 ~ Fx (425) 557-2841
www.macphersonconstruction.com/
