
CITY OF MERCER ISLAND

COMMUNITY PLANNING & DEVELOPMENT

9611 SE 36TH STREET | MERCER ISLAND, WA 98040

PHONE: 206.275.7605 | www.mercerisland.gov



DECISION

CRITICAL AREA REVIEW 2 CAO23-021

Applicant Owner: Design Build Homes, LLC
c/o Todd Sherman
11400 SE 8th Street
Bellevue, WA 98008
Phone: (206) 909-8187
Email: todd@luxurydbh.com

Engineer/Surveyor: D. R. STRONG Consulting Engineers Inc.
c/o Jeffery Eisenhour, E.I.T.
620 7th Avenue
Kirkland, WA 98033
Phone: (425) 827-3063
Email: jeffrey.eisenhour@drstrong.com

Site Address: 4719 86th Avenue SE, Mercer Island WA 98040
Identified by King County Assessor tax parcel number: 7598100420

Zone: R-9.6

Staff Contact: Ryan Harriman, EMPA, AICP, Planning Manager
Phone: (206) 275-7717
Email: ryan.harriman@mercerisland.gov

Project Documents: <https://mieplan.mercergov.org/public/SUB23-004>

Key Project Dates:

Date of Application:	September 14, 2023
Determined to Be Complete:	September 20, 2023

Notice of Application

Bulletin Notice:	September 25, 2023
Date Mailed:	September 25, 2023
Date Posted on the Subject Property:	September 25, 2023
Comment Period Ended:	5:00 PM on October 25, 2023
Decision Date:	December 4, 2023

Notice of Decision

Bulletin Notice: December 4, 2023
 Date Mailed: December 4, 2023
 Date Posted on the Subject Property: December 4, 2023
 Appeal Period Ended: 5:00 PM on December 18, 2023

Terms Used in this Staff Report

Term:	Refers to, unless otherwise specified:
Applicant	Todd Sherman / Design Build Homes, LLC
Proposed development	Critical area review 2 for a two lot short subdivision
Subject property	4719 86th Avenue SE, Mercer Island WA 98040 King County Assessor tax parcel number: 7598100420
City	City of Mercer Island
MICC	Mercer Island City Code
Code Official	Community Planning and Development Director City of Mercer Island or a duly authorized designee

Exhibits:

1. Development Application, dated September 14, 2023;
2. Letter of completeness, dated September 20, 2023;
3. Notice of Application, dated September 25, 2023;
4. Project Narrative;
5. Site plan prepared by DR Strong Consulting Engineers, dated August 11, 2023;
6. Geotechnical Consultation - Preliminary Slope Assessment, Earth Solutions NW, LLC, dated June 25, 2021;
7. Geotechnical Engineering Study, Earth Solutions NW, LLC, dated February 1, 2022;
8. Critical Area Consultation, Earth Solutions NW, LLC, dated September 13, 2023;
9. Geotech peer review memo, dated September 27, 2023;
10. CAO23-021 – First Review Letter;
11. CAO23-021 – First Review Response Letter;
12. Critical Area Consultation, Earth Solutions NW, LLC, revised November 17, 2023;
13. Response to Comments and Geotechnical Update, Earth Solutions NW, LLC, October 12, 2023;
14. Geotech peer review memo, dated November 28, 2023;
15. Email chain between Ryan Harriman, Planning Manager, and the City’s third-party geotechnical engineer, Michele Lorilla, P.E. dated November 28, 2023, and
16. Notice of Decision.

INTRODUCTION:

I. Project Description

The applicant proposes to short subdivide the subject property into two (2) lots. A critical area review 2 (CAR2) application was submitted separately from the preliminary short subdivision application, SUB23-004. A CAR2 is required because the proposed development location is within a mapped geologically hazardous area, specifically a seismic and potential slide hazard area.

II. Site Description and Context

The subject property is located within the R-9.6 Zone and is developed with an existing single-family residence (SFR). The subject property is adjacent to 86th Avenue SE to the east and surrounded by single-family homes to the north, south, and west. The subject property contains mapped seismic and potential slide hazard areas.

FINDINGS OF FACT & CONCLUSIONS OF LAW:

III. Application Procedure

1. The application (**Exhibit 1**) for a CAR2 was received by the City of Mercer Island September 14, 2023. The application was determined to be complete (**Exhibit 2**) on September 20, 2023.
2. According to MICC 19.15.030, Table A, a CAR2 is a Type III land use review. Type III land use reviews require notice of application (discussed below). A notice of decision is issued once the project review is approved by the code official, followed by an appeal period.
3. A notice of application (NOA) was issued on September 25, 2023, and the public comment period ran from September 25, 2023, through October 25, 2023. The NOA was mailed to neighboring property owners within 300 feet (ft) of the subject property, the NOA was posted on the subject property, and posted in the City's weekly permit bulletin (**Exhibit 3**). No public comments were received.

IV. SEPA Review:

1. The proposed development is exempt from SEPA review pursuant to WAC 197-11-800(6)(d).

V. Consistently with the Critical Areas Code:

1. A development proposal or activity within a critical area is required to address the mitigation sequencing measures in MICC 19.07.100.

Staff Finding: Pursuant to the Critical Area Consultation, dated September 12, 2023 and revised on November 17, 2023 (**Exhibit 12**), Earth Solutions NW LLC (ESNW) determined that there are no slope-related geologic hazards located on the subject property. This determination was based on the subsurface data collected during the geotechnical engineering fieldwork, the geotechnical engineering review of the topographic survey for the subject property, and geologic hazard map. ESNW provided an analysis of the mitigation sequencing and recommends foundation elements for the residential structure be seated in the firm native material, anticipated to be encountered at depths below two feet; and maintain a ten-foot linear setback from edge-of-footing to the face of slope. This may require a deviation from the code mandated setback and buffer, yet act to minimize additional surcharge/loading on the remnant sloped region of the subject property to the south of the subject project area.

ESNW insists that Best Management Practices (BMP) for erosion control will need to be employed during and after site development. This includes site grading to minimize erosion and soil mobilization, temporary erosion control measures during construction, and permanent vegetation to protect sloped areas from the effects of erosive forces.

Pursuant to the Geotech peer review memo, dated November 28, 2023 (**Exhibit 14**), the proposed development is consistent with MICC 19.07.100. The Critical Area Consultation, Earth Solutions NW, LLC, revised November 17, 2023 (**Exhibit 12**) meets the requirements of MICC 19.07.100 and MICC 19.07.160 provided that the recommendations presented in Response to Comments and Geotechnical Update, Earth Solutions NW, LLC, October 12, 2023 (**Exhibit 13**), are incorporated into the proposed stormwater drainage system design.

Staff Finding: In an email between Ryan Harriman, Planning Manager, and the City's third-party geotechnical engineer, Michele Lorilla, P.E. dated November 28, 2023 (**Exhibit 15**), the City's third-

party geotechnical engineer indicated the following when asked about ESNW's opinion that the subject property doesn't contain geologically hazardous areas and our maps are outdated:

I generally agree with them that the site does not contain geologically hazardous areas based on the soil conditions encountered. As for outdated maps, the development to the south installed a series of soil nail walls that would serve to stabilize the slope, but I do not think that we are updating all the maps based on site developments, so I would not say that they are outdated. The geology and slope steepness can indicate a landslide prone area – and I believe that was what triggered the hazard classification in the first place. It just so happened that the landslide prone designation encroached on a small portion of the site in question. The site has a seismic hazard designation and I am not sure how that designation was established for this site, but I also think that a seismic hazard is not present due to the soil conditions encountered.

In an email from the City's third-party geotechnical engineer, Michele Lorilla, P.E. dated November 28, 2023 (**Exhibit 15**), Ryan Harriman, Planning Manager asked the following question: "Are you of the opinion that the proposed development is minor in nature and will not increase the risk of landslide, erosion, or harm from seismic activity, or that the development site does not meet the definition of a geologically hazardous area?" Michele Lorilla, P.E., responded with the following statement: "My opinion is that the site does not meet the definition of a geologically hazardous area based on the soil conditions encountered at the site."

2. MICC 19.07.110 lists requirements for a critical area study. A critical area study is required when a development proposal will result in an alteration to one or more critical area buffers or when required to determine the potential impact to a critical area. The critical area study may be waived or modified if the applicant demonstrates that the development proposal will not have an impact on the critical area or its buffer in a manner contrary to the purposes and requirements of this chapter.

Staff Finding: The Applicant submitted the following reviews/studies as part of the application for CAO23-021:

- Geotechnical Consultation - Preliminary Slope Assessment, Earth Solutions NW, LLC, dated June 25, 2021 (**Exhibit 6**);
- Geotechnical Engineering Study, Earth Solutions NW, LLC, dated February 1, 2022 (**Exhibit 7**);
- Critical Area Consultation, Earth Solutions NW, LLC, dated September 13, 2023 (**Exhibit 8**); and
- Critical Area Consultation, Earth Solutions NW, LLC, revised November 17, 2023 (**Exhibit 12**).

The reviews/studies submitted with this application meet the requirements of MICC 19.07.110.

3. MICC 19.07.160 lists standards for development on sites containing geologically hazardous areas.
 - A. Geologically hazardous areas are lands that are susceptible to erosion, landslides, seismic events, or other factors as identified by WAC 365-190-120. These areas may not be suited for development activities because they may pose a threat to public health and safety. Areas susceptible to one or more of the following types of hazards shall be designated as geologically hazardous areas: landslide hazard areas, seismic hazard areas, and erosion hazard areas.

Staff Finding: The proposed development is located within a geological hazardous areas, specifically landslide and seismic hazard areas, pursuant to the City's GIS mapping. A Critical Area Consultation, dated September 13, 2023 and revised on November 17, 2023 was submitted (**Exhibit 12**) with the CAR2 application. According to ESNW, based on the presence of glacial till throughout the sloped

region which presents a very stable geologic condition as it relates to slope stability. Furthermore, based on the homogeneity of the soil throughout the profile of the sloped region (based on observations of the site and site to the south) there is no interbedding of sands and gravels, and the slope has been extremely diminished in overall relief resulting from grading on the adjacent property. It is ESNW's opinion that a landslide hazard may not exist following the re-grading of the sloped area based on the soil type and density and vertical relief and inclination of the remaining slope.

Staff Finding: Pursuant to the Critical Area Consultation, dated September 13, 2023 and revised on November 17, 2023 (**Exhibit 12**), glacial till is present throughout the subsurface of the site and within the sloped area to the south of the project area. No groundwater seepage was observed during past site exploration or within the exposed slope on the neighboring property to the south of the subject site. ESNW is of the opinion that there is no liquefaction hazard on the subject site and slope to the south based on the presence of glacial till and lack of a nearsurface groundwater table.

- B. Alteration within geologically hazardous areas or associated buffers is required to meet the standards in this section, unless the scope of work is exempt pursuant to section 19.07.120, exemptions, or a critical area review 1 approval has been obtained pursuant to section 19.07.090(A).
1. When an alteration within a landslide hazard area, seismic hazard area or buffer associated with those hazards is proposed, the applicant must submit a critical area study concluding that the proposal can effectively mitigate risks of the hazard. The study shall recommend appropriate design and development measures to mitigate such hazards. The code official may waive the requirement for a critical area study and the requirements of subsections (B)(2) and (B)(3) of this section when he or she determines that the proposed development is minor in nature and will not increase the risk of landslide, erosion, or harm from seismic activity, or that the development site does not meet the definition of a geologically hazardous area.

Staff Finding: Pursuant to the Critical Area Consultation, dated September 13, 2023 and revised on November 17, 2023 (**Exhibit 12**), ESNW indicates they are of the opinion that there is no geologically hazardous areas on the subject property, and based on the alterations of the slopes located directly to the south of the subject site, the applicant requested the city waive the requirements in subsections (B)(2) and (B)(3) of this section.

The Critical Area Consultation, dated September 13, 2023 and revised on November 17, 2023 (**Exhibit 12**), was reviewed and approved by the City of Mercer Island's third-party geotechnical reviewer Michele Lorilla, PE (**Exhibit 14**), subject to the following condition:

Critical Area Consultation, dated September 13, 2023 and revised on November 17, 2023 (**Exhibit 12**), meets the requirements of MICC 19.07.100 and MICC 19.07.160 provided that the recommendations presented in Earth Solutions NW, LLC's letter dated October 12, 2023 (**Exhibit 13**), are incorporated into the proposed stormwater drainage system design.

Staff Finding: Both ESNW and the City's third-party geotechnical review engineer, Michele Lorilla, P.E., are of the opinion that the subject property does not meet the definition of a geologically hazardous area based on the soil conditions encountered at the site (**Exhibits 12 & 15**).

2. Alteration of landslide hazard areas and seismic hazard areas and associated buffers may occur if the critical area study documents find that the proposed alteration:

- a. Will not adversely impact other critical areas;
- b. Will not adversely impact the subject property or adjacent properties;
- c. Will mitigate impacts to the geologically hazardous area consistent with best available science to the maximum extent reasonably possible such that the site is determined to be safe; and
- d. Includes the landscaping of all disturbed areas outside of building footprints and installation of hardscape prior to final inspection.

Staff Finding: Pursuant to MICC 19.07.160(B)(1) the code official may waive the requirement for a critical area study and the requirements of subsections (B)(2) and (B)(3) of this section (MICC 19.07.160) when he or she determines that the proposed development is minor in nature and will not increase the risk of landslide, erosion, or harm from seismic activity, or that the development site does not meet the definition of a geologically hazardous area.

Staff Finding: Both ESNW and the City's third-party geotechnical review engineer, Michele Lorilla, P.E., are of the opinion that the subject property does not meet the definition of a geologically hazardous area based on the soil conditions encountered at the site (**Exhibits 12 & 15**). MICC 19.07.160(B)(2) is waived by the code official.

3. Alteration of landslide hazard areas, seismic hazard areas and associated buffers may occur if the conditions listed in subsection (B)(2) of this section are satisfied and the geotechnical professional provides a statement of risk matching one of the following:
 - a. An evaluation of site-specific subsurface conditions demonstrates that the proposed development is not located in a landslide hazard area or seismic hazard area;
 - b. The landslide hazard area or seismic hazard area will be modified or the development has been designed so that the risk to the site and adjacent property is eliminated or mitigated such that the site is determined to be safe;
 - c. Construction practices are proposed for the alteration that would render the development as safe as if it were not located in a geologically hazardous area and do not adversely impact adjacent properties; or
 - d. The development is so minor as not to pose a threat to the public health, safety and welfare.

Staff Finding: Pursuant to MICC 19.07.160(B)(1) the code official may waive the requirement for a critical area study and the requirements of subsections (B)(2) and (B)(3) of this section (MICC 19.07.160) when he or she determines that the proposed development is minor in nature and will not increase the risk of landslide, erosion, or harm from seismic activity, or that the development site does not meet the definition of a geologically hazardous area.

Staff Finding: Both ESNW and the City's third-party geotechnical review engineer, Michele Lorilla, P.E., are of the opinion that the subject property does not meet the definition of a geologically hazardous area based on the soil conditions encountered at the site (**Exhibits 12 & 15**). MICC 19.07.160(B)(3) is waived by the code official.

- C. Development is allowed within landslide hazard areas and associated buffers, when the following standards are met:
 1. A critical area study shall be required for any alteration of a landslide hazard area or associated buffer;

2. Buffers shall be applied as follows. When more than one condition applies to a site, the largest buffer shall be applied:
 - a. Buffer widths shall be equal to the height of a steep slope, but not more than 75 feet, and applied to the top and toe of slopes;
 - b. Shallow landslide hazard areas shall have minimum 25-foot buffers applied in all directions; and
 - c. Deep-seated landslide hazard areas shall have 75-foot buffers applied in all directions.

Staff Finding: Pursuant to the Critical Area Consultation, dated September 13, 2023 and revised on November 17, 2023 (**Exhibit 12**), ESNW is of the opinion that there are no critical areas present on the subject property in the form of erosion hazards, landslide hazard, or seismic hazard. ESNW bases this opinion on the fact that glacial till is present across the site and surrounding area, lack of a significant slope following excavation for the neighboring residence to the south, and the lack of a groundwater table. We have recommended a ten-foot horizontal foundation setback from the face of any slope on the site or surrounding the site. ESNW is of the opinion that other buffers would be unnecessary.

Staff Finding: The Critical Area Consultation, dated September 13, 2023 and revised on November 17, 2023 (**Exhibit 12**), was reviewed and approved by the City of Mercer Island's third-party geotechnical reviewer Michele Lorilla, PE (**Exhibit 14**), subject to the following condition:

The Critical Area Consultation, dated September 13, 2023 and revised on November 17, 2023 (**Exhibit 12**), meets the requirements of MICC 19.07.100 and MICC 19.07.160 provided that the recommendations presented in Earth Solutions NW, LLC 's letter dated October 12, 2023 (**Exhibit 13**), are incorporated into the proposed stormwater drainage system design.

Staff Finding: Both ESNW and the City's third-party geotechnical review engineer, Michele Lorilla, P.E., are of the opinion that the subject property does not meet the definition of a geologically hazardous area based on the soil conditions encountered at the site. The prescribed setbacks as provided in the Critical Area Consultation, dated September 13, 2023 and revised on November 17, 2023 (**Exhibit 12**), shall be applicable.

- D. When development is proposed within a seismic hazard area:
 1. A critical area study shall be required and shall include an evaluation by a qualified professional for seismic engineering and design, a determination of the magnitude of seismic settling that could occur during a seismic event, and a demonstration that the risk associated with the proposed alteration is within acceptable limits or that appropriate construction methods are provided to mitigate the risk of seismic settlement such that there will be no significant impact to life, health, safety, and property.

Staff Finding: Pursuant to the Critical Area Consultation, dated September 13, 2023 and revised on November 17, 2023 (**Exhibit 12**), ESNW is of the opinion that seismic hazards do not exist on the subject site based on the lack of a nearsurface groundwater table, presence of glacial till, and lack of and liquefiable soil types.

Staff Finding: Both ESNW and the City's third-party geotechnical review engineer, Michele Lorilla, P.E., are of the opinion that the subject property does not meet the definition of a geologically hazardous area based on the soil conditions encountered at the site (**Exhibits 12 & 15**).

2. Seismic hazard areas shall be identified by a qualified professional who references and interprets information in the U.S. Geological Survey Active Faults Database, performs on-site evaluations, or applies other techniques according to best available science.

Staff Finding: Pursuant to the Critical Area Consultation, dated September 13, 2023 and revised on November 17, 2023 (**Exhibit 12**), ESNW reviewed the USGS fault maps for Mercer Island. The nearest mapped fault is located approximately a half-mile to the south of the subject property.

Staff Finding: Both ESNW and the City's third-party geotechnical review engineer, Michele Lorilla, P.E., are of the opinion that the subject property does not meet the definition of a geologically hazardous area based on the soil conditions encountered at the site (**Exhibits 12 & 15**).

3. When development is proposed on a site with an active fault, the follow provisions shall apply:
 - a. A 50-foot minimum buffer shall be applied from latest Quaternary, Holocene, or historical fault rupture traces as identified by the United States Geological Survey or Washington Geological Survey map databases or by site investigations by licensed geologic professionals with specialized knowledge of fault trenching studies; or
 - b. Mitigation sequencing shall be incorporated into the development proposal as recommended based on geotechnical analysis by a qualified professional to prevent increased risk of harm to life and/or property.

Staff Finding: Pursuant to the Critical Area Consultation, dated September 13, 2023 and revised on November 17, 2023 (**Exhibit 12**), ESNW reviewed the USGS fault maps for Mercer Island. The nearest mapped fault is located approximately a half-mile to the south of the subject property.

Staff Finding: Both ESNW and the City's third-party geotechnical review engineer, Michele Lorilla, P.E., are of the opinion that the subject property does not meet the definition of a geologically hazardous area based on the soil conditions encountered at the site (**Exhibits 12 & 15**).

CONCLUSIONS:

1. Both ESNW and the City's third-party geotechnical review engineer, Michele Lorilla, P.E., are of the opinion that the subject property does not meet the definition of a geologically hazardous area based on the soil conditions encountered at the site (**Exhibits 12 & 15**).
2. Based on the information provided in Exhibit 12 and Exhibit 15, it appears that the subject property likely does not contain geologically hazardous areas.
3. The applicant should provide mapping data to the City to revise the GIS Mapping for the subject property.

CONDITIONS OF APPROVAL:

1. The proposed development shall be in substantial conformance with **Exhibit 5** and all applicable development standards contained within Chapter 19.07 Mercer Island City Code (MICC).
2. The applicant is responsible for documenting any required changes in the project proposal due to conditions imposed by any applicable local, state and federal government agencies.

3. The applicant shall ensure that the recommendations contained within the Critical Area Consultation, Earth Solutions NW, LLC, dated September 13, 2023, and revised on November 17, 2023 (**Exhibit 12**) are incorporated into the proposed development of the subject property.
4. The applicant shall ensure that all of the recommendations presented in Earth Solutions NW, LLC's letter dated October 12, 2023 (**Exhibit 13**), are incorporated into the proposed stormwater drainage system design.
5. Best Management Practices (BMP) for erosion control shall be employed during and after the development of the subject property. This includes site grading to minimize erosion and soil mobilization, temporary erosion control measures during construction, and permanent vegetation to protect sloped areas from the effects of erosive forces.
6. Construction or substantial progress toward construction of a development for which a permit has been granted must be undertaken within three years after the approval of the permit or the permit shall terminate. The code official shall determine if substantial progress has been made.
7. To eliminate the geologically hazardous areas on the subject property, the applicant may provide mapping data to the City.

DEVELOPMENT REGULATION COMPLIANCE – DISCLOSURE:

1. The applicant is responsible for obtaining any required permits or approvals from the appropriate Local, State, and Federal Agencies.
2. All required permits must be obtained prior to the commencement of construction.

DECISION:

Based upon the above noted Findings of Fact and Conclusions of Law, Critical Area Review 2 application CAO23-021, is hereby **APPROVED AS CONDITIONED**. This decision is final, unless appealed in writing consistent with adopted appeal procedures, MICC 19.15.130, and all other applicable appeal regulations.

Approved this 4th day of December 2023.

Ryan Harriman

Ryan Harriman, EMPA, AICP
Planning Manager
Community Planning & Development
City of Mercer Island

If you desire to file an appeal, you must submit the appropriate form, available from the department of Community Planning and Development, and file it with the City Clerk within fourteen (14) days from the date after the notice of decision is made available to the public and applicant pursuant to MICC 19.15.130. Upon receipt of a timely complete appeal application and appeal fee, an appeal hearing will be scheduled. To reverse, modify or remand this decision, the appeal hearing body must find that there has been substantial error, the proceedings were materially affected by irregularities in procedure, the decision was unsupported by material

and substantial evidence in view of the entire record, or the decision is in conflict with the city's applicable decision criteria.

Please note that the City will provide notice of this decision to the King County Department of Assessment, as required by State Law (RCW 36.70B.130). Pursuant to RCW 84.41.030(1), affected property owners may request a change in valuation for property tax purposes notwithstanding any program of revaluation by contacting the King County Department of Assessment at (206) 296-7300.