

ALPINE ENTERPRISES INC.

Surveying, Engineering, Mapping, GPS, GIS and Natural Hazards Consulting

DATE: February 1, 2023

TO: Bruce Thomson, Owner
Craig Lawrence, Architect

Re: Snow Avalanche Hazard Evaluation for Defiance Lode, Lot 77

Dear Bruce and Craig,

At your request we have performed a Snow Avalanche Hazard Evaluation for a proposed residence on the subject property located within Section 15, T.4N., R.18E., in the Elkhorn area of Blaine County, Idaho.

A field analysis in March of 2021 suggested that portions of the site were likely capable of producing relatively small snow avalanche events.

We used Blaine County LiDAR for terrain analysis along with topographic mapping by Benchmark Associates and potential building locations from the Architect.

We then used RAMMS Avalanche Simulation software from the Swiss Federal Institute for Snow and Avalanche Research to determine potential avalanche paths and runout distances. The results of this study show that the proposed residence was in the outer limits of the Blue or Moderate Hazard Zone. Site constraints and low avalanche forces resulting in working with the Architect to develop an integral avalanche mitigation structure and landscape grading to keep the residence itself from being affected by infrequent avalanche events.

We feel that the proposed residence location, along with low forces, lengthy return periods and passive mitigation to be an acceptable risk for residents that are aware of, and willing to accept the minimal risk associated with potential avalanche zones.

Residents and their guests should be aware of the potential hazard during Winter activities and avoid the areas shown to be potential avalanche hazard areas.

Please feel free to contact us if you have any questions, comments, or if we can be of further assistance.

Respectfully submitted,

Bruce Smith, PLS 7048
Alex Nelson, PE 19275
Alpine Enterprises Inc.

