



Cariboo Regional District
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GUIDELINES FOR THE PREPARATION OF GEOTECHNICAL REPORTS

A Geotechnical Report may be required by the Cariboo Regional District (CRD) to ensure that development occurs only on sites which are safe for the use intended. The Development Services Guide for Geotechnical Hazards will inform you of when a report is required. There may be other instances where a Geotechnical Report is required when hazards are suspected to exist. The purpose of this guide is to outline the necessary elements of a Geotechnical Report for use by the Cariboo Regional District.

Please note that the Geotechnical Report must be registered on title under a priority agreement. A template for this registration can be provided by CRD staff.

Geotechnical Report Content

Applicants are advised that geotechnical reports may be undertaken only by a professional engineer or professional geoscientist (qualified professional, (QP)) with training or experience in geotechnical study and geohazard assessments and licensed to work in the province of BC.

The QP shall inspect the property and supervise the geotechnical site investigations. The Report shall clearly state all relevant restrictions, conditions and/or limitations to the proposed development of the land.

The Report shall address the following minimum criteria with respect to any development or activity including, but not limited to, construction, subdivision, soil deposit/removal and/or alteration of land:

1. A topographic and geomorphologic description of the site and a statement as to which type of natural hazards may affect the land, such as:
 - a. Erosion
 - b. Landslide (landslip)
 - c. Avalanche
 - d. Ground water flows
 - e. Subsidence
 - f. Earthquake
 - g. Rolling rock
 - h. Steep slope
2. A review of previous geotechnical studies affecting the site and/or of engineering work in the vicinity or on scientifically relevant sites elsewhere.

3. Identify any natural areas that should not be developed or built upon (including removal of vegetation) including steep slopes and floodplain due to unacceptable risk level. Those areas are to be easily identified on a map or site plan.
4. A clear identification of the subject property in the report by citing the legal address, as printed on a recent title search printout, and civic address if one had been assigned.
5. The report must include a site plan illustrating the location of the proposed development as it relates to the geotechnical assessment and a description of the intended use of the property. Building requirements such as depth of footings, and drainage, etc. must also be included if any of the requirements exceed the minimum BC Building Code standards.
6. Regarding rockfall/rolling rock hazard: any proposed development within a rock fall shadow area, or on slopes greater than 27.5 degrees, where development exists below, or could reasonably be foreseen to exist in the future, must be assessed to identify the potential for generating rolling rocks. The report must stipulate construction practices that will avoid, or where avoidance is not possible, mitigate the potentially affected properties to achieve an acceptable level of risk.
7. Establish a safe setback line from floodplains, steep slopes or hazard areas to protect the land, buildings, and inhabitants from the risk of injury or damage as identified by the QP.
8. A statement that the QP is a professional engineer or geoscientist and is appropriately knowledgeable to provide the Geotechnical report and is a member in 'good standing' with the Association of Professional Engineers and Geoscientists of British Columbia (APEGBC). The signature and seal/number must be included.
9. **The Qualified Professional (QP) recommendations and the conclusions of the Report must:**
 - a. Quantify the risks of a geotechnical failure or any substantial hazard. If the property is determined to be safe for the use intended, the QP must clearly state that the land is safe for the use intended.
 - b. Prescribe the geotechnical works and any changes in the standards of the design of the development which may be required.
 - c. If work is structural in nature, schedules and proof of insurance may be required.

- d. If mitigation is required, the QP must subsequently confirm in writing that the works are completed to their specifications. Confirmation must be received in an acceptable form such as a letter or a report.
- e. Acknowledge that the CRD, its Planning staff and the building inspectors may rely upon the report when making a decision on applications for rezoning or development/building permit of the subject property;
- f. Reference the Association of Professional Engineers and Geoscientists of British Columbia's (APEGBC) "Guidelines for Legislated Landslide Assessments for Proposed Residential Development in British Columbia" where slope stability is identified as a hazard, including Appendix D: Landslide Assessment Assurance Statement.
- g. Any mitigation measures recommended must be clearly outlined.
- h. If mitigation measures are required, outline the stage of development when the professional engineer will conduct a site inspection and provide written confirmation that the mitigation measures have been completed to the satisfaction of the professional engineer.
- i. Structural requirements will require professional engineering, including schedules and proof of insurance.