


BC BUILDING CODE INTERPRETATION COMMITTEE

A joint committee with members representing
AIBC, EGBC, BOABC

File No: 18-0079

INTERPRETATION

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Interpretation Date:	November 17, 2020
Building Code Edition:	BC Building Code 2018
Subject:	Geotechnical Field Review on a Continuous Basis
Keywords:	Field review, deep foundations, engineered fills, retaining structures, continuous basis
Building Code Reference(s):	4.2.2.3.(1) and 4.2.2.3.(2)(a)
Question:	<p>Sentence 4.2.2.3.(1) requires that geotechnical <i>field reviews</i> associated with excavation and foundation systems for buildings be carried out by the <i>designer</i> (i.e. the geotechnical engineer of record - GER) or by another suitably trained person to ascertain that the subsurface conditions are consistent with the design and that the construction is carried out in accordance with the design and good engineering practice.</p> <p>Clause 4.2.2.3.(2)(a) requires that such <i>field review</i> be provided on a continuous basis for the following aspects:</p> <ol style="list-style-type: none">1. <i>Deep foundation units</i>,2. Installation and removal of retaining structures and related backfill operations, and3. Engineered fill that supports <i>foundation units</i>. <p>Does the term "continuous basis" mean that the <i>designer</i> or by another suitably trained person must be present on the jobsite 100% of the time when these activities are underway?</p>
Interpretation:	<p>No, (except in certain circumstances).</p> <p>Engineers and Geoscientists British Columbia (the Association) is the regulatory and licensing body for the engineering and geoscience professions in British Columbia (BC). To protect the public, the Association establishes, maintains, and enforces standards for the qualification and practice of its members and licensees.</p> <p>The Association provides various practice resources to its members and licensees to assist them in meeting their professional and ethical obligations under the Engineers and Geoscientists Act.</p> <p></p> <hr/> <p>Patrick Shek, P.Eng., CP, FEC, Committee Chair</p>
<p>The views expressed are the consensus of the joint committee with members representing AIBC, EGBC and BOABC, which form the BC Building Code Interpretation Committee. The Building and Safety Standards Branch, Province of BC and the City of Vancouver participate in the committee's proceedings with respect to interpretations of the BC Building Code. The purpose of the committee is to encourage uniform province wide interpretation of the BC Building Code. These views should not be considered as the official interpretation of legislated requirements based on the BC Building Code, as final responsibility for an interpretation rests with the local <i>Authority Having Jurisdiction</i>. The views of the joint committee should not be construed as legal advice.</p>	

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One of those resources is professional practice guidelines, which establish the standard of practice for specific professional activities. The Association works with experts in their fields to develop professional practice guidelines where additional guidance is beneficial or required.

These Professional Practice Guidelines – Geotechnical Engineering Services for Building Projects provide guidance on professional practice for Engineering Professionals who carry out geotechnical engineering services related to building projects in British Columbia.

This Guideline was originally published in March 1998 and was recently updated on September 17, 2020. The Guideline outlines the roles and responsibilities of the Geotechnical Engineer of Record (GER) and specifically addresses “field reviews on a continuous basis” in Subsection 3.3.4. on Page 16 of the Guideline as indicated below:

Conduct Field Reviews, including construction observation and testing that the GER deems necessary to form a professional opinion about the geotechnical aspects of the work undertaken by the contractor, and to appropriately complete the Letters of Assurance for the Authority Having Jurisdiction.

- *In cases where Field Review is required on a "continuous" basis as per Division B, Subsection 4.2.2.3(2) of the BCBC or VBBL, the GER must ensure that methods and techniques are defined and documented that meet the intent of continuous Field Review. This should include the identification of qualified person(s) who provide the necessary observations, the required records of such observations, and the nature of supervision provided by the GER.*

During Field Reviews, confirm that work quality is sufficient to support the design intent, promote safety, and limit movement, especially if any of these could affect off-site and/or vulnerable buildings.

Provide observations, testing, advice, and recommendations to facilitate the successful completion of the geotechnical related aspects of the building.

As described in the definition of *field review*, the frequency and extent of *field review* is at the professional discretion of the GER and can vary depending upon soil, groundwater & weather conditions, site & design complexity, expected performance, and contractor workmanship and efficiency.

GERs may use various techniques to fulfill the intent of “*field review on a continuous basis*” which may rely upon a combination of prescriptive and performance specifications, field review by professional engineers and qualified technicians, field density testing by the GER’s firm and third party agencies, and engineering photographs / videos from the site.



Patrick Shek, P.Eng., CP, FEC, Committee Chair

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Many GERs in their professional discretion do provide full-time field review during installation of deep foundations and permanent rock anchors relied upon for foundation support due to the critical importance of these foundation units.

Foundations and earthworks are some of the most critical elements of projects, and the least accessible to remediate following construction, so the GER takes this into consideration when establishing the frequency and extent of *field reviews*.



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