


BC BUILDING CODE INTERPRETATION COMMITTEE

A joint committee with members representing
AIBC, EGBC, BOABC

File No: 24-0092

INTERPRETATION

Page 1 of 2

Interpretation Date:	Septemeber 16, 2025
Building Code Edition:	BC Building Code 2024
Subject:	Requirements for Gas-Permeable Layer and Location of Below Ground Soil Gas Collector Piping
Keywords:	Radon, Gas-Permeable Layer, Soil Gas Collector
Building Code Reference(s):	9.13.4.3.(1), 9.16.2.1.(1), 9.13.4.3.(2)(b), A-9.13.4.3.(2)(b) and (3)(b), CAN/CGSB-149.11
Question:	<ol style="list-style-type: none">1. Sentence 9.13.4.3.(1) requires material or materials below floors-on-ground that allow effective depressurization of that space in accordance with Sentence 9.16.2.1.(1) or not less than 100 mm of coarse clean granular material containing not more than 10% of material that would pass a 4 mm sieve. Are there any minimum size requirements for the granular material chosen?2. If there are multiple compartments below the floor on ground created by footings and foundation walls, can openings be provided through the walls to provide the required contiguous gas-permeable layer to the soil gas collection system?
Interpretation:	<p>1. No.</p> <p>Effective depressurization of the layer below the air barrier system requires sufficient clear spaces or gaps in the material for soil gases to move about such that they can be extracted when a fan applies a negative pressure (vacuum) to the space. The limit in Sentence 9.13.4.3.(1) of 10% of material that would pass through a 4 mm sieve means that essentially the other 90% of the material is too coarse to pass through a 4 mm sieve. Though there is no minimum size on the 10% portion of material that passes the sieve, the remaining material is to be of sufficient size that it won't pass through, and as a result, is considered sufficient for providing those clear spaces or gaps when installed as a layer below the air barrier system.</p> <p></p> <hr/> <p>Patrick Shek, P.Eng., CP, FEC, Committee Chair</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 *Authority Having Jurisdiction*. The views of the joint committee should not be construed as legal advice.

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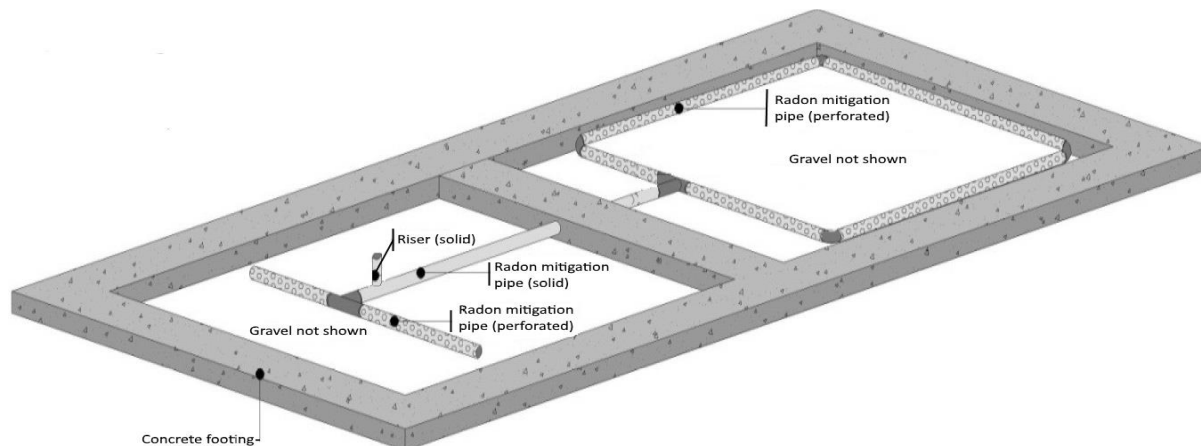
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Page 2 of 2

2. No.

The compartments below the floor on ground created by footings and foundation walls must be connected by a soil gas collector pipe.

Clause 9.13.4.3.(2)(b) states that the radon vent pipe must have one or more inlets that allows for the effective depressurization of the gas-permeable layer. This clause directs the user to Note A-9.13.4.3.(2)(b) and (3)(b) which states that “the arrangement and location of the extraction system inlet(s) may have design implications where the footing layout separates part of the space underneath the floor. If an area is segregated by a footing (for example), **a through-footing pipe can join the area** so that a single suction point can depressurize both areas.” Although not directly referenced, CAN/CGSB-149.11 also provides some guidance to this issue in 7.1.2.6 and Figure 7.1.2.7 as shown below.



Patrick Shek

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