



ALTERNATIVE SOLUTIONS

The purpose of this bulletin is to describe the City of Enderby's alternative solution submission requirements.

An alternative solution application must meet the requirements described in the British Columbia Building Code 2018 (BCBC) Division C, Section 2.3.

Under the City of Enderby Building Bylaw No. 1582, 2015, section 402, a Building Official retained by the City is responsible for administering new, alternative, and equivalent construction design, methods, and materials in accordance with the BCBC.

The City encourages an applicant to discuss any contemplated alternative solution with a Building Official prior to submission.

What is an alternative solution?

If BCBC compliance cannot be achieved by using an acceptable solution specified in the BCBC's Division B, an alternative solution may be proposed to achieve compliance.

An alternative solution uses materials, appliances, systems, equipment, methods of design and construction and/or processes not specifically described in the BCBC or which vary from the specific requirements of the BCBC.

An alternative solution must:

- demonstrate that it is suitable on the basis of past performance, tests or technical evaluations;
- achieve the minimum level of performance required by the BCBC; and
- must not involve an acceptable solution that expressly requires conformance to a provincial enactment other than the BCBC.

How do I make an alternative solution application?

Alternative solution submissions should be made at the preliminary stages of a project. The City's acceptance of a proposed alternative solution is typically a condition of building permit issuance.

It is the applicant's responsibility to plan and schedule the alternative solution process within the context of their project's broader timeline. In the event that an alternative solution is not accepted, the applicant must comply with the BCBC's acceptable solutions.

An alternative solution submission must be prepared, sealed and signed by a qualified registered professional with relevant experience to practice in British Columbia, in the discipline to which the alternative solution pertains. The decision to accept or reject an alternative solution is made by a Building Official. The Building Official may:

- refer the alternative solution for comment to other departments and outside agencies;
- request a third-party independent review of a proposed alternative solution, at the expense of the applicant, in order to assist in their decision; and/or

- waive or vary the requirement for an alternative solution submission to be prepared, sealed and signed by a qualified registered professional.

In the event that an alternative solution is incomplete or rejected by a Building Official and there are material changes at the time that the revised alternative solution is submitted, the revision will be deemed a new application and the full fee for an alternative solution submission will be charged. A requirement for minor changes to the proposed alternative solution will be deemed part of the normal review process.

Upon completion of the Building Official's review of the proposed alternative solution, the applicant will be notified of its acceptance or rejection.

Final occupancy will not be granted until the registered professional provides assurance, in the form of a signed and sealed letter, that the alternative solution has been installed in a manner satisfactory to them and in compliance with the alternative solution. A complex alternative solution will require the submission of the registered professional's field review reports in addition to the final assurance letter.

What must I include in my alternative solution application?

An applicant seeking acceptance of an alternative solution must submit sufficient evidence to demonstrate that the alternative solution provides at least the level of performance required by the BCBC acceptable solution and must address the relevant objectives and functional statements.

Further guidance regarding documentation of alternative solutions may be obtained by reference to BCBC Division C, Appendix A Articles A-2.3.1.

The following are required for a complete application submission. Any of the requirements may be waived at the sole discretion of the Building Official.

- A covering letter summarizing the rationale for the alternative solution, including the reasons why the BCBC acceptable solution may not be achieved and how the alternative solution will meet the minimum performance levels of the acceptable solution;
- Two sealed original copies plus one digital file for each submission;
- Alternative solution report, including:
 - The applicable code performance requirements which the applicant is proposing to address by way of an alternative solution;
 - The reason why the BCBC acceptable solution cannot be achieved;
 - The alternative solution design measures that are being proposed to achieve the performance requirements of the BCBC, including:
 - a clear explanation of how the design measures will meet or exceed the BCBC acceptable solution;
 - a Code analysis outlining the analytical methods and rationales used to determine that a proposed alternative solution will achieve at least the level of performance required by Clause 1.2.1.1.(1)(b) of Division A of the BCBC, which must be in sufficient detail to convey the design intent and to support the validity, accuracy, relevance and precision of the Code analysis;

- information concerning any special maintenance or operational requirements, including any building component commissioning requirements, that are necessary for the alternative solution to achieve compliance with the BCBC after the building is constructed;
- the applicable objectives, functional statements and acceptable solutions, and any assumptions, limiting or restricting factors, testing procedures, engineering studies or performance parameters that will support a Code compliance assessment;
- information about the qualifications, experience and background of the person or persons taking responsibility for the design;
 - Where more than one person is responsible for the design of a building or facility that includes a proposed alternative solution, the person requesting the use of the alternative solution shall identify a single person to co-ordinate the preparation of the design, Code analysis and documentation for the alternative solution submission;
- Documented proof of how the alternative solution provides the level of performance required by the acceptable solution, such as performance test results;
- Specific design parameters required for other building design elements as a result of the alternative solution;
- Signed and sealed statement from the registered professional indicating that the alternative solution will provide a level of performance that meets or exceeds that required by the BCBC;
- Drawings (floor plans, elevations, sections, etc.) that portray the extent of the alternative solution in its entirety, and its relationship to the remainder of the project;
- Supporting literature;
- An undertaking for field review letter signed and sealed by the registered professional; and
- Payment of alternative solution application fee.

The City of Enderby encourages an applicant to discuss any contemplated alternative solution with a City of Enderby Building Official prior to submission.