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Proposed Change 1839

Code Reference(s):	NECB20 Div.A 1.1.1.1. (first printing) NECB20 Div.A 1.3.3. (first printing)
Subject:	Alteration of Existing Buildings
Title:	Application of the NECB to the Alteration of Existing Buildings
Description:	This proposed change modifies the application of the NECB generally, and Parts 3 to 8 and 10 and proposed Part 11 specifically, to include the alteration of existing buildings.
Related Proposed Change(s):	PCF 1812, PCF 1813, PCF 1824

This change could potentially affect the following topic areas:

- | | |
|--|---|
| <input checked="" type="checkbox"/> Division A | <input type="checkbox"/> Division B |
| <input type="checkbox"/> Division C | <input checked="" type="checkbox"/> Design and Construction |
| <input type="checkbox"/> Building operations | <input type="checkbox"/> Housing |
| <input type="checkbox"/> Small Buildings | <input checked="" type="checkbox"/> Large Buildings |
| <input type="checkbox"/> Fire Protection | <input type="checkbox"/> Occupant safety in use |
| <input type="checkbox"/> Accessibility | <input type="checkbox"/> Structural Requirements |
| <input type="checkbox"/> Building Envelope | <input checked="" type="checkbox"/> Energy Efficiency |
| <input type="checkbox"/> Heating, Ventilating and Air Conditioning | <input type="checkbox"/> Plumbing |
| | <input type="checkbox"/> Construction and Demolition Sites |

General information

See the summary for subject Alteration of Existing Buildings.

Problem

Regulatory authorities and the industry have expressed the desire for a consistent set of provisions that apply to the alteration of existing buildings to ensure an acceptable level of safety and building performance, and to remove ambiguity with respect to the degree to which the unaltered portion of the building must meet the Code requirements. A consistent process for applying these requirements would help to reduce unnecessary variation in enforcement levels in different jurisdictions.

The National Energy Code of Canada for Buildings (NECB) applies to new buildings, to additions, and to the subsequent alteration of buildings constructed to meet the requirements of the 2020 National Model Codes. The NECB does not currently apply to the alteration of existing buildings that are constructed to meet the requirements of previous editions of the National Model Codes. For consistent application across jurisdictions and improved energy efficiency in the existing portion of the building, the application of the NECB must be expanded to include the alteration of existing buildings.

A new Part 11 of the NECB is being proposed to contain the technical requirements that apply to the alteration of existing buildings. Division A of the NECB would also need to be revised to state the application of the proposed Part 11 to existing buildings.

Failure to state the application of a set of requirements that apply to the alteration of existing buildings may lead to an incorrect set of requirements being applied to an existing building or a missed opportunity for upgrading the energy performance of an existing building when it is cost-effective to do so.

Justification

The voluntary alteration of an existing building represents an opportunity to upgrade the energy performance of the building. When significant repairs or alterations need to be made, the energy performance of the building should also be improved at the same time where it is cost-effective to do so, thereby minimizing the incremental cost of the upgrade.

In order to provide the minimum requirements for the alteration of existing buildings, the scope of the NECB must be expanded. The Code requirements that apply to alterations must be identified, with any permitted relaxations provided where applicable.

Providing a set of consistent, harmonized and cost-effective requirements that apply to the alteration of an existing building would provide Code users, the industry and authorities having jurisdiction with a clear expectation of the degree of work required to improve the energy performance of an existing building.

PROPOSED CHANGE

NECB20 Div.A 1.1.1.1. (first printing)

[1.1.1.1.] 1.1.1.1. Application of this Code

[1] 1) Except as provided in ~~Sentence (3)~~Sentence (2)-2025, this Code applies to

[a] --) the design and construction of

[i] --) all new *buildings* described in Sentence 1.3.3.2.(1) of Division A of the NBC, and

[ii] --) ~~to~~ additions, and

[b] --) the alteration of all existing buildings described in Sentence 1.3.3.2.(1) of Division A of the NBC.

(See Note A-1.1.1.1.(1).)

~~[2] 2) This Code applies to subsequent alterations to and within buildings originally constructed in accordance with this Code. (See Note A-1.1.1.1.(2).)~~

[3] 3) This Code does not apply to *farm buildings*.

Note A-1.1.1.1.(1) Additions ~~application of this Code.~~

~~This Code applies to buildings and their systems, components and assemblies at the time of their construction.~~

For the purpose of understanding the scope of this Code, an addition can be thought of as a new building that happens to be built contiguous to an existing building or as a new portion of an existing building.

~~Note A-1.1.1.1.(2) -Application of this Code.~~

~~This Code is intended to apply to alterations to and within buildings constructed in compliance with the NECB to ensure that future alterations and improvements to building assemblies, systems, equipment and components regulated by this Code, such as tenant improvements and renovations, continue to meet the requirements of this Code.~~

~~Designers should pay particular attention to situations where the Part 8 Performance Compliance Path is used. The assumptions used in the original energy model may need to be reviewed, and a new energy model may need to be prepared.~~

NECB20 Div.A 1.3.3. (first printing)

[1.3.3.] 1.3.3. Application of Division B

[1.3.3.1.] 1.3.3.1. Application of Parts 1, ~~3 to 8 and 10~~

[1] 1) Parts 1, ~~3 to 8 and 10~~ of Division B ~~applies~~y to all *buildings* covered in this Code. (See Article 1.1.1.1.)

[1.3.3.2.] --- Application of Parts 3 to 8 and 10

[1] --) Parts 3 to 8 and 10 of Division B apply to all new buildings covered in this Code and to additions.

[1.3.3.3.] --- Application of Part 11

[1] --) Except as provided in Sentences (2) and (3), Part 11 of Division B applies to the alteration of existing buildings.

[2] --) Part 11 of Division B does not apply to

[a] --) tents,

[b] --) air-supported structures,

[c] --) relocatable buildings,

[d] --) open-air storage garages,

[e] --) garages or carports described in Sentence 9.35.1.1.(1) of the NBC,
or

[f] --) construction camps.

[3] --) Part 11 of Division B does not apply to *heritage buildings* or to parts of a *building* that have been formally recognized by a federal, provincial, territorial or municipal authority as having heritage value.

General information

See the summary for subject Alteration of Existing Buildings.

Impact analysis

The proposed changes to Division B that apply to the alteration of existing buildings provide the impact analysis for each technical requirement.

It is expected that the proposed Code requirements that apply to the alteration of existing buildings would provide a benefit to both the industry and authorities having jurisdiction by providing a consistent set of provisions to ensure an acceptable level of safety and building performance, and to remove ambiguity with respect to the degree of work required to improve energy performance in the unaltered portion of the building.

This proposed change would help reduce the administrative and enforcement costs of assessing the degree to which any particular requirement could be relaxed without affecting the level of performance of the building with respect to the Code objectives.

Enforcement implications

It is expected that a consistent set of provisions that apply to the alteration of existing buildings would help reduce the administrative and enforcement work of assessing the degree to which any particular requirement could be relaxed without affecting the level of performance of the building with respect to the Code objectives. The proposed changes would aid enforcement by identifying the work necessary to improve energy performance in the unaltered portion of the building.

Who is affected

Designers, engineers, architects, building officials, manufacturers, suppliers and energy advisors.

