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# Proposed Change 1864

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<b>Code Reference(s):</b>	<b>NECB20 Div.C 2.2. (first printing)</b>
Subject:	Alteration of Existing Buildings
Title:	Alteration of HVAC Systems
Description:	This proposed changes adds administrative requirements related to the alteration of HVAC systems.
Related Proposed Change(s):	PCF 1859

This change could potentially affect the following topic areas:

- |   |   |
|---|---|
| <input type="checkbox"/> Division A   | <input type="checkbox"/> Division B                         |
| <input checked="" type="checkbox"/> Division C                                | <input checked="" type="checkbox"/> Design and Construction |
| <input type="checkbox"/> Building operations                                  | <input type="checkbox"/> Housing                            |
| <input checked="" 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 checked="" type="checkbox"/> Heating, Ventilating and Air Conditioning | <input type="checkbox"/> Plumbing                           |
|   | <input type="checkbox"/> Construction and Demolition Sites  |

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## General information

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See the summary for subject Alteration of Existing Buildings.

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## Problem

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Division C of the National Energy Code of Canada for Buildings (NECB) requires that the authority having jurisdiction be provided with adequate documentation and other information, such as drawings and equipment specifications, in order to verify compliance with the Code. With the introduction of requirements for the alteration of existing buildings in the NECB 2025, there will be a need for information and calculations related to the extent of the alterations.

Failure to provide adequate documentation and level of detail regarding the alteration would make it difficult for authorities having jurisdiction to verify that the proposed alterations conform to the Code. This situation could also lead to inconsistency in the

design, construction and performance of the alterations, which could cause confusion and conflict between designers, manufacturers, authorities having jurisdiction and the legal community.

These conflicts would occur when

- authorities having jurisdiction request documentation during permit reviews to prove Code compliance,
- designers require Code compliance for use of their design specifications on a project, or
- disputes arise which require litigation.

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## Justification

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Providing administrative guidance in Division C on the proper reporting techniques for documentation and calculations related to the alteration of existing buildings for compliance with the NECB is necessary to ensure building officials are provided with an appropriate level of detail to assess Code compliance.

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## PROPOSED CHANGE

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### [2.2.] 2.2. Administration

#### [2.2.1.] 2.2.1. Administration

##### [2.2.1.1.] 2.2.1.1. Conformance with Administrative Requirements

#### [2.2.2.] 2.2.2. Information Required for Proposed Work

##### [2.2.2.1.] 2.2.2.1. General Information Required

##### [2.2.2.2.] 2.2.2.2. Design Calculations and Analysis

##### [2.2.2.3.] 2.2.2.3. Documentation on the Building Envelope

##### [2.2.2.4.] 2.2.2.4. Documentation on Lighting Systems

##### [2.2.2.5.] 2.2.2.5. Documentation on HVAC Systems

##### [2.2.2.6.] 2.2.2.6. Documentation on Service Water Heating Systems

##### [2.2.2.7.] 2.2.2.7. Documentation on Electrical Power Systems and Motors

##### [2.2.2.8.] 2.2.2.8. Documentation Requirements for Building Performance Compliance

### [2.2.3.] -- Information Required for Alteration Work

#### [2.2.3.1.] --- Documentation on the Alteration of HVAC Systems

[1] --) The following documentation on the *alteration* of HVAC systems shall be provided:

[a] --) documentation on new and altered components, equipment and systems, in accordance with Article 2.2.2.5., and

[b] --) thermal load and ductwork or piping length calculations for existing HVAC systems.

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## Impact analysis

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Administering the enforcement of the Code is the normal business of the existing enforcement infrastructure. The enforcement of these administrative requirements is not expected to be time-consuming or add significantly to the workload that is the

normal course of business for building inspectors. The overall impact would be a significant improvement in the ability of authorities having jurisdiction to successfully verify Code compliance.

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## **Enforcement implications**

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The enforcement of the administrative requirements for the alteration of HVAC systems in existing buildings can be accomplished with the same means and resources involved in the enforcement of NECB Part 5. However, there could be an increase in enforcement and permit-review responsibilities.

Requiring information about alteration work would facilitate enforcement.

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## **Who is affected**

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Designers, specification writers, manufacturers, contractors, building owners and building officials.