Alteration of Existing Buildings

Problem

The National Model Codes continually evolve to remain responsive to current and emerging issues; new technologies, materials, construction practices, research and social policy; and the changing needs of Canadian society. The 2020 edition of the National Building Code of Canada (NBC) addresses the objectives of safety, health, accessibility, fire and structural protection of buildings, and environment (energy-use efficiency).

While NBC requirements apply to the alteration of existing buildings, an evaluation process is often undertaken during the application of these requirements to existing buildings to balance their implementation costs with their relative importance in achieving the overall objectives of the Code. Advances made over time to Code requirements to meet the Code objectives may therefore result in some older buildings lagging behind more recently constructed ones in building performance and functionality.

How any particular requirement should be interpreted and the degree to which it may be relaxed when applied to an existing building, without affecting the intended level of performance with respect to the objectives of the Code, requires considerable judgment on the part of the designer and the authority having jurisdiction, respectively. If the Code requirements that apply to existing buildings are too onerous, there is a risk that alteration activities will not be undertaken or will be conducted without notifying the authority having jurisdiction.

Harmonization

The absence of clear requirements for existing buildings has resulted in a patchwork approach to dealing with alterations across Canada, which causes confusion for the industry, regulators and building owners/operators.

Authorities having jurisdiction and the industry have expressed the desire for a set of National Model Code requirements that can consistently be applied to existing buildings under alteration to ensure an acceptable level of safety and building performance, and that also removes ambiguity as to the degree of work required on the rest of the building. A process for the consistent application of these requirements would help reduce unnecessary variation in enforcement levels in different jurisdictions.

Economy

Although the renovation market represents approximately 40% of Canada's construction activity[1], there is a lack of consistent requirements for this sector. The unqualified application of Code requirements to existing buildings could result in costly and onerous alterations that far outreach the scope of the planned alteration, or could risk deterring Code users from undertaking alterations.

Affordability

Applying Code requirements that are mostly intended for new construction to existing buildings without consideration of constructability and practicality may result in an expansion of scope of the alterations, which may have costly outcomes.

Opportunity

The voluntary alteration of an existing building represents an opportunity to upgrade the building’s performance. Without a set of practical and cost-effective requirements that would apply to voluntary alterations, the opportunity for performance improvement when significant repairs or alterations are made may be missed and the cost of performing the same upgrades later may be increased.

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[1] Statistics Canada, Table 34-10-0175-01, Investment in Building Construction, September 2022 - January 2023, https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=3410017501

Justification

The development of provisions for existing buildings in the National Model Codes could be key to improving the performance of existing buildings (without worsening performance in other areas) at the time of alteration. National, provincial and territorial long-term policy goals could also be advanced.

Harmonization

Collaboration between provincial, territorial and federal governments is important to reduce variation, eliminate barriers for industry and enable sustainable economic growth. A model code for the alteration of existing buildings would help guide improvements that could be made when renovating buildings and provide harmonized provisions for adoption by the Provinces and Territories.

Economy

Construction in Canada is a $141 billion industry that employed over 1.4 million people in 2021[1]. Investment in retrofitting has been shown to be a strong job creator that provides direct local benefits.

Affordability

Most building owners and architects estimate that the costs of retrofitting commercial and institutional buildings for energy performance are regained in less than 10 years, according to data from the Canada Green Building Council. Residential energy-efficiency improvements helped Canadians save $12 billion in energy costs in 2013, which was an average savings of $869 per household[2].

Opportunity

The voluntary alteration of an existing building represents an opportunity to upgrade the building’s performance. When significant repairs or alterations need to be made is the ideal time to consider upgrading performance where it is cost-effective to do so, thereby minimizing the incremental cost of the upgrade.

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[1] Canadian Construction Association article, https://www.cca-acc.com/about-us/value-of-industry/

[2] Pan-Canadian Framework on Clean Growth and Climate Change, https://www.canada.ca/en/services/environment/weather/climatechange/pan-canadian-framework/climate-change-plan.html

Attached Supporting Material

none