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Proposed Change 2157

Code Reference(s):	NBC25 Div.A 1.1.1.1. (first printing) NBC25 Div.C 2.2.7.5. (first printing)
Subject:	Other
Title:	Moving the Reference to CSA A277, "Procedure for certification of prefabricated buildings, modules, and panels," from a Division A Note to a Division C Provision
Description:	This proposed change permits a certificate to CSA A277, "Procedure for certification of prefabricated buildings, modules, and panels," to be considered as third-party Code compliance approval to facilitate the approval of factory-constructed buildings, modules and panels.

This change could potentially affect the following topic areas:

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

Problem

It may often be difficult for authorities having jurisdiction (AHJs) to determine whether a factory-constructed building, module or panel complies with the National Building Code of Canada without a full inspection of the building, module or panel once it has been delivered to the construction site. AHJs may prefer to fully inspect these factory-constructed items as they do on-site construction. Because many of the wall, roof and floor assemblies are closed in, their components cannot be inspected without reopening the assemblies.

Note A-1.1.1.1.(2) currently identifies CSA A277, "Procedure for certification of prefabricated buildings, modules, and panels," as a potential compliance option for

factory-constructed buildings, modules and panels. However, to be enforceable the reference should appear in a provision instead of an explanatory Note, which means some AHJs may not accept CSA A277 as a compliance option.

Justification

This proposed change revises the Administrative Provisions in Division C by introducing a new sentence to Article 2.2.7.5. Proposed Sentence 2.2.7.5.(2) would allow authorities having jurisdiction (AHJs) to consider certifications to CSA A277, "Procedure for certification of prefabricated buildings, modules, and panels," as administrative confirmation that buildings, modules and panels that are constructed off site are Code compliant.

The AHJ would remain responsible for determining whether or not a building's plans are Code compliant, and an accredited agency would be responsible for ensuring that the processes used by the off-site manufacturer to construct the components off site follow the Code-compliant plans that were approved by the AHJ.

This proposed change could facilitate the acceptance of factory-constructed buildings, panels and modules by AHJs since it offers an enforceable pathway for Code compliance to be determined in a factory (off-site) by an accredited agency before the assemblies are closed in.

PROPOSED CHANGE

[1.1.1.1.] 1.1.1.1. Application of this Code

Note A-1.1.1.1.(2) Factory-Constructed Buildings.

The NBC applies the same requirements to site-built and factory-constructed buildings. ~~However, it can often be difficult to determine whether a factory-constructed building complies with the Code once it has been delivered to the construction site because many of the wall, roof and floor assemblies are closed in and so their components cannot be inspected. CSA A277, "Procedure for certification of prefabricated buildings, modules, and panels", was developed to address this problem with regard to residential, commercial and industrial buildings. This standard describes a procedure whereby an independent certification agency can review the quality control procedures of a factory and make periodic unannounced inspections of its products. The standard is not a building code, only a procedure for certifying compliance of factory-constructed components with a building code or other standard. If a factory-constructed building bears the label of an accredited certification agency indicating that compliance with the National Building Code has been certified using the CSA A277 procedure, the accepting authority will have some assurance that the concealed components do not require re-inspection on-site. and while the~~ On the other hand, standards in the CSA Z240 MH Series, "Manufactured homes", ~~do~~ resemble a building code, compliance with the series

should not be taken as an indication that the house necessarily complies with the building code in effect for the intended location of the house. ~~Most of the individual standards in the~~ The series contains requirements regarding many issues ~~also~~ covered in the NBC; ~~however,~~ ~~Some of these provisions in the~~ Z240 MH Series ~~provisions~~ are performance requirements with no quantitative criteria, some simply reference the applicable NBC requirements, while others contain requirements that differ from those in the NBC. Because it would be illogical to have two different sets of requirements for buildings—one set that applies to site-built buildings and one set that applies to factory-constructed buildings—the NBC does not reference these Z240 MH Series standards.

One of the individual standards in the Z240 MH Series deals with special requirements for manufactured homes related to the fact that they ~~se houses~~ must be moved over roads, which is an issue the NBC does not address. ~~Therefore, labeling that indicates that a factory-constructed house complies with the Z240 MH Series, standards can NOT be taken as an indication that the house necessarily complies with the building code in effect for the location where the house will be sited.~~

The NBC does reference CSA Z240.10.1, "Site preparation, foundation, and installation of buildings", which is not actually part of the CSA Z240 MH Series. This standard contains requirements for surface foundations where buildings—not just houses—comply with the deformation resistance test provided in CSA Z240.2.1, "Structural requirements for manufactured homes".

[2.2.7.5.] 2.2.7.5. Off-Site Review

- [1] 1)** Where a *building* or component of a *building* is assembled off the *building* site in such a manner that it cannot be reviewed on site, off-site reviews shall be provided to determine compliance with this Code.
- [2] --)** Prefabricated buildings, modules or panels certified in accordance with CSA A277, "Procedure for certification of prefabricated buildings, modules, and panels", by an organization accredited for this purpose by the Standards Council of Canada shall be deemed to comply with the off-site review required by Sentence (1). (See Note A-2.2.7.5.(2).)

Note A-2.2.7.5.(2) Deemed to Comply with Required Off-Site Review.

Sentence 2.2.7.5.(2) is intended to leave to the authority having jurisdiction the determination of the Code compliance of submitted drawings or designs for the proposed building, including any components intended to be assembled off the building site. The provision also leaves to the authority having jurisdiction the performance of on-site reviews for the on-site assembly (e.g., connections) of buildings, modules or panels that are certified in accordance with CSA A277, "Procedure for certification of prefabricated buildings, modules, and panels".

Impact analysis

The proposed change does not introduce any increase in costs for compliance with the requirements for the construction of prefabricated buildings, modules and panels.

Some authorities having jurisdiction (AHJs) have not previously permitted a certificate to CSA A277, "Procedure for certification of prefabricated buildings, modules, and panels," to be used as a means of confirming that what was constructed off site is Code compliant because it conforms with the AHJ-approved designs. In the cases where an AHJ now accepts the off-site review where they may not have before, this could result in a decrease in time and resources required for construction review or approval processes depending on the availability of accredited certification bodies to complete the certifications.

Enforcement implications

Authorities having jurisdiction could spend less time approving prefabricated buildings, modules and panels, depending on the availability of accredited certification bodies that are capable of completing the certifications.