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Proposed Change 1797

Code Reference(s):	NFC20 Div.B 5.6.1. (first printing)
Subject:	Other — Hazardous Materials and Activities
Title:	Protection of Adjacent Buildings
Description:	This proposed change expands explanatory Note A-5.6.1.2.(1) to clarify the intent of the related provision.

This change could potentially affect the following topic areas:

- | | |
|--|---|
| <input type="checkbox"/> Division A | <input checked="" type="checkbox"/> Division B |
| <input type="checkbox"/> Division C | <input checked="" type="checkbox"/> Design and Construction |
| <input type="checkbox"/> Building operations | <input checked="" type="checkbox"/> Housing |
| <input checked="" type="checkbox"/> Small Buildings | <input checked="" type="checkbox"/> Large Buildings |
| <input checked="" 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 checked="" type="checkbox"/> Construction and Demolition Sites |

Problem

Following the revision of Section 5.6. of the National Fire Code of Canada (NFC) during the 2005–2010 Code cycle, a new Article 5.6.1.2. was introduced in the NFC 2010 for the protection of adjacent buildings in areas undergoing construction, alteration or demolition operations. Explanatory Note A-5.6.1.2.(1) was also introduced to clarify the intended level of the protection required by the new Article, which allowed various options to protect adjacent buildings during demolition, alteration or construction (e.g. water curtains, fire tarpaulin, spatial separation, gypsum sheathing).

Stakeholders have raised a concern as to the degree of application inferred by the wording of Article 5.6.1.2. for the protection of adjacent buildings. Sentence 5.6.1.1.(2)-2005 was removed from the NFC 2010, and clarification of the intent of the application statement for Section 5.6. as stated in Article 5.6.1.1.-2010 was provided in new explanatory Note A-5.6.1.1.-2010. As a result, the normative aspect of the degree of application as set out in Sentence 5.6.1.1.(2)-2005 was removed.

Some jurisdictions now require specific fire protection features (e.g. gypsum sheathing or intumescent oriented strandboard) to mitigate fire spread to adjacent properties in accordance with Article 5.6.1.2., without fully considering the degree of application of Section 5.6. as clarified in explanatory Note A-5.6.1.1.

The intent of the revisions to Section 5.6. made in the NFC 2010 was to allow for more flexibility in the degree of application for the protection of adjacent buildings. Further revisions were made in the NFC 2020 to clarify the measures to be taken in the protection of adjacent buildings. The current wording does not limit a construction or demolition site to specific active or passive fire protection features. Sentence 5.6.1.2.(1)-2020 allows for more options than active or passive fire protection measures, provided a risk assessment is performed and agreed upon by the authority having jurisdiction, as described in explanatory Note A-5.6.1.2.(1)-2020.

The provision and Note were never intended to limit any jurisdiction to specific fire protection features, such as gypsum sheathing, during construction to protect adjacent properties. Construction sites may not require additional fire protection measures, as described in explanatory Note A-5.6.1.2.(1)-2020, if no risk of exposure to adjacent buildings exists. The Note mentions a risk assessment to determine the appropriate application of these fire protection measures.

The relationship between Sentence 5.6.1.2.(1)-2020 and the associated explanatory Note is such that the protection of adjacent properties is always required, but compliance is achieved objectively rather than prescriptively so that jurisdictions have more options and flexibility. A risk assessment is a valid tool to identify the hazards and potential risks to adjacent properties in the event of a fire and to identify the proper measures to mitigate those risks. In some cases, spatial separation is all that is required to achieve compliance with Sentence 5.6.1.2.(1)-2020 based on a risk assessment and fire safety plan.

However, in applying the requirement for the mitigation of fire spread to adjacent buildings, as stated in Article 5.6.1.2.-2020, some jurisdictions understand that the protection required needs to be permanent and, as such, become part of the building. This would result in excessive measures being taken for low-risk situations and additional project costs, which is contrary to the intent of Sentence 5.6.1.2.(1)-2020 to offer more options and flexibility to achieve compliance.

Justification

This proposed change would revise explanatory Note A-5.6.1.2.(1) to

- state that the fire safety plan should include a risk assessment to inform the degree of application for the protection of adjacent buildings, and
- further clarify options for active or passive fire protection measures, which can be determined following a risk assessment and agreed upon by the authority having jurisdiction.

In addition, the revised explanatory Note would clarify that construction sites may not require any additional fire protection measures if there is no risk of exposure to adjacent properties.

PROPOSED CHANGE

[5.6.1.] 5.6.1. General

[5.6.1.1.] 5.6.1.1. Application

[5.6.1.2.] 5.6.1.2. Measures to ~~Mitigate~~Reduce the Risk of Fire Spread to Adjacent Buildings

- [1] 1) Measures shall be taken to ~~mitigate~~reduce the risk of fire spread to adjacent *buildings* and facilities that would be exposed to fire originating from *buildings*, parts of *buildings*, facilities and associated areas undergoing construction, alteration or demolition operations. (See Note A-5.6.1.2.(1))

~~[5.6.1.3.] 5.6.1.3. Fire Safety Plan~~

- ~~[1] 1) A fire safety plan conforming to Section 2.8. shall be prepared.~~

[5.6.1.4.] 5.6.1.4. Access for Firefighting

[5.6.1.5.] 5.6.1.5. Portable Extinguishers

[5.6.1.6.] 5.6.1.6. Standpipe Systems

[5.6.1.7.] 5.6.1.7. Hot Surface Applications

[5.6.1.8.] 5.6.1.8. Ignition Sources

[5.6.1.9.] 5.6.1.9. Building Services at Demolition Sites

[5.6.1.10.] 5.6.1.10. Fuel Supply Installation

[5.6.1.11.] 5.6.1.11. Tank, Piping and Machinery Reservoir Safety at Demolition Sites

[5.6.1.12.] 5.6.1.12. Fire Separations in Partly Occupied Buildings

[5.6.1.13.] 5.6.1.13. Protection during Shutdown

[5.6.1.14.] 5.6.1.14. Watch

[5.6.1.15.] 5.6.1.15. Smoking Restrictions

[5.6.1.16.] 5.6.1.16. Provision for Egress

[5.6.1.17.] 5.6.1.17. Fire Warning

[5.6.1.18.] 5.6.1.18. Storage and Use of Dangerous Goods

[5.6.1.19.] 5.6.1.19. Temporary Enclosures

[5.6.1.20.] 5.6.1.20. Disposal of Combustible Refuse

Note A-5.6.1.2.(1)

As part of fire safety planning, various methods, procedures and materials, if deemed necessary following a risk assessment, can be used to mitigate reduce the risk of fire spread from a construction or demolition site to adjacent buildings and facilities. that are deemed necessary following a risk assessment. These measures can range from active to include the presence of trained supervisory staff on site and the monitoring and control of fire hazards. They can also include active or passive systems solutions such as spatial separation, erecting a temporary fire barrier (e.g. fire tarpaulin), using construction methods and materials (e.g. gypsum sheathing), or installing water curtains, using construction methods and materials that include gypsum sheathing, or

~~erecting a temporary fire barrier such as a fire tarpaulin.~~ Materials that may become part of the finished building must conform to the NBC.

Impact analysis

There is no cost associated with this proposed change as it is editorial and clarifies the intent of the original Code requirement.

The benefits would include harmonization of the interpretation and application of the provision, as well as the elimination of potential confusion about the intent of the provision.

Enforcement implications

This proposed change would ease the application of Section 5.6. of Division B of the NFC to construction and demolition sites by the authority having jurisdiction. This proposed change would also facilitate the enforcement of Code provision for regulators.

Who is affected

Regulators, builders, owners, contractors and consultants.

OBJECTIVE-BASED ANALYSIS OF NEW OR CHANGED PROVISIONS

[\[5.6.1.1.\]](#) 5.6.1.1. ([\[1\]](#) 1) no attributions

[\[5.6.1.2.\]](#) 5.6.1.2. ([\[1\]](#) 1) [F02,F03-OP3.1]

~~[\[5.6.1.3.\]](#) 5.6.1.3. ([\[1\]](#) 1) no attributions~~

[\[5.6.1.4.\]](#) 5.6.1.4. ([\[1\]](#) 1) [F12-OS1.2]

[\[5.6.1.4.\]](#) 5.6.1.4. ([\[1\]](#) 1) [F12-OP1.2]

[\[5.6.1.4.\]](#) 5.6.1.4. ([\[2\]](#) 2) [F12-OS1.2,OS1.5]

[\[5.6.1.4.\]](#) 5.6.1.4. ([\[2\]](#) 2) [F12-OP1.2]

[\[5.6.1.4.\]](#) 5.6.1.4. ([\[3\]](#) 3) [F12-OS1.2,OS1.5]

[\[5.6.1.4.\]](#) 5.6.1.4. ([\[3\]](#) 3) [F12-OP1.2]

[\[5.6.1.4.\]](#) 5.6.1.4. ([\[4\]](#) 4) [F12-OS1.2,OS1.5]

- [5.6.1.4.] 5.6.1.4. ([4] 4) [F12-OP1.2]
- [5.6.1.4.] 5.6.1.4. ([5] 5) [F12-OS1.2,OS1.5]
- [5.6.1.4.] 5.6.1.4. ([5] 5) [F12-OP1.2]
- [5.6.1.5.] 5.6.1.5. ([1] 1) [F12-OS1.2]
- [5.6.1.5.] 5.6.1.5. ([1] 1) [F12-OP1.2]
- [5.6.1.5.] 5.6.1.5. ([2] 2) [F02-OS1.2]
- [5.6.1.5.] 5.6.1.5. ([2] 2) [F02-OP1.2]
- [5.6.1.6.] 5.6.1.6. ([1] 1) [F02,F12-OS1.2]
- [5.6.1.6.] 5.6.1.6. ([1] 1) [F02,F12-OP1.2]
- [5.6.1.6.] 5.6.1.6. ([2] 2) [F02,F12-OS1.2]
- [5.6.1.6.] 5.6.1.6. ([2] 2) [F02,F12-OP1.2]
- [5.6.1.6.] 5.6.1.6. ([2] 2) ([c] c)
- [5.6.1.6.] 5.6.1.6. ([3] 3) [F12,F82-OS1.2]
- [5.6.1.6.] 5.6.1.6. ([3] 3) [F12,F82-OP1.2]
- [5.6.1.7.] 5.6.1.7. ([1] 1) no attributions
- [5.6.1.7.] 5.6.1.7. ([2] 2) [F01-OS1.1]
- [5.6.1.7.] 5.6.1.7. ([2] 2) [F01-OP1.1]
- [5.6.1.7.] 5.6.1.7. ([3] 3) [F01-OS1.2]
- [5.6.1.7.] 5.6.1.7. ([3] 3) [F01-OP1.2]
- [5.6.1.8.] 5.6.1.8. ([1] 1) [F01-OS1.1]
- [5.6.1.8.] 5.6.1.8. ([1] 1) [F01-OP1.1]
- [5.6.1.8.] 5.6.1.8. ([2] 2) [F01-OS1.1,OS1.2]
- [5.6.1.8.] 5.6.1.8. ([2] 2) [F01-OP1.1]
- [5.6.1.9.] 5.6.1.9. ([1] 1) [F01,F43-OS1.1]
- [5.6.1.9.] 5.6.1.9. ([1] 1) [F01,F43-OP1.1]
- [5.6.1.9.] 5.6.1.9. ([1] 1) [F32-OS3.3]
- [5.6.1.9.] 5.6.1.9. ([2] 2) [F81-OS1.1,OS1.2]
- [5.6.1.9.] 5.6.1.9. ([2] 2) [F81-OP1.1,OP1.2]
- [5.6.1.9.] 5.6.1.9. ([3] 3) [F32-OS3.4]
- [5.6.1.9.] 5.6.1.9. ([3] 3) [F01-OS1.1,OS1.2]
- [5.6.1.10.] 5.6.1.10. ([1] 1) [F81,F43-OS1.1]

- [5.6.1.11.] 5.6.1.11. ([1] 1) no attributions**
- [5.6.1.11.] 5.6.1.11. ([2] 2) [F01,F43-OS1.1] [F01-OS1.1]**
- [5.6.1.11.] 5.6.1.11. ([3] 3) [F01,F81-OS1.1]**
- [5.6.1.11.] 5.6.1.11. ([4] 4) [F01,F43-OS1.1]**
- [5.6.1.12.] 5.6.1.12. ([1] 1) [F03-OS1.2]**
- [5.6.1.12.] 5.6.1.12. ([1] 1) [F03-OP1.2]**
- [5.6.1.13.] 5.6.1.13. ([1] 1) [F12,F82-OS1.2]**
- [5.6.1.13.] 5.6.1.13. ([1] 1) [F12,F82-OP1.2]**
- [5.6.1.13.] 5.6.1.13. ([1] 1) [F02-OP3.1]**
- [5.6.1.13.] 5.6.1.13. ([2] 2) [F02-OP1.2]**
- [5.6.1.13.] 5.6.1.13. ([2] 2) [F02-OP3.1]**
- [5.6.1.13.] 5.6.1.13. ([2] 2) [F02-OS1.2,OS1.5]**
- [5.6.1.13.] 5.6.1.13. ([2] 2) no attributions**
- [5.6.1.14.] 5.6.1.14. ([1] 1) [F02-OS1.2,OS1.5]**
- [5.6.1.14.] 5.6.1.14. ([2] 2) [F02-OS1.5,OS1.2]**
- [5.6.1.14.] 5.6.1.14. ([3] 3) [F13-OS1.5,OS1.2]**
- [5.6.1.15.] 5.6.1.15. ([1] 1) [F01-OS1.1]**
- [5.6.1.16.] 5.6.1.16. ([1] 1) [F10,F82-OS3.7]**
- [5.6.1.16.] 5.6.1.16. ([2] 2) [F10,F82-OS3.7]**
- [5.6.1.17.] 5.6.1.17. ([1] 1) [F11-OS1.5]**
- [5.6.1.18.] 5.6.1.18. ([1] 1) no attributions**
- [5.6.1.18.] 5.6.1.18. ([2] 2) no attributions**
- [5.6.1.18.] 5.6.1.18. ([3] 3) no attributions**
- [5.6.1.19.] 5.6.1.19. ([1] 1) [F01-OS1.1,OS1.2]**
- [5.6.1.20.] 5.6.1.20. ([1] 1) [F02-OS1.1,OS1.2]**
- [5.6.1.20.] 5.6.1.20. ([1] 1) [F02-OP1.2]**