

National Building Code – 2019 Alberta Edition – Excerpts

(Note: Nothing has changed from the 2014 Edition)

NOTE:

“The NBC(AE)’s objectives... describe undesirable situations and their consequences, which the Code aims to avoid occurring in buildings. The wording of most of the definitions of the objectives include two key phrases: “limit the probability” and “unacceptable risk.” The phrase “limit the probability” is used to acknowledge that the NBC(AE) cannot entirely prevent those undesirable situations from happening. The phrase “unacceptable risk” acknowledges that the NBC(AE) cannot eliminate all risk: the “acceptable risk” is the risk remaining once compliance with the Code has been achieved (viii).

Put another way, “acceptable risk” is “the risk remaining once the applicable acceptable solutions in Division B have been implemented...[It] represents the residual level of risk deemed to be acceptable by the broad base of Canadians who have taken part in the consensus process used to develop the Code” (Division A, p.1-23).

“Unacceptable risk” is the condition that exists in the absence of compliance with the Code.

“Each requirement in Division B is linked to three types of information:

- objectives (such as safety or health), which individual requirements help to address,
- functional statements (statements on the functions of the building that a particular requirement helps to achieve), and
- intent statements (detailed statements on the specific intent of the provision)” (viii).

[NOTE: Nothing in the Code absolves the Accredited Municipality and its Authorized Officers of their duty to enforce the Code upon notice of non-compliance.]

Division A

Part 1 - Compliance

Section 1.4. Terms and Abbreviations

1.4.1. Definitions of Words and Phrases

1.4.1.2. Defined Terms

Excavation means the space created by the removal of *soil, rock or fill* for the purposes of Construction.

Part 2, Section 2.2. - Objectives

OS5 Safety at Construction and Demolition Sites

An objective of this Code is to limit the probability that, as a result of the construction or demolition of the *building* or facility, the public adjacent to a construction or demolition site will be exposed to an unacceptable risk of injury due to hazards. The risks of injury due to construction and demolition hazards addressed in this Code are those caused by

OS5.1 – objects projected onto *public ways*

OS5.2 – vehicular accidents on *public ways*

OS5.3 – damage to or obstruction of *public ways*

OS5.4 – water accumulated in *excavations*

OS5.5 – entry into the site

OS5.6 – exposure to hazardous substances and activities

OS5.7 – loads bearing on a covered way that exceed its *loadbearing* capacity

OS5.8 – collapse of the *excavation*

OS5.9 – persons being delayed in or impeded from moving to a safe place during an emergency (see Note A-2.2.1.1.(1))

Intent 1:

To limit the probability that construction, alteration or demolition activities will lead to unsafe conditions, which could lead to harm to persons.

Intent 2:

To limit the probability that persons will inadvertently wander onto the site, which could lead to persons being exposed to unsafe conditions, which could lead to harm to persons.

OP4 Protection of Adjacent Buildings or Facilities from Structural Damage

An objective of this Code is to limit the probability that, as a result of the design, construction or demolition of the *building* or facility, adjacent *buildings* or facilities will be exposed to an unacceptable risk of structural damage. The risks of structural damage to adjacent *buildings* or facilities addressed in this Code are those caused by—

- OP4.1 – settlement of the medium supporting adjacent *buildings* or facilities
- OP4.2 – collapse of the *building* or facility or portion thereof onto adjacent *buildings* or facilities
- OP4.3 – impact of the *building* or facility on adjacent *buildings* or facilities
- OP4.4 – collapse of the *excavation*

Intent 1:

To limit the probability that excavation operations will lead to damage to adjacent buildings.

Division B

Part 8 - Safety Measures at Construction and Demolition Sites

Section 8.1. General

8.1.1. Scope

8.1.1.1. Scope

- 1) The scope of this Part shall be as described in Subsection 1.3.3. of Division A.
- 2) This Part applies to fire safety and the protection of the public during the construction, *alteration* or demolition of every *building*, including any incomplete or abandoned *building*.

8.1.2. Application

8.1.2.1. Application

- 1) Where a *building* is undergoing construction, *alteration* or demolition, measures shall be taken at the *building* site in conformance with this Code.

Sentence 8.1.2.1.(1)

Intent 1:

To expand the application of Part 8 and make it applicable to the building site [as opposed to just the building itself].

8.1.2.2. Protection from Risk

- 1) Precautions shall be taken to ensure that no person is exposed to undue risk.

Section 8.2. Protection of the Public

8.2.1. Fencing and Barricades

8.2.1.3. Fencing, Boarding or Barricades

- 1) When a construction or demolition activity may constitute a hazard to the public and is located 2 m or more from a *public way*, a strongly constructed fence,

boarding or barricade not less than 1.8 m high shall be erected between the site and the public way or open sides of a construction site.

- 2) Barricades shall have a reasonably smooth surface facing the *public way* and shall be without openings, except those required for access.
- 3) Access openings through barricades shall be equipped with gates that shall be
 - a) kept closed and locked when the site is unattended, and
 - b) maintained in place until completion of the construction or demolition activity.

Intent 1:

To limit the probability that persons will inadvertently wander onto the site, which could lead to persons being exposed to unsafe conditions, which could lead to harm to persons.

Intent 2:

To limit the probability that persons will be injured from contact with rough surfaces of the barricade, which could lead to harm to persons.

8.2.2. Excavation

8.2.2.1. Water Removal

1) *Excavations shall be kept reasonably clear of water.*

Intent 1:

To limit the probability that water will cause the failure of the sides of the excavation, which could lead to the ground surrounding the excavation collapsing into the excavation, which could lead to harm to persons.

Intent 2:

To limit the probability that persons who might enter or fall into the excavation will be drowned or injured from the intake of water, which could lead to harm to persons.

8.2.2.2. Protection of Adjoining Property

- 1) If the stability of adjoining *buildings* may be endangered by the *work* of excavating, adequate underpinning, shoring and bracing shall be provided to prevent
 - a) damage to, or movement of, any part of the adjoining *building*, and
 - b) the creation of a hazard to the public.

Sentence 8.2.2.2.(1)

1. OP4

OP4 Protection of Adjacent Buildings from Structural Damage

An objective of this Code is to limit the probability that, as a result of the design, construction or demolition of the building, adjacent buildings will be exposed to an unacceptable risk of structural damage. The risks of structural damage to adjacent buildings addressed in this Code are those caused by—

OP4.1 – Settlement of the medium supporting adjacent buildings.

Intent 1:

To limit the probability that excavation operations will lead to damage to adjacent buildings.

2. OS5

OS5 Safety at Construction and Demolition Sites

An objective of this Code is to limit the probability that, as a result of the construction or demolition of the building, the public adjacent to a construction or demolition site will be exposed to an unacceptable risk of injury due to hazards. The risks of injury due to construction and demolition hazards addressed in this Code are those caused by—

OS5.8 - collapse of the excavation

Intent 1:

To limit the probability that excavation operations will lead to the failure of any part of adjoining buildings, which could lead to harm to persons.

Division B

Part 9 - Housing and Small Buildings

Section 9.12. Excavation

9.12.1. General

9.12.1.2. Standing Water

1) *Excavations* shall be kept free of standing water.

9.12.1.3. Protection from Freezing

1) The bottom of *excavations* shall be kept from freezing throughout the entire construction period.

9.3.1.9. Cold Weather Requirements

- 1) When the air temperature is below 5°C, concrete shall be
 - a) kept at a temperature of not less than 10°C or more than 25°C while being mixed and placed, and
 - b) maintained at a temperature of not less than 10°C for 72 h after placing.
- 2) No frozen material or ice shall be used in concrete described in Sentence (1).

9.12.2. Depth

9.12.2.1. Excavation to Undisturbed Soil

- 1) *Excavations for foundations* shall extend to undisturbed *soil*.

9.12.2.2. Minimum Depth of Foundations

- 1) Except as provided in Sentences (4) to (7), the minimum depth of *foundations* below finished ground level shall conform to Table 9.12.2.2.

Division C

Part 2 - Administrative Provisions

2.2.2. Information Required for Proposed Work

2.2.2.1. General Information Required

- 1) Sufficient information shall be provided to show that the proposed *work* will conform to this Code and whether or not it may affect adjacent property.
- 2) Plans shall be drawn to scale and shall indicate the nature and extent of the *work* or proposed *occupancy* in sufficient detail to establish that, when completed, the *work* and the proposed *occupancy* will conform to this Code.
- 3) When proposed *work* is changed during construction, information on the changes shall comply with the requirements of this Section for proposed *work*.
- 4) Plans and specifications shall include, so far as is applicable,
 - a) floor plans on a scale of not less than 1:100,
 - b) dimensions of all rooms,
 - c) a description of the purpose of all rooms,
 - d) the location of all walls, *partitions*, doorways, windows and other openings,
 - e) the finish of all floors, walls and ceilings,
 - f) the location and description of all fixed equipment, and
 - g) *building* sections, elevations and details sufficient to determine if the proposed *work* meets the requirements of this Code.

[Division A - 1.4.1.2. Defined Terms

Work means any activity, duty or function regulated by this Code and carried out at a *project*.

Project means any construction, *alteration* or demolition operation.]

2.2.2.2. Site Plans

- 1) If requested by the *authority having jurisdiction*, the *owner* shall submit an up-to-date plan of survey or real property report prepared by a registered Alberta Land Surveyor, containing sufficient information regarding the site and the location

of the *building*

- a) to establish, before construction starts, that all requirements of this Code in relation to this information will be complied with, and
 - b) to verify upon completion of the *work* that all such requirements have been complied with.
- 2) Site plans shall show
- a) by dimensions from property lines, the location of the proposed *building*,
 - b) the similarly dimensioned location of every adjacent existing *building* on the property,
 - c) existing and finished ground levels to an established datum at or adjacent to the site, and
 - d) the access routes for firefighting.

2.2.2.3. Site Grading

- 1) The *authority having jurisdiction* may require that an *owner* have a *building* site graded in conformance with a surface drainage plan, established by the council of the local authority, for the area in which the *building* is located.

2.2.2.4. Dimensional Tolerances

- 1) If life safety will not be reduced, the *authority having jurisdiction* may accept a minor variation, not more than 2%, of a dimension given in this Code.

2.2.10. Permits

2.2.10.1. General

- 1) A *permit* is required for the construction, *alteration*, installation, repair, relocation, demolition, change in *occupancy* or any *work* to which this Code applies in accordance with the Safety Codes Act and its Regulations.
- 2) In addition to a *permit* that is required by Sentence (1), other *permits* may be required for the installation of related *building* services.
- 3) An *owner* shall ensure that all *permits* required in connection with proposed *work* are obtained before starting the *work* to which they relate.

2.2.10.2. Permit Fees

- 1) *Permit* fees and application procedures shall be as established by regulation or bylaw made pursuant to the Safety Codes Act.
- 2) The *authority having jurisdiction* may place a valuation on *work* for the purpose of determining fees.

2.2.10.3. Obtaining Permits

- 1) The *authority having jurisdiction* shall accept and process an application for

a *permit*.

2.2.10.4. Required Information

- 1) Except as otherwise required by this Part, every applicant for a *permit* shall
 - a) identify and describe in detail the *project* or *occupancy* to be covered by the *permit* for which application is made,
 - b) describe the land on which the *project* is to be undertaken by a description that will readily identify and locate the *building* lot,
 - c) submit plans, specifications or other documents showing the proposed *occupancy* of all parts of the *building*,
 - d) state the valuation of the proposed *project*, and
 - e) state, as applicable, the names, addresses and telephone numbers of the *owner* and the *designer*.

2.2.10.5. Records

- 1) The *authority having jurisdiction* may keep copies of all applications received, *permits* and orders issued, inspections and tests made, and of all papers and documents connected with the administration of regulations made under the Safety Codes Act.

2.2.10.6. Deviations

- 1) The *owner* shall not deviate nor authorize a deviation from the requirements of this Code or the conditions of a *permit* without first obtaining permission in writing to do so from the *authority having jurisdiction*.

2.2.10.7. Permit Revoked

- 1) The *authority having jurisdiction* may revoke a *permit* if
 - a) there is a contravention of any condition under which the *permit* was issued,
 - b) the *permit* was issued in error, or
 - c) the *permit* was issued on the basis of incorrect information.

2.2.10.8. Refusal to Proceed

- 1) The *authority having jurisdiction* may refuse to allow any *building*, *project*, *work* or *occupancy* that would not be permitted by the Safety Codes Act, this Code or other legislation.
- 2) The *authority having jurisdiction* may refuse to allow any *building*, *project*, *work* or *occupancy* if
 - a) incorrect information is submitted, or
 - b) the information submitted is inadequate to determine compliance with the provisions of the Safety Codes Act, this Code or other legislation.
- 3) A person who is refused a *permit* may appeal the refusal in accordance with

the Safety Codes Act and its Regulations.

2.2.10.9. Responsibility for Compliance

- 1) Neither the issuance of a *permit* nor inspections made by the *authority having jurisdiction* shall in any way relieve the *owner* of a *building* from full responsibility for carrying out the construction or having the construction carried out in accordance with the requirements of the Safety Codes Act and its Regulations, this Code, or the *permit*, including compliance with any special conditions required by the *authority having jurisdiction*.
- 2) The *owner* shall ensure that all activities that take place on the site meet the requirements of this Code.
- 3) The *constructor* shall ensure that
 - a) precautions are taken to safeguard the public and protect adjacent properties,
 - b) the methods used in demolition or erection are safe, and
 - c) the material and equipment used on site meet the requirements of this Code.
- 4) Every vendor or supplier of materials and items used in the construction of a *building* shall ensure that the materials and equipment they advertise, display, sell, lease or otherwise dispose of meet the requirements of this Code.
- 5) The *designer* shall ensure that the plans and specifications comply with the requirements of this Code.

2.2.12. Prohibitions

2.2.12.1. Prohibited Actions

- 1) No person
 - a) shall fail to complete construction or demolition that is regulated by this Code and is shown on the plans, specifications and documents before occupying a *building* without first having obtained the permission of the *authority having jurisdiction* in accordance with this Section,
 - b) being responsible for the use, *occupancy*, relocation, construction, *alteration*, demolition of, or addition to a *building*, shall cause, allow or maintain an *unsafe condition*,
 - c) shall undertake *work* on, over or under public property, or erect or place any construction or store any material thereon, without first having obtained permission from the appropriate authority,
 - d) shall allow the property boundaries or grading of a *building* lot to be changed so as to place a *building* in contravention of this Code, unless the *building* is altered, after obtaining any necessary *permits*, so that no contravention will occur as a result of the change of the property boundary

- or grading of the *building* lot,
- e) shall knowingly submit false or misleading information,
- f) shall change the size or scope of a *project* for which a *permit* has been issued or for which permission to construct has been given, without first having obtained, in writing, the permission of the *authority having jurisdiction*, or
- g) shall remove or deface any label or marking on a material or product that has been affixed to show compliance with this Code or a referenced document.

2.2.13. Required Notification

2.2.13.1. Notification Before Starting

- 1) Before *work* is started on a *project*, the *owner* shall give notice to the *authority having jurisdiction* of the date on which *work* will start.
- 2) The *owner* shall give notice in writing to the *authority having jurisdiction*
 - a) before starting *work*, listing the name, address and telephone number of
 - i) the *constructor* or other person responsible for the *work*,
 - ii) any *registered engineering professional*, *registered architectural professional* or *registered professional of record* reviewing the *work*, and
 - iii) any inspection or testing agency engaged to monitor the *work*, and
 - b) of any change in or termination of employment of those persons listed in Clause (a) during the course of construction, immediately after the change or termination occurs.

2.2.13.3. Change of Ownership

- 1) The *owner* shall give notice in writing to the *authority having jurisdiction* of an impending change in ownership.
- 2) A new *owner* shall provide assurance that compliance with Subsection 2.2.10. and Sentence 2.4.3.1.(1) will continue under new ownership.

2.2.13.4. Availability of Documents

- 1) The *owner* shall ensure that the plans and specifications on which the issue of the *permit* was based are available at the *project* site during working hours for inspection by the *authority having jurisdiction*.

2.2.13.5. Inspection

- 1) The *owner* shall give notification to the *authority having jurisdiction*
 - a) of the intent to undertake construction that is required to be inspected,
 - b) of the intent to cover construction that is required to be inspected before covering, and

- c) when construction has been completed.
- 2) If required by the *authority having jurisdiction*, an *owner* shall have uncovered and replaced at their own expense any construction that has been covered contrary to an order or condition of a *permit* issued by the *authority having jurisdiction*.

2.2.13.6. Verification of Compliance

- 1) Except as required in Article 2.4.3.2., when required by the *authority having jurisdiction*, an *owner* or a *constructor* shall provide written assurance from the person supervising construction that the construction was in compliance with the requirements of this Code and any *permits* issued.

2.2.14. Safety During Construction

2.2.14.1. Safety During Construction

- 1) Except as required by Sentence 2.4.4.2.(1), the *constructor* shall be responsible for ensuring compliance with Part 8 of Division B.
- 2) The *constructor* is responsible jointly and severally with the *owner* for any construction or *work* undertaken.
[**Note:** Sentence 2.4.4.2.(1) states: The *constructor* shall be responsible for the construction safety aspects of the *project* and, when required, shall retain a *registered professional* to design temporary structural members such as formwork, falsework, hoarding and scaffolding. (See Article 4.1.1.3. of Division B and Note A-2.4.4.2.(1).)]

2.2.14.2. Responsibility for Damage

- 1) The *owner* is responsible for the repair of any damage to public property or works located thereon that may occur as a result of undertaking *work* regulated by this Code.
- 2) The *owner* shall ensure that *work* undertaken does not damage or create a hazard to adjacent properties.

2.2.15. Unsafe Condition

[Division A - 1.4.1.2. Defined Terms

Unsafe condition means any condition that, in the opinion of the *authority having jurisdiction*, could endanger the life, limb or health of any person authorized or expected to be on or about the premises.]

2.2.15.1. Correcting an Unsafe Condition

- 1) If a *building* is in an *unsafe condition*, the *owner* shall forthwith take all necessary action to correct the condition.
- 2) The *authority having jurisdiction* may order the *owner* of any *building* to correct

any *unsafe condition*.

- 3) If immediate measures must be taken to avoid an imminent danger of fire or risk of accident, the *authority having jurisdiction* may take any action deemed necessary to reduce the danger of fire or risk of accident, without notice, and at the expense of the *owner*.