

NOVA SCOTIA BUILDING CODE REGULATIONS

Made Under Section 4

of the

BUILDING CODE ACT

R.S.N.S., 1989, c. 46

2009



December 31, 2009

December 31, 2009

Prescription

**In the matter of Section 4 of Chapter 46 of the revised Statutes
of Nova Scotia, 1989, the *Building Code Act***

- and -

In the matter of *Nova Scotia Building Code Regulations*

I, Marilyn More, Minister of Labour and Workforce Development for the Province of Nova Scotia pursuant to Section 4 of Chapter 46 of the revised Statutes of Nova Scotia, 1989, the *Building Code Act* hereby repeal the *Nova Scotia Building Code Regulations*, N.S. Reg.143/2006 made by Order of the Minister of Environment and Labour dated July 13, 2006 as amended, effective on and after December 31, 2009.

Furthermore, I hereby make the *Nova Scotia Building Code Regulations* pursuant to Section 4 of Chapter 46 of the revised Statutes of Nova Scotia, 1989, in the form set forth in the attached, effective on and after December 31, 2009.

Dated at Halifax Regional Municipality, Province of Nova Scotia this 19th day of November, 2009.

Original signed by
Honourable Marilyn More
Minister of Labour and
Workforce Development

Acknowledgements

The Department of Labour and Workforce Development gratefully acknowledges the contributions of the many individual volunteers who participate in the code development process. In particular, the Department recognizes the following volunteers for the continuing support.

Nova Scotia Building Advisory Committee

David Bateman	Robert McLaren
Heather Corrigan	Tim Nobes
Bill Crawford	Gary Ruitenberg
Peter Greer (<i>Chair</i>)	Roy Strickland
Richard Lind (<i>Vice Chair</i>)	Kevin White
Duart MacAulay (<i>to July 2009</i>)	Mannie Withrow
Kevin Marchand	Robert Martin

Ad Hoc Committee on Energy Conservation

Gary Ruitenberg (*Chair*)
 Richard Miller
 Kevin Marchand
 David Bateman
 Robert McLaren
 Brain Hayes
 David Stewart

Ad Hoc Committee on Sprinklers

Robert McLaren (*Chair*)
 Roy Strickland
 Gerard Donahoe
 Gary Ruitenberg

The Department acknowledges the support of the Permits and Inspections Manager and Building Officials of the Halifax Regional Municipality in the preparation of this edition.

Building Code Website Information

The general building code information website address is:

<http://www.gov.ns.ca/lwd/buildingcode/>

This site also includes:

- Rules of Procedure for a Hearing

- Application forms for a Hearing

- Links to the

 - Building Code Act

 - Building Code Regulations

 - List of municipal building inspectors

 - Canadian Code Centre

 - Standards Organizations

 - other Provinces and Territories

Building Officials The Administration and Enforcement of these Regulations and The Building Code Act is the responsibility of the municipalities. Contact names and addresses are available on the internet: The address is:

<http://www.gov.ns.ca/snsmr/muns/contact/grouped/BuildingInspectors.asp>

Permits Some municipalities now have applications available on the internet: To find a list and contact them the address is:

<http://www.gov.ns.ca/snsmr/muns/contact/>

Building Code Act A copy of the Building Code Act is available at:

<http://www.gov.ns.ca/legislature/legc/index.htm>

Building Code Regulation A copy of the Building Code Act is available at:

<http://www.gov.ns.ca/just/regulations/regs/bcregs.htm>

Building Code Regulation Information

The symbol **r** | is used to designate changes from the 2006 edition of the regulation.

Attention

Please take a few moments to fill out this form and return it so we can keep you updated on any amendments or errata to these Regulations. As well you will be added to our mailing list for any advisory notices that are issued by the Department on the Nova Scotia Building Code Regulations.

Any personal information collected on this form will only be used for this stated purpose. Personal information collected here is subject to the privacy provisions of the *NS Freedom of Information & Access to Privacy Act*.

The completed form may be mailed to:

Building Code Regulations
Nova Scotia Labour and Workforce Development
PO Box 697
Halifax NS
B3J 2T8

fax to: 1-902-424-3239
e-mail to: rosstg@gov.ns.ca

please print

name:

mailing address:

city/town	province	postal code
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street address(if different):

city/town	province	postal code
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phone	fax	e-mail
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Code Change Form

(only one proposed change on any one submission - duplicate as necessary - print single sided)
(Attach additional pages as necessary or use any other format as long as all the information indicated below is included.)

Mail to: Secretary
Nova Scotia Building Advisory Committee
PO Box 697
Halifax NS
B3J 2T8

fax to: 1-902-424-3239
e-mail to: rosstg@gov.ns.ca

please print

name: _____

mailing address: _____

city/town	province	postal code
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street address(if different): _____

city/town	province	postal code
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phone	fax	e-mail
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Code Reference it is proposed to change (Article, Sentence, etc.)

Problem - Why should the existing provision be changed or, if proposing an addition to the Code, what is missing?:

Proposed Change/Addition - What wording for the change/addition do you think should be used in the Code?:

Justification/Explanation - How does proposed change/addition address the problem?:

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PART 1

Repeals, Interpretation, Scope, Definitions and Administration

1.1. Repeals, Adoption and Interpretation

1.1.1. Title, Repeals, and Effective Date

1.1.1.1. **Title.** These *regulations* may be cited as the *Nova Scotia Building Code Regulations*.

1.1.1.2. Repeals and Effective Date of *Regulations*.

(1) The *Nova Scotia Building Code Regulations* (N.S. Reg. 143/2006) made by the Minister of Environment and Labour on July 13, 2006, 2006 as amended by N.S. Reg. 241/2008 (March 31, 2008, effective April 30, 2008), are hereby repealed on and after December 31, 2009.

(2) These *Nova Scotia Building Code Regulations* made by the Minister of Labour and Workforce Development shall come into effect on and after December 31, 2009.

1.1.2. Adoption

1.1.2.1. *Nova Scotia Building Code*

(1) These *Nova Scotia Building Code Regulations* made by the Minister of Labour and Workforce Development shall come into effect on and after December 31, 2009.

(2) These regulations adopt the National Building Code of Canada, 2005 and the 1st Revisions and Errata dated December 1, 2007, and the 2nd Revisions and Errata dated June 20, 2008, which together with the regulations shall be known as the "Nova Scotia Building Code" and may be referred to as the "Code".

1.1.3. Interpretation

1.1.3.1. Numbering System

(1) These *regulations* have been prepared following the same decimal numbering system as used in the *Code*.

(2) The first number indicates the Part of the *regulations*; the second, the Section in the Part; the third, the Subsection and the fourth, the Article in the Subsection. An Article may be further broken down into Sentences (indicated by numbers in brackets), and the Sentence further divided into Clauses and Subclauses. They are illustrated as follows:

A	Division
A-3	Part
A-3.5	Section
A-3.5.2.	Subsection
A-3.5.2.1.	Article
A-3.5.2.1.(2)	Sentence
A-3.5.2.1.(2)(a)	Clause
A-3.5.2.1.(2)(a)(i)	Subclause

1.1.3.2. Schedules The Schedules "A" through "A-9" inclusive, "B", "C" and "D" form part of these *regulations*.

1.1.4. Nova Scotia Building Advisory Committee

1.1.4.1. Appointment of Nova Scotia Building Advisory Committee

(1) The Minister may appoint to the Committee such number of members as the Minister determines, for such terms as may be specified in the appointments.

(2) The Committee shall include

- (a) a representative of municipal government appointed from among persons nominated by the Executive of the Union of Nova Scotia Municipalities;
- (b) a representative of the Fire Marshal for the Province;
- (c) a representative appointed from among persons nominated by the Disabled Persons Commission;
- (d) a representative appointed from among persons nominated by the Executive of the Association of Professional Engineers of Nova Scotia;
- (e) a representative appointed from among persons nominated by the Executive of the Nova Scotia Association of Architects;
- (f) a representative appointed from among persons nominated by the Executive of the Nova Scotia Home Designers Association;
- (g) a representative appointed from among persons nominated by the Executive of Association of Interior Designers of Nova Scotia;

- (h) a representative appointed from among persons nominated by the Executive of the Nova Scotia Home Builders Association;
- (i) a representative appointed from among persons nominated by the Executive of the Construction Association of Nova Scotia;
- (j) a representative appointed from among persons nominated by the Executive of the Nova Scotia Building Officials Association;
- (k) a representative appointed from among persons nominated by the Executive of the Atlantic Provinces Building Supply Dealers Association, who shall be a resident of Nova Scotia;
- (l) a representative appointed from among persons nominated by the Executive of the NS & PEI Regional Council of Carpenters, Millwrights & Allied Workers, who shall be a resident of Nova Scotia, and
- (m) up to 3 additional members, as selected by the Minister.

1.2 Scope and Application

1.2.1. Application

1.2.1.1. Scope

(1) These *regulations* apply to the administration and enforcement of the *Building Code Act* in the design, construction, erection, placement and *occupancy* of new *buildings*, and the *alteration*, reconstruction, *demolition*, removal, relocation, *occupancy* and change of *occupancy* classification of existing *buildings* and to the work necessary to correct *unsafe conditions* in existing *buildings* reported to the *authority having jurisdiction* or observed during an inspection.

(2) Any construction or condition that lawfully existed prior to the effective date of these regulations need not conform to these regulations provided that such construction or condition does not constitute an unsafe condition in the opinion of the authority having jurisdiction.

(3) Construction pursuant to a building permit in effect prior to December 31, 2009, and still in effect, need not conform to these regulations provided that such construction conforms to the regulations in force on the date that the building permit was issued.

(4) Where a *building* or any part thereof is altered, these *regulations* apply to the parts of the *building* that are altered.

(5) Where the whole or any part of a *building* is relocated either within or into the area of jurisdiction of the *authority having jurisdiction* these *regulations* apply only to the parts of the *building* that are being altered or *constructed*.

(6) When the whole or any part of a *building* is demolished, these *regulations* apply to the work involved in the *demolition* and to the work required to any parts remaining after *demolition* to the extent that deficiencies occurring or remaining after *demolition* require correction.

(7) When a *building* is damaged by fire, earthquake or other cause, these *regulations* apply to the work necessary to reconstruct damaged portions of the *building*.

(8) "Alternate Compliance Methods for Existing *Buildings*", contained in Schedule D" of these *regulations*, or a combination of the "Alternate Compliance Methods for Existing *Buildings*", and the *Code*, may be used where a *building* existed prior to March 13, 1987

- (a) where an existing *building* is undergoing *construction* other than for a change of use, or
- (b) where an existing *building* is undergoing *construction*, and where a change of *occupancy* classification results in an *occupancy* with a reduced fire hazard risk.

(9) When a *heritage building* or part thereof is undergoing a change in *occupancy* classification the *owner* may choose the "Alternate Compliance Methods for Existing *Buildings*", contained in Schedule "D" of these *regulations*, or a combination of the "Alternate Compliance Methods for Existing *Buildings*", and the *Code*.

(10) In a *Heritage Conservation District* any *building* undergoing a change in *occupancy* classification the *owner* may choose the "Alternate Compliance Methods for Existing *Buildings*", contained in Schedule "D" of these *regulations*, or a combination the "Alternate Compliance Methods for Existing *Buildings*", and the *Code*.

1.2.1.2. Exemptions

(1) The *Code* does not apply to;

- (a) sewerage, water, electrical, telephone, rail or similar systems located above, below or on an area which has been dedicated or deeded for public use,
- (b) public utility towers and poles, television and radio or other communication aerials and towers, except for loads resulting from those located on or attached to *buildings*,
- (c) flood control, dams for public water supply, hydroelectric dams and their related structures (not excluding *buildings*).
- (d) mechanical or other equipment and *appliances* not specifically regulated by the *Code*,
- (e) above ground or below ground bulk storage tanks not regulated under Part 6 of the *Code*, or the National Farm Building Code of Canada,
- (f) free-standing signs,

- (g) fences,
- (h) retaining walls or exterior steps not attached to, and forming part of, a *building's* construction,
- (i) manufactured homes built to CSA Z240 MH Series Standard "Manufactured Homes" except for
 - i) the notifications required by Sentence 2.1.1.11.(1) where the *manufactured home* is constructed before January 1, 2010 and has not been structurally altered, or
 - ii) the notifications required by Sentence 2.1.1.11.(1) and the requirements of Article 3.1.1.23. Schedule E, Part 10 Energy Efficiency Measures where the *manufactured home* is constructed after December 31, 2009
 (See Appendix Note A-1.2.1.2.(1)(i) and (j). NSBCR)
- (j) modular homes certified to CAN/CSA-A277-08 "Procedure for Factory Certification of Buildings" as complying with the technical requirements of this Code, except for
 - i) the notifications required by Sentence 2.1.1.11.(1) where the *modular home* is constructed before January 1, 2010 and has not been structurally altered, or
 - ii) the notifications required by Sentence 2.1.1.11.(1) and the requirements of Article 3.1.1.23. Schedule E, Part 10 Energy Efficiency Measures where the *modular home* is constructed after December 31, 2009
 (See Appendix Note A-1.2.1.2.(1)(i) and (j). NSBCR)

- (2) Unless a municipality otherwise requires by by-law, or where *regulations* are in another enactment, the *Code* applies but a *building permit* is not required for
- (a) accessory *buildings* not greater than 20 square metres (215.2 square feet) in area,
 - (b) except under Clause 1.2.1.2.(2)(c), interior and exterior non-structural material *alterations* and material repairs with a monetary value of five thousand dollars or less.
 - (c) replacement or installation of a new plumbing *fixture* that does not increase the hydraulic load of the drainage system or require alterations to an existing water distribution system or drainage system.

1.3 Definitions of Words and Phrases

1.3.1. Definitions

1.3.1.1. General Definitions contained in Section 2 of the *Building Code Act*, also apply in these *regulations*.

1.3.1.2. Italicized Words. The words and phrases defined in Article 1.1.3.2. of the *Code* identified in these *regulations* in italics, also apply in these *regulations* unless otherwise defined.

1.3.1.3. Specific Definitions. In these *regulations* the following definitions apply

"Architect" means a member licensed to practice or licensee of the Nova Scotia Association of Architects.

"Building Code Act" or "Act" means Chapter 46 of the Revised Statutes of Nova Scotia, 1989, the *Building Code Act*.

"Building Official" means a person appointed as an inspector pursuant to Section 5 of the Act.

"Camping accommodation" means any *building* within a campground which is intended to serve the public or is intended as rental accommodation for the travelling or vacationing public.

"Care facility" means the *occupancy* or use of a *building* or part thereof by persons who require special care or treatment because of cognitive or physical limitations.

"Code" means the Nova Scotia *Building Code*.

"Construct" means to do anything in the erection, installation, extension, relocation, material *alteration* or material repair of a *building* and includes the installation of a factory-made *building* fabricated or moved from elsewhere.

"Demolition" means the doing of anything in the removal of a *building* or any material part thereof.

"Electric space heating" means an electric energy source that provides more than 10 per cent of the heating capacity provided for a *building* and includes,

- (a) electric resistance unitary baseboard heating,
- (b) electric resistance unitary cabinet heating,
- (c) electric resistance ceiling cable or floor cable heating,
- (d) electric resistance central furnace heating,
- (e) electric hot water space heating, and
- (f) air source heat pumps in combination with electric resistance backup heating.

"Field Review of Construction" means, and is limited to, the inspection of the construction work at intervals appropriate to the stage of construction, at the project site and where applicable at the fabrication location where *building* components are fabricated for use at the project site, that the *designer* in their professional discretion consider necessary to determine general compliance with the design drawings accepted by the *authority having jurisdiction* and all revisions thereto. "*Field Review of Construction*" does not include the coordination, quality and performance of construction.

"Flow control roof drain" means a *roof drain* that restricts the flow of *storm water* into the *storm drainage system*.

"Heritage *Building*" means a registered heritage property, registered under the Heritage Property Act by the Province or by a municipality.

"Heritage Conservation District" means a heritage conservation district designated by the municipality in accordance with the Heritage Property Act.

"Interior Designer" means a member licensed to practice or a licensee of the Association of Interior Designers of Nova Scotia.

"Manufactured home" means a transportable, single or multiple section *dwelling unit* certified by an accredited certification body, as complying with the CAN/CSA- Series Z240 Series "Manufactured Homes" at the time of manufacture, prior to placement on the site.

"Modular home" means a finished section or sections of a complete *dwelling unit* built in a factory for transport to the site for installation, and certified to CSA Standard A277-08 "Procedures for the Factory Certification of Buildings", by an accredited certification body, at the time of manufacture, prior to placement on the site.

"National *Building Code* of Canada, 2005" means the National *Building Code* of Canada, 2005 as issued by the Canadian Commission on Building and Fire Codes, National Research Council of Canada, NRCC No. 38726, including all revisions and errata and corrections to errata made by that body on or before the date these *regulations* come into force.

"Owner" includes a person controlling the property under consideration, and also prima facie the assessed *owner* of the property whose name appears on the assessment role prepared in accordance with the Assessment Act.

"Professional Engineer" means a member or licensee of the Association of Professional Engineers of Nova Scotia.

"Roofed accommodation" means a *building*, part of a *building*, or a group of *buildings* which is intended as rental accommodation for the travelling or vacationing public.

"Work" means any construction duty or function regulated by these *regulations*, carried out on or about a construction site or on, in, or about a *building* or part thereof.

1.4 Administration

1.4.1. *Permits*

1.4.1.1. **General**

(1) A *permit* is required if work regulated by the *Code* is to be done.

(2) The *authority having jurisdiction* may place a value on the cost of the work based on an accepted costing standard for the purpose of determining *permit* fees to be applicable.

(3) The *authority having jurisdiction* may, if applicable, withhold an *building permit* until satisfied that there is a valid on-site sewage disposal system *permit* issued by the Department of the Environment for the construction of a *building* requiring a new *private sewage disposal system*.

(4) The *authority having jurisdiction* may, if applicable, withhold an *occupancy permit*

(a) until satisfied that there is a valid electrical *permit* issued by the electrical *authority having jurisdiction*

(b) until satisfied that the civic address is posted where a municipality has so provided by by-law, in accordance with Section 313 of the Municipal Government Act,

(5) The *authority having jurisdiction* may, if applicable, withhold a *building permit* until satisfied that there is a valid “Minister’s Consent For Building and Access to Property” issued by the Department of Transportation and Public Works, under the Public Highways Act.

(6) Where a municipality has so provided by by-law, the *authority having jurisdiction* may withhold the issuance of a *building permit* until satisfied that any and all applicable *regulations* of the *Heritage Property Act*, and the *Municipal Government Act*, including any *Land Use Bylaw*, *Subdivision Bylaw*, lot grading plan or Development Agreement, have been complied with and all required permits have been issued by the Development Officer.

(7) Unless a municipality in accordance with Section 7 of the *Building Code Act* has provided other or additional *regulations* by by-law, an *occupancy permit* is required

- (a) to allow the initial *occupancy* of a *building* or part thereof,
- (b) when the *occupancy* classification of a *building* or part thereof is changed,
- or
- (c) to allow partial *demolition* or *alteration* of a *building*.

1.4.1.2. Application. To obtain a *permit* the *owner* shall file an application as prescribed by the *authority having jurisdiction*.

1.4.1.3. Required Information

- (1) Every *building permit* application as a minimum shall
- (a) identify and describe in detail the work and *occupancy* to be covered by the *permit* for which application is made,
 - (b) describe the land by including where Nova Scotia property mapping exists in the unique Parcel Identifier (PID) or where this mapping does not exist the assessment account number, and a description that will readily identify and locate the *building* lot,
 - (c) include plans and specifications as required by Division C, Subsection 2.2.2. of the *Code*,
 - (d) state the valuation of the proposed work and be accompanied by the required fee,
 - (e) state the names, addresses and telephone numbers of the *owner*, architect, *professional engineer*, or other *designer*, *constructor* and any inspection or testing agency that has been engaged to monitor the work or part of the work,
 - (f) describe any special *building* systems, materials and *appliances*, and
 - (g) such additional information as may be required by the *authority having jurisdiction*.

1.4.1.4. Letter of Undertaking when Professional Required to Design. The *owner* shall, along with the application referred to in Article 1.4.1.2., submit a letter of undertaking to the *authority having jurisdiction* for the *Field Review of Construction* when the *building*, or part thereof, has been designed within the Scope of Part 4 of the *Code* and as provided under 2.1.1.6. for Part 9 *buildings*.

1.4.1.5. Dimensional Tolerances. If, in the opinion of the *authority having jurisdiction*, safety to life will not be reduced and *barrier-free* design and access will not be adversely affected, an *authority having jurisdiction* may accept a minor variation, not more than 2%, in a dimension given in this *Code*.

1.4.1.6. Deviations. The *owner* shall not deviate, nor authorize a deviation, from the *Code*, or the conditions of a *permit*, without first obtaining permission in writing to do so from the *authority having jurisdiction*.

1.4.1.7. Land Survey. In addition to Clause 1.4.1.3.(1)(c) the *owner*, if requested by the *authority having jurisdiction* shall submit an up-to-date plan of survey or real property report, prepared by a registered Nova Scotia Land Surveyor, containing sufficient information regarding the site and the location of the *building*,

(1) to establish before construction begins that the regulations of the *Code* related to the site and the location of the *building* will be complied with, and
(2) to verify that, upon completion of the work, compliance with all such regulations.

1.4.1.8. Responsibility for carrying out work. The acceptance of drawings and specifications, the granting of a *permit*, and inspections made by the *authority having jurisdiction* shall not in any way relieve the *owner*, *owner's* agent, the *constructor*, the *architect*, the *professional engineer*, or the *designer*, of a *building* from their respective responsibility for carrying out the work or having it carried out in accordance with these *regulations*, including ensuring that the *occupancy* of the *building*, or any part thereof, is in accordance with the terms of the *permit*.

1.4.1.9. Inspection Exemption *Modular* and *Manufactured Homes* *Modular homes* and *manufactured homes* are subject to the notification for inspection required by sentence 2.1.1.11.(2) of these *regulations*, and are exempt for the work certified at the factory as complying with CAN/CSA- Series Z240 Series " *Manufactured Homes*" or certified to CSA Standard A277-08 "Procedures for the Factory Certification of Buildings". (See Appendix Note A-1.2.1.2.(1)(i) and (j) NSBCR)

1.4.1.10. Site Grading. The *authority having jurisdiction* may require an *owner* to have a *building* site graded in conformance with any storm drainage plan, prepared or accepted by the *authority having jurisdiction*, for the area in which the *building* is located.

1.4.1.11. Permission to Proceed in Part

(1) The *authority having jurisdiction* may allow, at the risk of the *owner*, with conditions if necessary, to ensure conformance with this *Code*, the *owner* to proceed with *excavation* or construction of part of a *building* before the plans of the entire *building* have been submitted.

(2) If the *authority having jurisdiction* allows *excavation* or construction of part of a *building* under Sentence (1), the *owner* shall submit all such plans and specifications as may be required in connection therewith by the *authority having jurisdiction*, including at a minimum, complete plans and specifications for the work which is authorized under sentence (1).

(3) If an *owner* proceeds to excavate or *construct* part of a *building* under Sentences (1) and (2), the *owner* proceeds without assurance that the *excavation* or construction of other parts of the *building* will be allowed.

1.4.1.12. Temporary Building or Occupancy [see A-1.4.1.12.]

(1) Notwithstanding anything contained elsewhere in these *regulations*, a permit for a temporary *building* or part thereof, or a temporary change of occupancy classification of an existing *building*, may be issued by the *authority having jurisdiction*, authorizing for a limited time only the erection and existence of a *building*, or part thereof, or for a temporary change of *occupancy* classification, for an *occupancy* which, because of its nature, will exist for a short time, under circumstances which warrant only selective compliance with the *Code*.

(2) A *permit* for a temporary *building* or temporary change of *occupancy* classification shall state the date after which and the conditions under which the *permit* is no longer valid.

(3) A *permit* for a temporary *building* or temporary change of *occupancy* classification may be extended provided permission in writing is granted by the *authority having jurisdiction*.

(4) A *permit* for a temporary *building* or temporary change of *occupancy* classification shall be posted on the *building*.

(5) A *permit* issued for a tent or temporary *air-supported structure*, shall be required to be renewed every twelve months.

(6) A *permit* issued for a temporary change of *occupancy* classification shall be required to be renewed every twelve months.

PART 2

Responsibilities and Obligations

2.1 Obligations of Owner

2.1.1. General

2.1.1.1. Required *Permits*. Every *owner* shall obtain all required *permits* or approvals prior to commencing the work to which they relate.

2.1.1.2. Start Up Date. Every *owner* shall give written notice to the *authority having jurisdiction* of the date on which the *owner* intends to begin work prior to commencing work on the *building* site.

2.1.1.3. Notice of Employees.

(1) Every *owner* shall, prior to commencing the work, give notice in writing to the *authority having jurisdiction* of,

- (a) the name, address and telephone number of
 - i) the *constructor* or other person in charge of the work,
 - ii) the *designer* of the work,
 - iii) the *architect(s)*, *professional engineer(s)*, and prime consultant(s) performing the *Field Review of Construction(s)*, and
 - iv) any inspection or testing agency engaged to monitor the work or part of the work, and
- (b) any change in or termination of employment of such persons during the course of the construction in writing, as soon as practical but not later than 72 hours of such change, or termination occurs.

(2) Every *owner* shall give notice in writing to the *authority having jurisdiction*

- (a) as soon as any change in ownership or change in the address of the *owner* occurs prior to the issuance of an *occupancy permit*, and
- (b) prior to occupying any portion of the *building* if it is to be occupied in stages.

2.1.1.4. Plans at Site. Every *owner* shall ensure that the plans, specifications and related documents on which the issuance of the *building permit* was based are available at the site of the work for inspection during working hours by the *authority having jurisdiction*, and that the *permit*, or true copy thereof, is posted conspicuously on the site during the entire execution of the work.

2.1.1.5. Professional Design and Review The *owner* who undertakes to *construct* or have *constructed* a *building* or part thereof within the scope of Part 4 of the *Code* shall,

- (1) ensure that an *architect*, *professional engineer*, or both, as required, are appointed to undertake the design of the *building* or part thereof, and
- (2) complete and submit a letter of undertaking in the form specified in Schedule "A" for the *Field Review of Construction* of such *buildings*.

2.1.1.6. Design Regulations for Structural Components. Where the dimensions of a structural component are not provided in Part 9 of the *Code* for use in a *building* within the scope of that part, and such dimensions are to be determined on the basis of calculation, testing or other means of evaluation, the *owner* shall,

- (1) ensure that a *professional engineer* is appointed to undertake the design of the structural component, and
- (2) when required by the *authority having jurisdiction*, complete and submit a letter of undertaking in the form specified in Schedule "A" for the *Field Review of Construction* for this structural component.

2.1.1.7. Site Conditions, Size, or Complexity Requiring Professional Design and Inspection Where the site conditions, the size or complexity of a *building*, part of a *building* or *building* component warrant, the *authority having jurisdiction* may require the *owner* to file a Letter of Undertaking and have appropriate Field Review of Construction letters submitted as deemed necessary.

2.1.1.8. Design Regulations for Sprinklered Building

- (1) Where a *building* is required or intended to be *sprinklered*, the *owner* shall
 - (a) ensure that a *professional engineer* is appointed to undertake the design of the sprinkler system, and
 - (b) complete and submit a Letter of Undertaking in the form specified in Schedule "A" of the *Field Review of Construction*

(2) Where the *alteration* of an existing *building* requires changes to an existing sprinkler system, the *authority having jurisdiction* may waive compliance with Clauses 2.1.1.8.(1), (a) and (b). Where Clauses 2.1.1.8.(1), (a) and (b) are waived, the design documents and test results conducted on the system, required under the provincial maintenance regulations made under the Fire Safety Act must be filed with the *authority having jurisdiction*.

2.1.1.9. Alteration to Property Boundary or Ground Elevation No *owner* or person hired by the *owner* shall allow the ground elevations or the property boundaries of a *building* lot to be changed so as to place a *building* or part thereof, in contravention of these *regulations*, unless the *building* or part thereof, is so altered, after obtaining the necessary *permit*, that no contravention will occur as a result of the change of the property boundary or grades.

2.1.1.10. Right of Entry Every *owner* shall allow the *authority having jurisdiction* to enter any *building* or premises at any reasonable time for the purpose of administering and enforcing these *regulations* in accordance with the provisions of Sections 10 (1), 10(2), and 10(3) of the *Building Code Act*.

2.1.1.11. Notification for Inspection and Certification of Field Review of Construction

(1) The *owner* of a *building* being *constructed* under the scope of Part 9 of the Code shall notify the *authority having jurisdiction* to inspect for compliance with the Code at the following stages of construction,

- (a) footings in place,
- (b) subfloor plumbing
- (c) subfloor and foundation insulation
- (d) pre-backfill
- (e) except for *manufactured and modular homes*
 - (i) the framing, roof, and plumbing and mechanical systems,
 - (ii) insulation and vapour barrier before wall framing is covered, and
- (f) for *manufactured and modular homes*,
 - (i) superstructure installation and anchorage systems,
 - (ii) foundation insulation and vapour barrier before wall framing is covered, and plumbing connections below the first floor, and
- g) before occupancy

(See Appendix Notes A-2.1.1.11.(1) and (2) and A-1.2.1.2.(1)(i) and (j) NSBCR)

(2) The *owner* of a *building* being *constructed* outside the scope of Part 9 of the Code shall notify the *authority having jurisdiction* to inspect for compliance with the Code

- (a) of the intent to undertake construction that will be inspected and will be reviewed as per the appropriate Letter of Undertaking required by Article 2.1.1.5., 2.1.1.6., or 2.1.1.7..
- (b) of intent to cover construction that has been ordered to be inspected by the *authority having jurisdiction* before covering and,
- (c) at intervals deemed necessary by the *authority having jurisdiction* based on the complexity of the *building*, and,
- (d) when construction has been completed so that a final inspection can be made.

(See Appendix Note A-2.1.1.11.(3) NSBCR)

2.1.1.12. Occupancy Prior to Completion. Should the *owner* require *occupancy* to occur prior to the completion of all work the *owner* shall apply for the occupancy *permit* and shall ensure that no *unsafe condition* exists or will exist because of the work being undertaken or not completed.

2.1.1.13. Test or Inspections to Prove Compliance. Every *owner* shall make, or have made at their own expense, the tests or inspections necessary to prove compliance with these *regulations* and shall promptly file a copy of all such test or inspection reports with the *authority having jurisdiction*.

2.1.1.14. Repairs to Public Property. Every *owner* is responsible for the cost of repair of any damage to public property or works located therein that may occur as a result of undertaking work for which a *permit* was or was not required.

2.1.1.15. Discontinuation of Work. Every *owner* who is unable to continue work owing to bankruptcy or other cause, is responsible, before leaving the site of the work, for ensuring that no *unsafe condition* remains at the site.

2.2 Obligations of Professional

2.2.1. General

2.2.1.1. Design. The *architect*, or *professional engineer* who undertakes to design a *building* or part thereof shall do so in accordance with their respective statutes and bylaws to ensure that the design meets the intent of the *Code*.

2.2.1.2. Field Review of Construction. The *architect*, or *professional engineer* who undertakes the *Field Review of Construction* shall do so in accordance with their respective statutes and bylaws, and shall

(1) inspect the *building* at intervals appropriate to the stage of construction to determine general compliance with design referred to in Article 2.2.1.1.,

(2) coordinate with the *authority having jurisdiction* the review of changes to the design documents for consistency with the intent of the plans and specifications.

(3) file with the *authority having jurisdiction* the Certification of *Field Review of Construction*.

2.3 Obligations of Constructor

2.3.1. General

2.3.1.1. Construction Safety Regulations. Every *constructor* shall ensure that all construction safety requirements of the Department of Labour, Occupational Health and Safety Division, are complied with.

2.3.1.2. Work on Public Property. Every *constructor* is responsible for ensuring that no *excavation* or other work is undertaken on public property, and that no *building* is erected or materials stored in whole or in part therein without approval having first been obtained in writing from the appropriate government authority.

2.3.1.3. Responsibilities for the Work Undertaken.

(1) Every *constructor* is responsible jointly and severally with the *owner* for all and any work actually undertaken.

(2) Every *constructor* who is unable to continue work owing to bankruptcy or other cause, is responsible, before leaving the site of the work, for ensuring that no *unsafe condition* remains at the site.

2.3.1.4. Owner Deemed to be constructor. Where the work for which a *permit* is issued is not under the control of a *constructor*, the *owner* shall be deemed to be the *constructor* and shall accept the responsibilities and obligations of a *constructor*.

2.3.1.5. Materials, Systems, to Comply with Code. Every *constructor* shall ensure that all materials, systems, equipment, used in the construction, *alteration*, reconstruction or renovation of a *building* meet the *regulations* of the *Code* for the work undertaken.

2.4 Obligation of Authority having Jurisdiction

2.4.1. Qualifications of *Building Officials*

2.4.1.1. Appointment A person appointed or eligible to be appointed by a municipality as a *building official* shall

(1) hold a valid diploma from the Nova Scotia Building Code Training and Certification Board, and

(2) be a member in good standing of the Nova Scotia Building Officials Association.

2.4.1.2. Administration and Enforcement of the Building Code Act and Regulation

(1) *Building Officials* are required to administer and enforce the provisions of the *Building Code Act* and Regulation.

(2) *Building Officials* may only administer and enforce the provisions of the *Building Code Act* and Regulation within the scope for which they hold a valid diploma from the Nova Scotia Building Code Training and Certification Board.

2.4.2. General

2.4.2.1. Administration and Enforcement The *authority having jurisdiction* shall administer and enforce these *regulations*.

2.4.2.2. Copies of Applications, Inspections, and Tests The *authority having jurisdiction* shall 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 these *regulations* for such time as is required by law.

2.4.2.3. Notices and Orders The *authority having jurisdiction* shall issue, in writing, such notices or orders as may be necessary to inform the *owner* where a contravention of these *regulations* has been observed. Such notices or orders may specify any remedial or other measures that are required to meet the *regulations* in accordance with the provisions of Section 12 of the Act. Where the *authority having jurisdiction* issues such written notice or order, a copy shall be retained by the *authority having jurisdiction* and a copy shall be sent to

(1) the *owner*, by regular mail, at the address given on the *permit* application;

(2) the *designer, architect or professional engineer* by regular mail, at the address given on the *permit* application;

(3) the *constructor*, by regular mail, or if the *constructor* is present during the inspection, may be given to the *constructor*.

2.4.2.4. Responding to Code Inquiries The *authority having jurisdiction* shall answer such relevant questions as may be reasonable with respect to the provisions of these *regulations* when requested to do so, but shall refrain from assisting in the laying out of any work and from acting in the capacity of a *designer*.

2.4.2.5. Authority having Jurisdiction to Issue Permits The *authority having jurisdiction* shall issue a *building permit* or an *occupancy permit* to the *owner* when, to the best of *authority having jurisdiction's* knowledge, the applicable conditions, as set forth in these *regulations*, have been met.

2.4.1.6. Safety Regulations The *authority having jurisdiction* shall, when inspecting *building* sites and structures, comply with the *safety regulations* made pursuant to the Occupational Health and Safety Act, Department of Labour, Province of Nova Scotia.

2.5 Powers of *Authority having Jurisdiction*

2.5.1. General

2.5.1.1. Right to Enter Property. The *authority having jurisdiction* may enter and inspect any *building* or premises at any reasonable time for the purpose of administering or enforcing these *regulations* in accordance with the provisions of Sections 10(1), 10(2), and 10(3) of the *Building Code Act*.

2.5.1.2. Orders

- (1) The *authority having jurisdiction* is empowered to order
- (a) a person who contravenes these *regulations* to comply with them within the time period that may be specified,
 - (b) work to stop on the *building* or any part thereof if such work is proceeding in contravention of these *regulations*, or if there is deemed to be an *unsafe condition*,
 - (c) the removal of any unauthorized encroachment on public property,
 - (d) the removal of any *building* or part thereof constructed in contravention of these *regulations*,
 - (e) the cessation of any *occupancy* in contravention of these *regulations*,
 - (f) the cessation of any *occupancy* if any *unsafe condition* exists because of work being undertaken or not completed,
 - (g) correction of any *unsafe condition*, and
 - (h) the *owner* to uncover and replace at their own expense
 - i) work that has been ordered to be done pursuant to an order issued by the *authority having jurisdiction* and which has been covered without being inspected; and
 - ii) work for which notification to inspect is required to be given pursuant to Article 2.1.1.11., and where uncovering the work is necessary to determine compliance with the *Code*.

2.5.1.3. Tests Required to Prove Compliance The *authority having jurisdiction* may direct that tests of materials, equipment, devices, construction methods, structural assemblies or foundation conditions be made, or sufficient evidence or proof be submitted at the expense of the *owner*, where such evidence or proof is necessary to determine whether the material, equipment, device, construction or foundation condition meets these *regulations*.

2.5.1.4. Reports Regarding Failure or Potential Failure The *authority having jurisdiction* may require the *owner* or the *owner's* representative, where any failure occurs which causes or has the potential to cause injury or loss of life, to submit a report stating the nature and details of the failure and the name and addresses of the *constructor*.

2.5.1.5. Conditional *Building* or *Occupancy Permit*

(1) The *authority having jurisdiction* may issue a *building* or *occupancy permit* conditional upon

- (a) The submission of additional information not available at the time where such information is of such a nature that withholding of the *permit* until the information becomes available would be unreasonable.
- (b) Completion of such work that is incomplete at the time of inspection, or application is of such a nature that no *unsafe condition* exists and that withholding of the *permit* would be unreasonable.

2.5.1.6. Refuse to Issue *Permit*

(1) The *authority having jurisdiction* may refuse to issue any *permit*

- (a) whenever information submitted is inadequate to determine compliance with the provisions of these *regulations*,
- (b) whenever incorrect information is found to have been submitted,
- (c) that would authorize any *building* work or *occupancy* that would not be permitted by these *regulations*, or
- (d) that would be prohibited by any other Act, regulation or bylaw.

2.5.1.7. Revoke a *Permit*

(1) The *authority having jurisdiction* may revoke a *permit* by written notice to the *permit* holder if

- (a) there is 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.

2.5.1.8. *Occupancy Prior to Completion* The *authority having jurisdiction* may issue an *occupancy permit*, subject to compliance with provisions to safeguard persons in or about the premises, to allow the *occupancy* of a *building* or part thereof for the accepted use, prior to commencement or completion of the construction or *demolition* work.

2.5.1.9. Provide Reasons for Refusal The *authority having jurisdiction* shall provide the reasons for refusal to grant a *permit*, when requested to do so.

PART 3

Amendments to the Nova Scotia *Building Code*

3.1 Amendments Made to Division A, B and C of the National Building Code of Canada and the National Plumbing Code of Canada

3.1.1. Amendments

3.1.1.1. Definition of *Owner* The definition of "*owner*" in Section 1.4 (Part 1, Division A, Volume 1), of the National Building Code of Canada, 2005 is deleted and replaced herein with the definition of "*owner*" in Article 1.3.1.3. of these *regulations*.

3.1.1.2. Sentence 1.1.1.1.(2) (Part 1, Division A, Volume 1) amended.

Sentence 1.1.1.1.(2) (Part 1, Division A, Volume 1) of the National Building Code of Canada, 2005 is amended by deleting sentence (2) and substituting the following

Sentence 1.1.1.1.(2)

(a) Except as provided by Clauses 1.2.1.2.(1)(i) and (j) of this regulation, the *Code* applies to both site assembled, and factory built buildings. (See Appendix Note A-1.2.1.2.(1)(i) and (j) NSBCR)

3.1.1.3. Climatic Values Sentence 1.1.3.1.(1) (Part 1, Division B, Volume 1) amended. Sentence 1.1.3.1.(1) (Part 1, Division B, Volume 1) of the National Building Code of Canada, 2005 is amended by deleting " Table C 2, Appendix C." in the last line and substituting "Schedule B, Design Data for Selected Locations in Nova Scotia".

3.1.1.4. Climatic Values Sentence 1.1.3.1.(2)(Part 1, Division B, Volume 1) amended. Sentence 1.1.3.1.(2) (Part 1, Division B, Volume 1) of the National Building Code of Canada, 2005 is amended by deleting " Table C-2 (Appendix C, Division B, Volume 2)" in the middle line and substituting, "Schedule B, Design Data for Selected Locations in Nova Scotia".

3.1.1.5. *Barrier-Free Design* Section 3.8. (Part 3, Division B, Volume 1) deleted and replaced. Section 3.8. (Part 3, Division B, Volume 1) of the National Building Code of Canada, 2005 is deleted and replaced with the Section 3.8 "*Barrier-Free Design*" contained in Schedule "C" of these *regulations*.

3.1.1.6. Barrier-Free Design. Sentence 9.5.2.1. (1)(Part 9, Division B, Volume 1) deleted and replaced Sentence 9.5.2.1.(1) General (Part 9, Division B, Volume 1) of the National Building Code of Canada, 2005 is deleted and replaced by the following sentence

Sentence 9.5.2.1.(1) General Subject to Article 3.8.1.1. of this regulation every *building* shall be designed in conformance with Section 3.8.

3.1.1.7. Exception for Apartment Buildings Article 9.5.2.3. (Part 9, Division B, Volume 1) deleted Article 9.5.2.3. Exception for Apartment *Buildings* (Part 9, Division B, Volume 1) of the National Building Code of Canada, 2005 is deleted.

3.1.1.8. Section 3.2. (Part 3, Division B, Volume 1) Amended Section 3.2. (Part 3, Division B, Volume 1) 3.2. of the National Building Code of Canada, 2005 is amended by adding Article 3.2.2.84. "Alternate Compliance Methods For Existing *Buildings*

Section 3.2.2.84. Alternate Compliance Methods For Existing *Buildings*

(1) Scope

(2) Application. The Alternate Compliance Methods for Existing *Buildings* contained in Schedule "D" of these *regulations* are hereby adopted and may be used in accordance with Sentences 1.2.1.1.(8), (9), and (10) of these *regulations*.

3.1.1.9. Section 9.1. General (Part 9, Division B, Volume 1) Amended Section 9.1. (Part 9, Division B, Volume 1) of the National Building Code of Canada, 2005 is amended by adding Sentence 9.1.1.1.(2).

(2) The Alternate Compliance Methods for Existing *Buildings* contained in Schedule "D" of these *regulations* are hereby adopted and may be used in accordance with Sentences 1.2.1.1.(8), (9), and (10) of these *regulations*.

3.1.1.10. Clause 3.1.2.5.(2)(d) (Part 3, Division B, Volume 1) Amended Clause 3.1.2.5.(2) (Part 3, Division B, Volume 1) of the National Building Code of Canada, 2005 is amended by italicizing the words, " *care facility*". [Note that the term "care facility" is defined within these regulations.]

3.1.1.11. Sentence 9.27.2.2.(5) (Division B, Volume 1) amended Sentence 9.27.2.2.(5) is amended by replacing the comma after the word break with a period and deleting the balance of the sentence including deletion of Clauses 9.27.2.2.(5) (a) and (b) and the reference to Appendix C for information on the moisture index.

3.1.1.12. Article 9.32.3.6. (Part 9, Division B, Volume 1) deleted. Article 9.32.3.6. (Part 9, Division B, Volume 1) of the National Building Code of Canada, 2005 is deleted and Appendix Note A-9.32.3.6. (Appendix A, Division B, Volume 2) is deleted.

3.1.1.13. Article 1.3.1.2. (Part 1, Division B, Volume 1) Applicable Editions

Amended Article 1.3.1.2. (Part 1, Division B, Volume 1) of the National Building Code of Canada, 2005 is deleted and replaced with the following

(1) Except as provided under sentence (2) where documents are referenced in this Code, they shall be the editions designated in Table 1.3.1.2. (Part 1, Division B, Volume 1) except those documents designated under the following Acts and Regulations of the Province of Nova Scotia in which case the edition so referenced shall be deemed to be enforce,

- (a) *Fuel Safety Regulations*
- (b) *Boilers and Pressure Vessels Act* and Regulations
- (c) *Elevators and Lifts Act* and Regulations
- (d) *Electrical Installation and Inspection Act* and Regulations

(See Appendix note A-3.1.1.13. NSBCR)

(2) Where amendments to documents adopted by this code apply, these amendments shall apply to the particular provisions of those documents adopted by the above Acts and Regulations unless amended by this regulation.

3.1.1.14. Article 1.3.3.2. (Part 1, Division A, Volume 1) amended

Article 1.3.3.2. (Part 1, Division A, Volume 1) of the National Building Code of Canada 2005 is amended by adding new Sentence 1.3.3.2.(2) (Part 1, Division A, Volume 1).

Sentence 1.3.3.2.(2) Except as provided in Sentence 1.1.1.1.(3) (Part 1, Division A, Volume 1) and Clause 9.10.1.2.(10)(b)(NSBCR), Articles 3.2.2.18. and 3.2.2.44 to 3.2.2.48. inclusive (Part 3, Division B, Volume 1), apply to all *buildings* used for major occupancies classified as Group C, residential occupancies exceeding 300 m² in *building area*. (see 3.1.1.19. and Appendix A - 1.3.3.2.(2) NSBCR)

3.1.1.15. Table 3.2.2.47. (Part 3, Division B, Volume 1) deleted and replaced

Table 3.2.2.47. (Part 3, Division B, Volume 1) of the National Building Code of Canada 2005 is deleted and replaced with

**Table 3.2.2.47.
Maximum *Building Area*, Group C, up to 3 Storeys**

No. of Storeys	Maximum Area, m ²		
	Facing 1 Street	Facing 2 Streets	Facing 3 Streets
1	900	1 120	1350
2	450	560	675
3	300	375	450

3.1.1.16. Table 3.2.2.46. (Part 3, Division B, Volume 1) deleted and replaced
Table 3.2.2.46. (Part 3, Division B, Volume 1) of the National Building Code of Canada 2005 is deleted and replaced with

Table 3.2.2.46.
Maximum *Building Area*, Group C, up to 3 Storeys, Increased Area

No. of Storeys	Maximum Area, m ²		
	Facing 1 Street	Facing 2 Streets	Facing 3 Streets
1	1 200	1 500	1 800
2	600	750	900
3	400	500	600

3.1.1.17. Table 3.2.2.44. (Part 3, Division B, Volume 1) deleted and replaced
Table 3.2.2.44. (Part 3, Division B, Volume 1) of the National Building Code of Canada 2005 is deleted and replaced with

Table 3.2.2.44.
Maximum *Building Area*, Group C, up to 3 Storeys

No. of Storeys	Maximum Area, m ²		
	Facing 1 Street	Facing 2 Streets	Facing 3 Streets
1	2 400	3 000	3 600
2	1 200	1 500	1 800
3	800	1 000	1 200

3.1.1.18. Article 3.2.2.50. Group D, up to 6 Storeys (Part 3, Division B) deleted and replaced Article 3.2.2.50. Group D, up to 6 Storeys (Part 3, Division B) of the National Building Code of Canada 2005 is deleted and replaced with **3.2.2.50.**

(1) A *building* classified as Group D is permitted to conform to Sentence (2) provided

- (a) it is not more than 3 storeys in *building height*, and
- (b) it has a *building area* not more than the value in Table 3.2.2.50.

**Table 3.2.2.50.
Maximum Building Area, Group D, up to 3 Storeys**

No. of Storeys	Maximum Area, m ²		
	Facing 1 Street	Facing 2 Streets	Facing 3 Streets
1	not limited	not limited	not limited
2	7 200	not limited	not limited
3	4 800	6 000	7 200

(2) The *building* referred to in Sentence (1) shall be of noncombustible construction, and

- (a) floor assemblies shall be fire separations with a fire-resistance rating not less than 1 h,
- (b) mezzanines shall have a fire-resistance rating not less than 1 h,
- (c) roof assemblies shall have a fire-resistance rating not less than 1 h, except that in a *building* not more than 1 storey in *building height* this requirement is waived, and
- (d) loadbearing walls, columns and arches shall have a fire-resistance rating not less than that required for the supported assembly.

3.1.1.19. Article 9.10.1.2. Amended Article 9.10.1.2. Items under Part 3 Jurisdiction is amended by adding

9.10.1.2.(10)(a) Except as provided in Sentence 1.1.1.1.(3) (Part 1, Division A, Volume 1), and as provided in Clause 9.10.1.2.(10)(b) and (c), Articles 3.2.2.18. and 3.2.2.44 to 3.2.2.48. inclusive (Part 3, Division B, Volume 1) apply to all *buildings* used for major occupancies classified as Group C, residential occupancies exceeding 300 m² in *building area* or are greater than 3 storeys in *building height*. (Appendix A -1.3.3.2.(2) NSBCR)

9.10.1.2.(10)(b) Single detached dwelling units are exempt.

9.10.1.2.(10)(c) A residential *building* containing two dwelling units, with a building area of less than 600 m² or not more than 3 storeys *building height* is exempt.

3.1.1.20. Sentence 3.2.4.20.(5) (Part 3, Division B, Volume 1) Smoke Alarms Deleted and Replaced Sentence 3.2.4.20.(5) [Part 3, Division B, Volume 1] of the National Building Code of Canada 2005 is deleted and replaced with

- (5) Smoke alarms referred in Sentence (1) shall
 - (a) be installed
 - (i) by permanent connections to an electrical circuit, (See Appendix A, Division B, Volume 2 A-3.2.4.20.(5) NBC)
 - (ii) have no disconnect switch between the overcurrent device and the smoke alarm, and
 - (iii) in case the regular power supply to the *smoke alarm* is interrupted, be provided with a battery as an alternate power source that can continue to provide power to the *smoke alarm* for a period of no less than 24 hours in the normal condition, followed by five minutes of alarm.

3.1.1.21. Sentence 9.10.19.3.(1) (Part 9, Division B, Volume 1) Power Supply Deleted and Replaced Sentence 9.10.19.3.(1) (Part 9, Division B, Volume 1) of the National Building Code of Canada 2005 is deleted and replaced with

- 9.10.19.3.(1) Smoke alarms referred in Article 9.10.19.1. shall
 - (a) be installed
 - (i) by permanent connections to an electrical circuit,
 - (ii) have no disconnect switch between the overcurrent device and the smoke alarm, and
 - (iii) in case the regular power supply to the *smoke alarm* is interrupted, be provided with a battery as an alternate power source that can continue to provide power to the *smoke alarm* for a period of no less than 24 hours in the normal condition, followed by five minutes of alarm,
 - or
 - (b) in a single dwelling unit be installed
 - (i) as a component of a household fire warning system which includes a certified control unit that meets the applicable requirements of ULC-S545 "Standard for Residential Fire Warning System Control Units" and,
 - (ii) in case the regular power supply to the control unit is interrupted, be provided with a battery as an alternate power source that can continue to provide power to the control unit for a period of no less than 24 hours in the normal condition, followed by five minutes of alarm.

3.1.1.22. Appendix Notes The Appendix Notes to the National Building Code of Canada 2005 edition apply as appendix notes to the *Code* and where amendments made by this regulation unless specifically replaced or amended herein.

3.1.1.23. Schedule E, Part 10 Energy Efficiency Measures The National Building Code of Canada 2005 (Division B, Volume 1) is amended by adding the energy efficiency measures contained in Schedule "E" of these regulations.

3.1.1.24. Division A NBC and NPC 2.2 Objectives add the following objective to Division A Sentence 2..2.1.1.(1) (See Appendix Note NSBCR A-3.1.1.24.)

OR Resource Conservation

An *objective* of this Code is to limit the probability that, as a result of the design or *construction* of a *building*, a natural resource will be exposed to an unacceptable risk of depletion or the capacity of the infrastructure supporting the use of the resource will be exposed to an unacceptable risk of being exceeded.

OR1 Water Conservation

An *objective* of this Code is to limit the probability that, as a result of the design or *construction* of a *building*, water resources will be exposed to an unacceptable risk of depletion or the capacity of the water supply, treatment and disposal infrastructure will be exposed to an unacceptable risk of being exceeded, caused by the consumption of water.

OR2 Energy Conservation

An *objective* of this Code is to limit the probability that, as a result of the design or *construction* of a *building*, a natural resource will be exposed to an unacceptable risk of depletion or the capacity of the infrastructure supporting the use of the resource will be exposed to an unacceptable risk of being exceeded, caused by the consumption of energy.

3.1.1.25. Division A NBC and NPC 3.2 Functional Statements add the following functional statement to Division A Sentence 3.2.1.1.(1)

F 130 To limit excessive water consumption.

F 131 To limit excessive energy consumption.

3.1.1.26 Division B Table 1.3.1.2. amended Table 1.3.1.2. is amended to add additional standards and/or code references to which the standards apply. See Schedule E, Energy Efficiency Measures, Division B, Part 1, Acceptable Solutions NSBCR.

3.1.1.27. Table 1.3.1.2. amended Table 1.3.1.2. is amended by adding

Issuing Agency	Document #	Title of Document	code reference
ULC	Can/ULC-S545	Standard for Residential Fire Warning System Control Units	9.10.19.3.(1)

3.1.1.28. Article 2.4.9.1. No Reduction in Size is replaced In the National Plumbing Code of Canada Division B replace the existing sentence (1) and add sentences (2) and (3)

2.4.9.1. No Reduction in Size

(1) Except as permitted in Sentence (3), no drainage pipe that is of minimum size required by this Part for the purpose for which it is installed shall be so connected as to drain to other drainage pipe of lesser size.

(2) Where a *building drain* connects to a stack through a wall or floor, the drain shall retain its full size through the wall or floor.

(3) A sanitary drainage pipe may be connected to a pre-engineered waste water heat recovery system that incorporates piping of a lesser size than required by Sentence (1) provided that it does not convey sewage,

- (a) from a *sanitary unit*, or
- (b) that contains solids.

3.1.1.29. Article 2.6.1.8. Solar Domestic Hot Water Systems In the National Plumbing Code of Canada Division B is replaced with

2.6.1.8. Solar Domestic Hot Water Systems

(1) Except as provided in Sentence (2), a system for solar heating of *potable* water shall be installed in accordance with good engineering practice.

(2) Systems for solar heating of *potable* water in *residential occupancies* shall be installed in conformance with CAN/CSA-F383, "Installation Code for Solar Domestic Hot Water Systems".

3.1.1.30. Article 2.6.4. Water Efficiency is added In the National Plumbing Code of Canada Division B.

2.6.4. Water Efficiency

2.6.4.1. Water Supply Fittings

(1) The flow rates of fittings that supply water to a fixture shall not exceed the maximum flow rates at the test pressures listed for that fitting in Table 2.6.4.1.

(2) Sentence (1) does not apply to a fixture located in a heritage *building*.

**Table 2.6.4.1.
Maximum Flow Rates for Water Supply Fittings
Forming Part of Sentence 2.6.4.1.(1)**

Fitting	Maximum Flow, L/min	Test Pressure, kPa
Lavatory Faucet	8.35	413
Kitchen Faucet	8.35	413
Shower Heads	9.5	550
Column 1	2	3

2.6.4.2. Plumbing Fixtures

(1) Water closets and urinals shall be certified to CAN/CSA-B45.0, "General Requirements for Plumbing Fixtures".

(2) The flush cycle for each fixture that is a water closet or urinal and that is installed as a replacement for a fixture in a *building* that existed before the 1st day of January 2010 shall not exceed the maximum flush cycle listed for that fixture in Table 2.6.4.2.A.

**Table 2.6.4.2.A.
Maximum Flush Cycles for Sanitary Fixtures
Forming Part of Sentences 2.6.4.2.(2)**

Fixture	litres
Water Closet (Tank Type)	13.25
Water Closet (Direct Flush)	13.25
Urinal (Tank Type)	5.68(1)
Urinal (Direct Flush)	5.68(1)
Column 1	2

Notes to Table 2.6.4.2.A.

- (1) Urinals equipped with automatic flushing devices shall be controlled to prevent unnecessary flush cycles during *building* down time.

(3) Except as provided in Sentence (2) the flush cycle for each fixture that is a water closet or urinal shall not exceed the maximum flush cycle listed for that fixture in Table 2.6.4.2.B.

(4) Urinals which utilize water free technology and conform to CSA B 45 Plumbing Fixtures Series may be substituted under 2.6.4.2.(1).

(5) Sentences (2) and (3) do not apply to a fixture located in a heritage *building*, care or detention occupancy or passenger station.

**Table 2.6.4.2.B.
Maximum Flush Cycles for Sanitary Fixtures
Forming Part of Sentence 2.6.4.2.(3)**

Fixture	litres
Water Closet (Tank Type)	6
Water Closet (Direct Flush)	6
Urinal (Tank Type)	3.8(1)
Urinal (Direct Flush)	3.8(1)
Column 1	2

Notes to Table 2.6.4.2.B.

- (1) Urinals equipped with automatic flushing devices shall be controlled to prevent unnecessary flush cycles during *building* down time.

3.1.1.31. Article 3.7.2.1. Plumbing and Drainage Systems Amend the National Building Code of Canada Division B Sentence 3.7.2.1.(1) by replacing the existing sentences 3.7.2.1.(1) and 3.7.2.2. (5).

3.7.2.1. Plumbing and Drainage Systems

(1) Except under clause 3.7.2.2.(5)(b), if the installation of a sanitary drainage system is not possible because of the absence of a water supply, sanitary privies, chemical closets or other means for the disposal of human waste shall be provided.

3.7.2.2. (5)

(a) Urinals are permitted to be substituted for two thirds of the number of water closets required by this Article for males, except that if only 2 water closets are required for males, one urinal is permitted to be substituted for one of the water closets.

(b) Where urinals are permitted they may be of a type that utilizes water free technology and shall conform to CSA B 45 "Plumbing Fixtures Series."

3.1.1.32. Sentence 9.7.2.1.(2) Part 9 Division B Window Standards is deleted. r

3.1.1.33. Replace Article 9.25.1.1. Application as follows,

(1) This Section applies to thermal insulation and measures to control heat transfer, air leakage and condensation.

(2) Insulation and sealing of heating and ventilating ducts shall conform to Sections 9.32. and 9.33.

(3) Thermal Insulation shall meet the requirements of Part 10 NSBCR.

3.1.1.34. Replace Article 9.25.3.2. Air Barrier System Properties (See Appendix A, Division B, Volume 2 A-9.25.3.2. NBC) as follows,

(1) Sheet and panel type materials intended to provide the principal resistance to air leakage shall have an air leakage characteristic not greater than $0.02 \text{ L}/(\text{s}\cdot\text{m}^2)$ measured at a differential of 75 Pa.

(2) Where polyethylene sheet is used to provide airtightness in the air barrier system, it shall conform to CAN/CGSB-51.34-M, "Vapour Barrier, Polyethylene Sheet for Use in Building Construction."

3.1.1.35. Table 3.9.1.1. is amended by replacing functional statement 3.8.3.17. and adding functional statement 3.8.3.18.

3.8.3.17 Sleeping Units in Roofed Accommodations	
-1	F 74-OA2
-2	F 74-OA2
-3	F 74-OA2
3.8.3.18 Suites of Residential Occupancies Required to be Barrier Free	
-1	F 73-OA1, F 74-OA2
-2	F 73-OA1, F 74-OA2
-3	F 73-OA1, F 74-OA2
-4	F 73-OA1, F 74-OA2

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deliberately left blank

Schedule "A"
LETTER OF UNDERTAKING
CONFIRMATION OF COMMITMENT BY OWNER
TO THE MUNICIPAL AUTHORITY HAVING JURISDICTION
FIELD REVIEW OF CONSTRUCTION

PREAMBLE

Whereas the Building Code Act, RSNS 1989, Chapter 46, hereinafter referred to as the 'Act' applies to the construction or demolition of a *building*;

And Whereas the Minister of the Department of Labour and Workforce Development has by regulation adopted the National Building Code, with amendments as the Nova Scotia Building Code, requiring compliance with it as adopted for the construction or demolition of *buildings*;

And Whereas architects and professional engineers are required by their respective statutes, regulations, and bylaws, to ensure the general public of competent standards and ethical conduct in the design of *buildings*;

And Whereas Part 2 of the Nova Scotia Building Code requires professionals to design *buildings* in conformance with the minimum standards of the Nova Scotia Building Code with sufficient drawings and documents to show how these standards have been met;

And Whereas Part 2 of the Regulations made pursuant to the Act, requires that these *buildings* be inspected at intervals appropriate to the stage of construction to determine general compliance with the design drawings accepted by the authority having jurisdiction and all revisions thereto;

To:

Authority Having Jurisdiction	Date
Address	

Dear:

Authority Having Jurisdiction

Re:

Address of Project

Name of Project

Legal Description of Project

I (the owner) submit this Letter of Undertaking to the authority having jurisdiction along with a completed application for a *building* permit.

The undersigned has appointed an architect(s), professional engineer(s), or designer(s), or prime consultant(s) to undertake, as required in Articles 2.1.1.5. and 2.1.1.6. of the Regulations, the Field Review of Construction and I have attached to this Letter of Undertaking

(check appropriate boxes)

- Field Review of Construction Commitment Certificates completed by me or the prime consultant appointed by me to coordinate the Field Review of Construction.

- Field Review of Construction Commitment Certificates (identified below) completed by individual designers appointed by me to perform the Field Review of Construction for the applicable discipline(s).

- shall forward Field Review of Construction Commitment Certificates for those not yet appointed.

(Initial the disciplines that apply to this project. All disciplines will not necessarily be employed on every project)

- Building* Design Structural Plumbing Mechanical
- Electrical Geotechnical Fire Suppression System

I shall notify the authority having jurisdiction if the architect, professional engineer, named in the attached "Review of Construction Commitment Certificate(s)" ceases, for whatever reason, to provide the Field Review of Construction for this *building* and shall appoint another architect and professional engineer immediately so that the Field Review of Construction will continue uninterrupted. This notice and the necessary Field Review of Construction Commitment Certificates shall be forwarded to the authority having jurisdiction as soon as practical, but not later than 72 hours.

Signature of Owner _____ Date _____

Print Name _____

Address _____ Postal Code _____

Phone _____ Fax _____ e-mail _____

Schedule "A-1"
FIELD REVIEW OF CONSTRUCTION
INSPECTION COMMITMENT CERTIFICATE
PRIME CONSULTANT

PREAMBLE

Whereas the Building Code Act, RSNS 1989, Chapter 46, hereinafter referred to as the 'Act' applies to the construction or demolition of a *building*;

And Whereas the Minister of the Department of Labour and Workforce Development has by regulation adopted the National Building Code, with amendments as the Nova Scotia Building Code, requiring compliance with it as adopted for the construction or demolition of *buildings*;

And Whereas architects, and professional engineers are required by their respective statutes, regulations, and bylaws, to ensure the general public of competent standards and ethical conduct in the design of *buildings*;

And Whereas Part 2 of the Nova Scotia Building Code requires professionals to design *buildings* in conformance with the minimum standards of the Nova Scotia Building Code with sufficient drawings and documents to show how these standards have been met;

And Whereas Part 2 of the Regulations made pursuant to the Act, requires that these *buildings* be inspected at intervals appropriate to the stage of construction to determine general compliance with the design drawings accepted by the authority having jurisdiction and all revisions thereto;

To:

Authority Having Jurisdiction

Date

Address

Dear:

Authority Having Jurisdiction

Re:

Address of Project

Name of Project

Legal Description of Project

This is to advise that I am the architect, professional engineer or designer appointed by the owner as prime consultant to coordinate the Field Review of Construction for the above referenced project.

Schedule "A-2"
FIELD REVIEW OF CONSTRUCTION
INSPECTION COMMITMENT CERTIFICATE
***Building* DESIGN REQUIREMENTS**

PREAMBLE

Whereas the Building Code Act, RSNS 1989, Chapter 46, hereinafter referred to as the 'Act' applies to the construction or demolition of a *building*;

And Whereas the Minister of the Department of Labour and Workforce Development has by regulation adopted the National Building Code, with amendments as the Nova Scotia Building Code, requiring compliance with it as adopted for the construction or demolition of *buildings*;

And Whereas architects, and professional engineers are required by their respective statutes, regulations, and bylaws, to ensure the general public of competent standards and ethical conduct in the design of *buildings*;

And Whereas Part 2 of the Nova Scotia Building Code requires professionals to design in conformance with the minimum standards of the Nova Scotia Building Code with sufficient drawings and documents to show how these standards have been met;

And Whereas Part 2 of the Regulations made pursuant to the Act, requires that these *buildings* be inspected at intervals appropriate to the stage of construction to determine general compliance with the design drawings accepted by the authority having jurisdiction and all revisions thereto;

To:

_____ Date

Authority Having Jurisdiction

_____ Address

Dear:

_____ Authority Having Jurisdiction

Re:

_____ Address of Project

_____ Name of Project

_____ Legal Description of Project

This is to advise that I am the architect, or professional engineer appointed by the owner or prime consultant to perform the Field Review of Construction for the *Building* DESIGN aspects of the project, which are within Part 3 and Part 5 of the Code and as shown in design documents submitted to the authority having jurisdiction but do not include areas of work referred to in certificates A-3 to A-8 inclusive.

I hereby certify for the *Building* Design Requirements that

- 1) I will review the shop drawings relevant to this certificate to determine general compliance with the design documents, however, the party producing the shop drawings remains responsible for the design expressed therein;
- 2) I will coordinate the review of changes to the design documents relevant to this certificate to ensure that the changes conform to the Code; and
- 3) I will complete the Certification of Field Review of Construction and return it to the authority having jurisdiction prior to requesting the occupancy permit.

Please be advised that I may delegate some or all of my duties associated with the coordination of the Field Review of Construction to another person employed by me or my firm where it is consistent with prudent professional practice to do so. The functions will however be performed under my supervision in accordance with the Architects Act, or Professional Engineer's Act.

The undersigned shall notify the authority having jurisdiction, in writing as soon as practical, but not later than 72 hours, if the contract for Field Review of Construction is terminated at any time during construction.

Print Name

Signature _____ Initials Sample _____

Print Name of Firm or Company

Print Address

Print Municipality _____ Postal Code _____

Telephone _____ Fax _____ e-mail _____

Affix below the seal of the licensed *Professional Engineer* in accordance with provincial legislation.

Schedule "A-3"
FIELD REVIEW OF CONSTRUCTION
INSPECTION COMMITMENT CERTIFICATE
STRUCTURAL DESIGN REQUIREMENTS

PREAMBLE

Whereas the Building Code Act, RSNS 1989, Chapter 46, hereinafter referred to as the 'Act' applies to the construction or demolition of a *building*;

And Whereas the Minister of the Department of Labour and Workforce Development has by regulation adopted the National Building Code, with amendments as the Nova Scotia Building Code, requiring compliance with it as adopted for the construction or demolition of *buildings*;

And Whereas architects, and professional engineers are required by their respective statutes, regulations, and bylaws, to ensure the general public of competent standards and ethical conduct in the design of *buildings*;

And Whereas Part 2 of the Nova Scotia Building Code requires professionals to design *buildings* in conformance with the minimum standards of the Nova Scotia Building Code with sufficient drawings and documents to show how these standards have been met;

And Whereas Part 2 of the Regulations made pursuant to the Act, requires that these *buildings* be inspected at intervals appropriate to the stage of construction to determine general compliance with the design drawings accepted by the authority having jurisdiction and all revisions thereto;

To:

_____ Date

Authority Having Jurisdiction

_____ Address

Dear:

_____ Authority Having Jurisdiction

Re:

_____ Address of Project

_____ Name of Project

_____ Legal Description of Project

This is to advise that I am the professional engineer appointed by the owner or prime consultant to perform the Field Review of Construction for the STRUCTURAL DESIGN requirements.

I hereby certify for the Structural Design Requirements that

- 1) I will review the structural shop drawings to determine general compliance with the design documents, however, the party producing the shop drawings remains responsible for the design expressed therein;
- 2) I will coordinate the review of changes to the structural design drawings to determine that the changes conform to the Code; and
- 3) I will complete the Certification of Field Review of Construction and return it to the authority having jurisdiction prior to requesting the occupancy permit.

Please be advised that I may delegate some or all of my duties associated with the Field Review of Construction to another person employed by me or my firm where it is consistent with prudent professional practice to do so. The functions will however be performed under my supervision in accordance with the Engineering Profession Act.

The undersigned shall notify the authority having jurisdiction, in writing as soon as practical, but not later than 72 hours if the contract for Field Review of Construction is terminated at any time during construction.

Print Name

Signature _____ Initials Sample _____

Print Name of Firm or Company

Print Address

Print Municipality _____ Postal Code _____

Telephone _____ Fax _____ e-mail _____

Affix below the seal of the licensed *Professional Engineer* in accordance with provincial legislation.

Schedule "A-4"
FIELD REVIEW OF CONSTRUCTION
INSPECTION COMMITMENT CERTIFICATE
MECHANICAL DESIGN REQUIREMENTS

PREAMBLE

Whereas the Building Code Act, RSNS 1989, Chapter 46, hereinafter referred to as the 'Act' applies to the construction or demolition of a *building*;

And Whereas the Minister of the Department of Labour and Workforce Development has by regulation adopted the National Building Code, with amendments as the Nova Scotia Building Code, requiring compliance with it as adopted for the construction or demolition of *buildings*;

And Whereas architects and professional engineers are required by their respective statutes, regulations, and bylaws, to ensure the general public of competent standards and ethical conduct in the design of *buildings*;

And Whereas Part 2 of the Nova Scotia Building Code requires professionals to design *buildings* in conformance with the minimum standards of the Nova Scotia Building Code with sufficient drawings and documents to show how these standards have been met;

And Whereas Part 2 of the Regulations made pursuant to the Act, requires that these *buildings* be inspected at intervals appropriate to the stage of construction to determine general compliance with the design drawings accepted by the authority having jurisdiction and all revisions thereto;

To:

_____ Date

Authority Having Jurisdiction

_____ Address

Dear:

_____ Authority Having Jurisdiction

Re:

_____ Address of Project

_____ Name of Project

_____ Legal Description of Project

This is to advise that I am the professional engineer appointed by the owner or prime consultant to perform the Field Review of Construction for the MECHANICAL DESIGN requirements.

I hereby certify for the Mechanical Design Requirements that

- 1) I will review the mechanical shop drawings to determine general compliance with the design documents, however, the party producing the shop drawings remains responsible for the design expressed therein;
- 2) I will coordinate the review of changes to the mechanical design documents to ensure that the applicable professional engineer(s) determines whether the changes conform to the Code; and
- 3) I will complete the Certification of Field Review of Construction and return it to the authority having jurisdiction prior to requesting the occupancy permit.

Please be advised that I may delegate some or all of my duties associated with the Field Review of Construction to another person employed by me or my firm where it is consistent with prudent professional practice to do so. The functions will however be performed under my supervision in accordance with the Engineering Profession Act.

The undersigned shall notify the authority having jurisdiction, in writing as soon as practical, but not later than 72 hours, if the contract for Field Review of Construction is terminated at any time during construction.

Print Name

Signature

Initials Sample

Print Name of Firm or Company

Print Address

Print Municipality

Postal Code

Telephone Fax e-mail

Affix below the seal of the licensed *Professional Engineer* in accordance with provincial legislation.

Schedule "A-5"
FIELD REVIEW OF CONSTRUCTION
INSPECTION COMMITMENT CERTIFICATE
ELECTRICAL DESIGN REQUIREMENTS

PREAMBLE

Whereas the Building Code Act, RSNS 1989, Chapter 46, hereinafter referred to as the 'Act' applies to the construction or demolition of a *building*;

And Whereas the Minister of the Department of Labour and Workforce Development has by regulation adopted the National Building Code, with amendments as the Nova Scotia Building Code, requiring compliance with it as adopted for the construction or demolition of *buildings*;

And Whereas architects and professional engineers are required by their respective statutes, regulations, and bylaws, to ensure the general public of competent standards and ethical conduct in the design of *buildings*;

And Whereas Part 2 of the Nova Scotia Building Code requires professionals to design *buildings* in conformance with the minimum standards of the Nova Scotia Building Code with sufficient drawings and documents to show how these standards have been met;

And Whereas Part 2 of the Regulations made pursuant to the Act, requires that these *buildings* be inspected at intervals appropriate to the stage of construction to determine general compliance with the design drawings accepted by the authority having jurisdiction and all revisions thereto;

To:

_____ Date

Authority Having Jurisdiction

_____ Address

Dear:

_____ Authority Having Jurisdiction

Re:

_____ Address of Project

_____ Name of Project

_____ Legal Description of Project

This is to advise that I am the professional engineer appointed by the owner or prime consultant to perform the Field Review of Construction for the ELECTRICAL DESIGN requirements.

December 31, 2009

I hereby certify for the Electrical Design Requirements that

- 1) I will review the electrical shop drawings to determine general compliance with the design documents, however, the party producing the shop drawings remains responsible for the design expressed therein;
- 2) I will coordinate the review of changes to the electrical design documents to ensure that the applicable professional engineer(s) determines whether the changes conform to the Code; and
- 3) I will complete the Certification of Field Review of Construction and return it to the authority having jurisdiction prior to requesting the occupancy permit.

Please be advised that I may delegate some or all of my duties associated with the Field Review of Construction to another person employed by me or my firm where it is consistent with prudent professional practice to do so. The functions will however be performed under my supervision in accordance with the Engineering Profession Act.

The undersigned shall notify the authority having jurisdiction, in writing as soon as practical, but not later than 72 hours, if the contract for Field Review of Construction is terminated at any time during construction.

Print Name

Signature _____ Initials Sample _____

Print Name of Firm or Company

Print Address

Print Municipality _____ Postal Code _____

Telephone _____ Fax _____ e-mail _____

Affix below the seal of the licensed *Professional Engineer* in accordance with provincial legislation.

Schedule "A-6"
FIELD REVIEW OF CONSTRUCTION
INSPECTION COMMITMENT CERTIFICATE
FIRE SUPPRESSION SYSTEMS DESIGN REQUIREMENTS

PREAMBLE

Whereas the Building Code Act, RSNS 1989, Chapter 46, hereinafter referred to as the 'Act' applies to the construction or demolition of a *building*;

And Whereas the Minister of the Department of Labour and Workforce Development has by regulation adopted the National Building Code, with amendments as the Nova Scotia Building Code, requiring compliance with it as adopted for the construction or demolition of *buildings*;

And Whereas architects and professional engineers are required by their respective statutes, regulations, and bylaws, to ensure the general public of competent standards and ethical conduct in the design of *buildings*;

And Whereas Part 2 of the Nova Scotia Building Code requires professionals to design *buildings* in conformance with the minimum standards of the Nova Scotia Building Code with sufficient drawings and documents to show how these standards have been met;

And Whereas Part 2 of the Regulations made pursuant to the Act, requires that these *buildings* be inspected at intervals appropriate to the stage of construction to determine general compliance with the design drawings accepted by the authority having jurisdiction and all revisions thereto;

To

_____ Date

Authority Having Jurisdiction

Address

Dear

Authority Having Jurisdiction

Re

Address of Project

Name of Project

Legal Description of Project

This is to advise that I am the professional engineer appointed by the owner or prime consultant to perform the Field Review of Construction for the FIRE SUPPRESSION SYSTEMS DESIGN requirements.

I hereby certify for the Fire Suppression Systems Design Requirements that

- 1) I will review the fire suppression systems shop drawings to determine general compliance with the design documents, however, the party producing the shop drawings remains responsible for the design expressed therein;
- 2) I will coordinate the review of changes to the fire suppression systems design documents to ensure that the applicable professional engineer(s) determines whether the changes conform to the Code;
- 3) I will complete the Certification of Field Review of Construction and return it to the authority having jurisdiction prior to requesting the occupancy permit;
- 4) I will file a copy of this form, a copy of the shop drawings, and specifications for the fire suppression system, and a copy of the appropriate contractor's material and test certificate for the system, as required by sentence 3.2.5.13.(1) of the Code, with the Office of the Fire Marshal. I shall forward proof of receipt for each of the documents filed, issued by the Office of the Fire Marshal, to the authority having jurisdiction prior to requesting the occupancy permit.

Please be advised that I may delegate some or all of my duties associated with the Field Review of Construction to another person employed by me or my firm where it is consistent with prudent professional practice to do so. The functions will however be performed under my supervision in accordance with the Engineering Profession Act.

The undersigned shall notify the authority having jurisdiction, in writing as soon as practical, but not later than 72 hours, if the contract for Field Review of Construction is terminated at any time during construction.

Print Name

Signature _____ Initials Sample _____

Print Name of Firm or Company

Print Address

Print Municipality _____ Postal Code _____

Telephone _____ Fax _____ e-mail _____

Affix below the seal of the licensed *Professional Engineer* in accordance with provincial legislation.

Schedule "A-7"
FIELD REVIEW OF CONSTRUCTION
INSPECTION COMMITMENT CERTIFICATE
GEOTECHNICAL DESIGN REQUIREMENTS

PREAMBLE

Whereas the Building Code Act, RSNS 1989, Chapter 46, hereinafter referred to as the 'Act' applies to the construction or demolition of a *building*;

And Whereas the Minister of the Department of Labour and Workforce Development has by regulation adopted the National Building Code, with amendments as the Nova Scotia Building Code, requiring compliance with it as adopted for the construction or demolition of *buildings*;

And Whereas architects and professional engineers are required by their respective statutes, regulations, and bylaws, to ensure the general public of competent standards and ethical conduct in the design of *buildings*;

And Whereas Part 2 of the Nova Scotia Building Code requires professionals to design *buildings* in conformance with the minimum standards of the Nova Scotia Building Code with sufficient drawings and documents to show how these standards have been met;

And Whereas Part 2 of the Regulations made pursuant to the Act, requires that these *buildings* be inspected at intervals appropriate to the stage of construction to determine general compliance with the design drawings accepted by the authority having jurisdiction and all revisions thereto;

To

_____ Date

Authority Having Jurisdiction

Address

Dear

Authority Having Jurisdiction

Re

Address of Project

Name of Project

Legal Description of Project

This is to advise that I am the professional engineer appointed by the owner or prime consultant to perform the Field Review of Construction for the GEOTECHNICAL (PERMANENT) DESIGN requirements.

December 31, 2009

I hereby certify for the Geotechnical (Permanent) Systems Design Requirements that

- 1) I will review the Geotechnical shop drawings to determine general compliance with the design documents, however, the party producing the shop drawings remains responsible for the design expressed therein;
- 2) I will coordinate the review of changes to the Geotechnical design documents to ensure that the applicable professional engineer(s) determines whether the changes conform to the Code; and
- 3) I will complete the Certification of Field Review of Construction and return it to the authority having jurisdiction prior to requesting the occupancy permit.

Please be advised that I may delegate some or all of my duties associated with the Field Review of Construction to another person employed by me or my firm where it is consistent with prudent professional practice to do so. The functions will however be performed under my supervision in accordance with the Engineering Profession Act.

The undersigned shall notify the authority having jurisdiction, in writing as soon as practical, but not later than 72 hours, if the contract for Field Review of Construction is terminated at any time during construction.

Print Name

Signature _____ Initials Sample _____

Print Name of Firm or Company

Print Address

Print Municipality _____ Postal Code _____

Telephone _____ Fax _____ e-mail _____

Affix below the seal of the licensed *Professional Engineer* in accordance with provincial legislation.

Schedule "A-8"
FIELD REVIEW OF CONSTRUCTION
INSPECTION COMMITMENT CERTIFICATE
PLUMBING DESIGN REQUIREMENTS

PREAMBLE

Whereas the Building Code Act, RSNS 1989, Chapter 46, hereinafter referred to as the 'Act' applies to the construction or demolition of a *building*;

And Whereas the Minister of the Department of Labour and Workforce Development has by regulation adopted the National Building Code, with amendments as the Nova Scotia Building Code, requiring compliance with it as adopted for the construction or demolition of *buildings*;

And Whereas , architects and professional engineers are required by their respective statutes, regulations, and bylaws, to ensure the general public of competent standards and ethical conduct in the design of *buildings*;

And Whereas Part 2 of the Nova Scotia Building Code requires professionals to design *buildings* in conformance with the minimum standards of the Nova Scotia Building Code with sufficient drawings and documents to show how these standards have been met;

And Whereas Part 2 of the Regulations made pursuant to the Act, requires that these *buildings* be inspected at intervals appropriate to the stage of construction to determine general compliance with the design drawings accepted by the authority having jurisdiction and all revisions thereto;

To:

Authority Having Jurisdiction Date

Address

Dear:

Authority Having Jurisdiction

Re:

Address of Project

Name of Project

Legal Description of Project

This is to advise that I am the professional engineer appointed by the owner or prime consultant to perform the Field Review of Construction for the PLUMBING DESIGN requirements.

I hereby certify for the Plumbing Design Requirements that

- 1) I will review the plumbing shop drawings to determine general compliance with the design documents, however, the party producing the shop drawings remains responsible for the design expressed therein;
- 2) I will coordinate the review of changes to the plumbing design documents to ensure that the applicable professional engineer(s) determines whether the changes conform to the Code; and
- 3) I will complete the Certification of Field Review of Construction and return it to the authority having jurisdiction prior to requesting the occupancy permit.

Please be advised that I may delegate some or all of my duties associated with the Field Review of Construction to another person employed by me or my firm where it is consistent with prudent professional practice to do so. The functions will however be performed under my supervision in accordance with the Engineering Profession Act.

The undersigned shall notify the authority having jurisdiction, in writing as soon as practical, but not later than 72 hours, if the contract for Field Review of Construction is terminated at any time during construction.

Print Name		

Signature	_____	Initials Sample

Print Name of Firm or Company		

Print Address		

Print Municipality	_____	Postal Code

Telephone	Fax	e-mail

Affix below the seal of the licensed *Professional Engineer* in accordance with provincial legislation, where applicable.

Schedule "B"
DESIGN DATA FOR SELECTED LOCATIONS IN NOVA SCOTIA

Location	Design Temperature				Degree-Days Below 18 °C	15 Min. Rain mm	One Day Rain 1/50 mm	Ann Rain mm	Ann. Total Ppn. mm	Ground Snow Load, kPa		Hourly Wind Pressures		Seismic Data				
	January		July 2.5%							S ₁	S ₂	1/10 kPa	1/50 kPa	S ₁ (0.2)	S ₂ (0.5)	S ₃ (1.0)	S ₄ (2.0)	PGA
	2.5% °C	1% °C	Dry °C	Wet °C														
Amherst	-21	-24	27	21	4600	18	123	950	1150	2.4	0.5	0.41	0.58	0.24	0.13	0.062	0.018	0.14
Antigonish	-20	-23	27	21	4600	15	123	1100	1250	2.1	0.6	0.41	0.54	0.19	0.11	0.060	0.017	0.095
Baddeck	-16	-18	27	21	4546	13	-	-	-	-	-	0.45	-	-	-	-	-	-
Bedford	-16	-18	26	20	3880	15	-	-	-	-	-	0.40	-	-	-	-	-	-
Bridgewater	-15	-17	27	20	4250	15	144	1300	1475	1.9	0.6	0.41	0.59	0.23	0.13	0.069	0.019	0.12
Canso	-17	-19	25	20	4500	15	123	1325	1400	1.7	0.6	0.49	0.62	0.24	0.14	0.071	0.020	0.13
Cheticamp	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dartmouth	-16	-18	26	20	4200	18	144	1250	1400	1.6	0.6	0.40	0.55	0.23	0.13	0.069	0.019	0.12
Debert	-22	-25	27	21	4600	18	118	1000	1200	2.1	0.6	0.39	0.58	0.23	0.12	0.062	0.017	0.12
Digby	-15	-17	25	20	4050	15	139	1100	1275	2.2	0.6	0.40	0.55	0.26	0.13	0.069	0.020	0.14
East Gore	-20	-22	27	21	4325	16	-	-	-	-	-	0.35	-	-	-	-	-	-
Elmsdale	-19	-21	27	21	4424	16	-	-	-	-	-	0.40	-	-	-	-	-	-
Enfield	-19	-21	27	21	4424	16	-	-	-	-	-	0.40	-	-	-	-	-	-
Greenwood	-17	-19	28	21	4300	15	123	925	1100	2.7	0.6	0.36	0.54	0.25	0.13	0.067	0.018	0.14
Halifax	-16	-18	26	20	4100	15	150	1350	1500	1.9	0.6	0.40	0.58	0.23	0.13	0.069	0.019	0.12
Kennetcook	-20	-22	27	21	4325	15	-	-	-	-	-	0.35	-	-	-	-	-	-
Kentville	-18	-20	28	21	4200	18	128	950	1200	2.4	0.6	0.36	0.54	0.24	0.13	0.067	0.018	0.14
Lantz	-19	-21	27	21	4424	16	--	--	--	--	--	0.40	-	-	-	-	-	-
Liverpool	-14	-16	27	20	4050	15	150	1325	1425	1.7	0.6	0.44	0.61	0.24	0.14	0.072	0.020	0.13
Lockeport	-14	-16	25	20	4100	15	139	1250	1450	1.4	0.6	0.44	0.60	0.26	0.14	0.074	0.021	0.14
Louisburg	-15	-17	26	20	4500	15	118	1300	1500	2.1	0.6	0.52	0.65	0.22	0.12	0.066	0.018	0.12
Lunenburg	-15	-17	26	20	4250	15	144	1300	1450	1.9	0.6	0.43	0.61	0.23	0.13	0.069	0.019	0.12
Maitland	-21	-23	26	22	4400	16	-	-	-	-	-	0.37	-	-	-	-	-	-
Milford Station	-20	-22	27	21	4500	16	-	-	-	-	-	0.38	-	-	-	-	-	-
Mount Uniacke	-19	-21	27	21	4610	17	-	-	-	-	-	0.42	-	-	-	-	-	-
New Glasgow	-21	-23	27	21	4450	15	107	975	1200	2.2	0.6	0.40	0.55	0.18	0.13	0.058	0.016	0.086
Noel	-20	-22	26	22	4400	15	-	-	-	-	-	0.37	-	-	-	-	-	-
North Sydney	-16	-18	27	21	4600	13	123	1200	1475	2.4	0.6	0.47	0.59	0.19	0.11	0.061	0.016	0.098
Pictou	-21	-24	27	21	4400	15	107	950	1175	2.2	0.6	0.40	0.55	0.18	0.11	0.057	0.016	0.084
Port Hawkesbury	-19	-22	27	21	4400	15	128	1325	1450	2.1	0.6	0.59	0.74	0.21	0.12	0.064	0.018	0.11
Shubenacadie	-20	-22	27	21	4500	16	-	-	-	-	-	0.38	-	-	-	-	-	-
Springhill	-20	-23	27	21	4600	18	123	1075	1175	3.1	0.6	0.39	0.56	0.24	0.13	0.063	0.018	0.14
Stewiacke	-21	-23	27	21	4400	18	128	1050	1250	1.8	0.6	0.39	0.55	0.22	0.12	0.065	0.018	0.12
Sydney	-16	-18	27	21	4650	13	123	1200	1475	2.3	0.6	0.47	0.59	0.20	0.12	0.062	0.017	0.10
Tatamagouche	-21	-24	27	21	4500	18	118	875	1150	2.2	0.6	0.40	0.55	0.19	0.11	0.057	0.016	0.097
Truro	-21	-23	27	21	4650	18	123	1000	1175	2.0	0.6	0.37	0.53	0.21	0.12	0.062	0.017	0.12
Walton	-19	-21	26	22	4400	15	-	-	-	-	-	0.38	-	-	-	-	-	-
Wolfville	-19	-21	28	21	4200	18	123	975	1175	2.4	0.6	0.36	0.54	0.25	0.13	0.067	0.018	0.14
Yarmouth	-13	-15	22	19	4100	13	150	1125	1260	1.8	0.6	0.41	0.56	0.23	0.13	0.068	0.018	0.12
Column 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19

NOTE: If a municipality has recent climatic values for additional locations that it wishes included in a subsequent amendment of this table, please send them to the Building Code Coordinator, Public Safety Division, Nova Scotia Environment and Labour, PO Box 697, Halifax, NS, B3J 2T8. As it is not practical to list values for all municipalities in Nova Scotia, recommended climatic design values for locations not listed can be obtained by writing to the Atmospheric Environment Service, Environment Canada, 4905 Dufferin Street, Downsview, Ontario M3H 5T4 or by contacting (416) 739-4365. Seismic Values for those not listed may be obtained through the Natural Resources Canada Website at www.eathquakescanada.ca, or by writing to the Geological Survey of Canada, 7 Observatory Crescent Ottawa, ON, K1A 0Y3.

Schedule C

Barrier-Free Design

As amended by Article 3.1.1.5. of these regulations Section 3.8 Barrier-Free Design of the Code is replaced with the following

3.8 Barrier-Free Design

3.8.1. General (See Appendix Note 3.8.1. NSBCR)

3.8.1.1. Application

- (1) The requirements of this section apply to all *buildings*, except
- (a) houses, including semi-detached, duplexes, triplexes, townhouses, row houses, boarding houses, and rooming houses,
 - (b) houses on their own lot, except as required by Sentence 3.8.1.1.(5), for houses used as roofed accommodation, for not more than 10 persons including the owner and the owner's family,
 - (c) *buildings* of Group F, Division 1 major occupancy,
 - (d) *buildings* which are not intended to be occupied on a daily or full time basis, including automatic telephone exchanges, pumphouses, and substations,
 - (e) industrial occupancies with an operation which is not adaptable to barrier-free, and
 - (f) fire, rescue, and emergency response facilities intended to house vehicles and their crews. (See Appendix Note A-3.8.1.1.(1)(f) NSBCR)
- (2) In camping accommodation where sleeping accommodations are provided, and in roofed accommodation one sleeping unit conforming to Article 3.8.3.17. shall be provided for every twenty (20) sleeping units or part thereof.
- (3) In roofed accommodation, when a fire alarm system is required by Subsection 3.2.4. (Part 3, Division B, Volume 1) or Subsection 9.10.18. (Part 9, Division B, Volume 1) NBC, at least one sleeping unit for every twenty (20) sleeping units or part thereof, other than those required in Sentence 3.8.1.1.(2), shall be provided with a warning system which shall conform to Article 3.2.4.19. Visual Signals(Part 3, Division B, Volume 1).
- (4) Every floor area to which a barrier-free path of travel is required to provide access, shall conform to Article 3.3.1.7. (Part 3, Division B, Volume 1). Protection on Floor Areas with a Barrier-Free Path of Travel

(5) Where an alteration on the entrance level is made to a dwelling unit used as roofed accommodation, exempt by Clause 3.8.1.1.(1)(b), to add sleeping accommodation,

- (a) one sleeping unit conforming to Article 3.8.3.17.,
- (b) A barrier-free entrance shall be designed in accordance with Article 3.8.3.3.,
- (c) barrier free path of travel conforming to Article 3.8.1.3., and
- (d) one parking stall for each required sleeping unit under this sentence conforming with Sentence 3.8.2.2.(5)

shall be provided.

(6) Except as exempt by 3.8.1.1.(1)(a), in residential occupancies of multiple suites, one unit conforming to Article 3.8.3.18. shall be provided for every twenty (20) units or part thereof. (See Appendix A-3.8.1.1.(6) NSBCR)

3.8.1.2. Entrances (See Appendix A, Division B, Volume 2 A-3.8.1.2. NBC)

(1) In addition to the barrier-free entrances required by Sentence (2), not less than 50% of the pedestrian entrances of a *building* referred to in Sentence 3.8.1.1.(1) shall be barrier-free and shall lead from

- a) the outdoors at sidewalk level, or
- b) a ramp that conforms to Article 3.8.3.4. and leads from a sidewalk.

(2) A suite of assembly occupancy, business and personal services occupancy or mercantile occupancy that is located in the first storey of a *building*, or in a storey to which a barrier-free path of travel is provided, and that is completely separated from the remainder of the *building* so that there is no access to the remainder of the *building*, shall have at least one barrier-free entrance.

(3) A barrier-free entrance required by Sentences (1) or (2) shall be designed in accordance with Article 3.8.3.3.

(4) At a barrier-free entrance that includes more than one doorway, only one of the doorways is required to be designed in accordance with the requirements of Article 3.8.3.3.

(5) If a walkway or pedestrian bridge connects two barrier-free storeys in different *buildings*, the path of travel from one storey to the other storey by means of a walkway or bridge shall be barrier free.

(6) Where a principal entrance to a *building* of residential occupancy is equipped with a security door system,

- (a) both visual and audible signals shall be used to indicate when the door lock is released, and

- (b) there are more than 20 suites a closed circuit visual monitoring system shall be provided capable of connection to individual suites.
- (7) Where a house is required to conform to the requirements of sentence 3.8.1.1.(5) such house shall provide one barrier free entrance in conformance with sentence (1).

3.8.1.3. Barrier-Free Path of Travel

(1) Except as required by Sentence 3.8.3.2. (1), or as permitted by Article 3.8.3.3. for doorways, the unobstructed width of a *barrier-free* path of travel shall be not less than 920 mm.

(2) Interior and exterior walking surfaces that are within a barrier-free path of travel shall

- (a) have no opening that will permit the passage of a sphere more than 13 mm diam,
- (b) have any elongated openings oriented approximately perpendicular to the direction of travel,
- (c) be stable, firm and slip-resistant,
- (d) be bevelled at a maximum slope of 1 in 2 at changes in level not more than 13 mm, and
- (e) be provided with sloped floors or ramps at changes in level more than 13 mm.

(3) A barrier-free path of travel is permitted to include ramps, passenger elevators, inclined moving walks, or passenger-elevating device to overcome a difference in level.

(4) The width of a barrier free path of travel that is more than 30 m long shall be increased to not less than 1500 mm for a length of 1500 mm at intervals not exceeding 30 m.

3.8.1.4. Storeys Served by Escalators

(1) In a *building* in which an escalator or inclined moving walk provides access to any floor level above or below the entrance floor level, an interior barrier-free path of travel shall be provided to that floor level.

(See Appendix A, Division B, Volume 2 A-3.8.1.4.(1) NBC)

(2) The route from the escalator or inclined moving walk to the barrier-free path of travel from floor to floor required by Sentence (1) shall be clearly indicated by appropriate signs.

3.8.1.5. Controls

(1) Except as required by Sentence 3.5.2.1. (NBC Division B, Volume 1) for elevators, controls for the operation of *building* services or safety devices, including electrical switches, thermostats and intercom switches, intended to be operated by the occupant and located in or adjacent to a barrier-free path of travel shall be accessible to a person in a wheelchair, operable with one hand, and mounted between 400 mm and 1 200 mm above the floor.

3.8.2. Occupancy Requirements

3.8.2.1. Areas Requiring a Barrier-Free Path of Travel

(See Appendix A-3.8.2.1. NSBCR)

(1) Except as permitted by Sentence (2), a barrier-free path of travel from the entrances required by Sentences 3.8.1.2.(1) and (2) to be barrier-free shall be provided throughout and within all normally occupied floor areas of

- (a) the entrance storey,
- (b) each storey exceeding 600 m² in area, and
- (c) each storey served by a passenger elevator, escalator, inclined moving walk, or a passenger-elevating device. (See 3.8.3.5.(1) NSBCR and A-3.8.2.1.(1)(c))

(See Article 3.3.1.7. Protection on Floor Areas with a Barrier-Free Path of Travel (Part 3, Division B, Volume 1) for additional requirements for floor areas above or below the first storey to which a barrier-free path of travel is required.)

(2) A barrier-free path of travel for persons in wheelchairs is not required

- (a) to service rooms,
- (b) to elevator machine rooms,
- (c) to janitor's rooms,
- (d) to service spaces,
- (e) to crawl spaces,
- (f) to attic or roof spaces,
- (g) to floor levels not served by a passenger elevator, a passenger-elevating device, an escalator, or an inclined moving walk,
- (h) to high hazard industrial occupancies,
- (i) within portions of a floor area with fixed seats in an assembly occupancy where those portions are not part of the barrier-free path of travel to spaces designated for wheelchair use,
- (j) within floor levels of a suite of residential occupancy that are not at the same level as the entry level to the suite,
- (k) within a suite of residential occupancy not required by 3.8.1.1.(6) or
- (j) within those parts of a floor area that are not at the same level as the entry level, provided amenities and uses provided on any raised or sunken level are accessible on the entry level by means of a barrier-free path of travel.

(3) In an assembly occupancy, the number of spaces designated for wheelchair use within rooms or areas with fixed seats shall conform to Table 3.8.2.1. (See also Article 3.8.3.6. for additional requirements.)

Table 3.8.2.1. Designated Wheelchair Spaces

Number of Fixed Seats in Seating Area	Number of Spaces Required for Wheelchairs
2 - 100	2
101 - 200	3
201 - 300	4
301 - 400	5
401 - 500	6
501 - 900	7
901 - 1 300	8
1 301 - 1 700	9
each increment of up to 400 seats in excess of 1 700	one additional space

3.8.2.2. Access to Parking Areas

(1) If exterior parking is provided, a barrier-free path of travel shall be provided between the exterior parking area and a barrier-free entrance conforming to Article 3.8.1.2. (See Appendix A, Division B, Volume 2 A-3.8.1.2. NBC)

(2) If a passenger elevator serves one or more indoor parking levels, a barrier-free path of travel shall be provided between at least one parking level and all other parts of the *building* required to be provided with barrier-free access in accordance with Article 3.8.2.1.

(3) If an exterior passenger loading zone is provided, it shall have

- (a) an access aisle not less than 1 500 mm wide and 6 000 mm long adjacent and parallel to the vehicle pull-up space,
- (b) a curb ramp conforming to 3.8.3.2(2), where there are curbs between the access aisle and the vehicle pull-up space, and
- (c) a clear height not less than 2 750 mm at the pull-up space and along the vehicle access and egress routes.

(4) Where on-site parking is provided, parking stalls for use by disabled persons shall be provided

- (a) as designated by Table 3.8.2.2.,
- (b) one parking stall for disabled persons shall be provided for each viewing position required in assembly occupancies in Sentence 3.8.2.1.(3) or
- (c) one parking stall for each barrier free residential suite.

Table 3.8.2.2. Designated Parking Stalls

Number of Parking Stalls	Number of Designated Stalls Required for Wheelchairs
2 - 15	1
16 - 45	2
46 - 100	3
101 - 200	4
201 - 300	5
301 - 400	6
401 - 500	7
501 - 900	8
901 - 1 300	9
1 301 - 1 700	10
each increment of up to 400 stalls in excess of 1 700	one additional space

- (5)** Parking stalls for use by persons with physical disabilities shall
- be not less than 2 400 mm wide and provided on one side with an access aisle not less than 1 500 mm wide. (If more than one parking space is provided for persons with physical disabilities, a single access aisle can serve two adjacent parking stalls.) and if parallel parking stalls shall be not less than 7 000 mm long.
 - have a firm, slip-resistant and level surface of asphalt, concrete or compacted gravel,
 - be located close to an entrance required to conform to Article 3.8.1.2., but not exceeding 50 m,
 - be clearly marked as being for the use of persons with physical disabilities, and
 - be identified by a sign located not less than 1 500 mm above ground level in conformance the Motor Vehicle Act of Nova Scotia, traffic sign` regulations.

3.8.2.3. Washrooms Required to be Barrier-Free

(See Appendix A, Division B, Volume 2 A-3.8.2.3. NBC)

- Except as permitted by Sentence (2), a washroom in a storey to which a barrier-free path of travel is required in accordance with Article 3.8.2.1., shall be barrier-free in accordance with the appropriate requirements in Articles 3.8.3.8. to 3.8.3.13.
- A washroom need not conform to the requirements of Sentence (1) provided
 - it is located within a suite of residential occupancy, except where required by 3.8.1.1.(6), or
 - other barrier-free washrooms are provided on the same floor area within 45 m.

(3) In a *building* in which water closets are required in accordance with Subsection 3.7.2., one or more barrier-free water closets shall be provided in the entrance storey, unless

(a) a barrier-free path of travel is provided to barrier-free water closets elsewhere in the *building*, or

(b) the water closets required by Subsection 3.7.2. are for dwelling units only.

(4) In any washroom containing not more than three water closets, one of water closets stalls may be replaced by a universal toilet room conforming to Article 3.8.3.12.[See Appendix Note A-3.8.2.3. NSBCR]

(5) In any washroom containing 4 or more water closets at least one of the water closets shall conform to Articles 3.8.3.8.(1).

(6) A universal toilet room conforming to Article 3.8.3.12. is permitted to be substituted for one water closet required by Sentence (5), in lieu of facilities for disabled persons in washrooms used by the general public. [See Appendix Note A-3.8.2.3. NSBCR]

(7) Where alterations are made to existing *buildings* a universal toilet room conforming to Article 3.8.3.12. is permitted to be provided in lieu of facilities for disabled persons in washrooms used by the general public.

3.8.3. Design Standards

3.8.3.1. Accessibility Signs

(1) Signs incorporating the international symbol of accessibility for persons with physical disabilities shall be installed to indicate the location of a barrier-free entrance. (See Appendix A, Division B, Volume 2, A-3.8.3.1.(1) to (3) NBC)

(2) A teletypewriter (TTY/TDD) phone, washroom, shower, elevator or parking space designed to be barrier-free shall be identified by a sign consisting of the international symbol of accessibility for persons with physical disabilities and by appropriate graphic or written directions to indicate clearly the type of facility available. (See Appendix A, Division B, Volume 2, A-3.8.3.1.(1) to (3) NBC)

(3) If a washroom is not designed to accommodate persons with physical disabilities in a storey to which a barrier-free path of travel is required, signs shall be provided to indicate the location of barrier-free facilities. (See Appendix A, Division B, Volume 2, A-3.8.3.1.(1) to (3) NBC)

(4) Signs incorporating the symbol of accessibility for persons with hearing disabilities shall be installed to indicate the location of facilities for persons with hearing disabilities. (See Appendix A, Division B, Volume 2, A-3.8.3.1(4) to (3) NBC)

3.8.3.2. Exterior Walks

(1) Exterior walks that form part of a barrier-free path of travel shall

- a) be not less than 1 100 mm wide, and
- b) have a level area conforming to Clause 3.8.3.4.(1)(c) adjacent to each entrance doorway.

(2) A curb ramp shall have

- a) a minimum width of 1200 mm
- b) a maximum slope of 1 in 12
- c) flared sides with a maximum slope of 1 in 10. (See Appendix Note A-3.8.3.2. NSBCR)

3.8.3.3. Doorways and Doors

(1) Every doorway that is located in a barrier-free path of travel shall have a clear width not less than 800 mm when the door is in the open position. (See Appendix A, Division B, Volume 2, A-3.8.3.3.(1) NBC)

(2) Door operating devices shall be of a design which does not require tight grasping and twisting of the wrist as the only means of operation. (See Appendix A, Division B, Volume 2, A-3.8.3.3.(3) NBC)

(3) A threshold for a doorway referred to in sentences (1) or (2) shall not be more than 13 mm higher than the finished floor surface and shall be bevelled to facilitate the passage of wheelchairs.

(4) Except as permitted by Sentences (5) and (11), every door that provides a barrier-free path of travel through an entrance referred to in Article 3.8.1.2. shall be equipped with a power door operator if the entrance serves

- (a) a hotel,
- (b) a *building* containing a Group B, Division 2 major occupancy, or
- (c) a *building* more than 500 m² in *building area* containing an assembly occupancy, a business and personal services occupancy or a mercantile occupancy. (See Appendix A, Division B, Volume 2, A-3.8.3.3.(5) NBC)

(5) The requirements of Sentence 3.8.3.3.(4) do not apply to an individual suite having an area less than 500 m² in a *building* having only suites of assembly occupancy, business and personal services occupancy or mercantile occupancy if the suite is completely separated from the remainder of the *building* so that there is no access to the remainder of the *building*.

(6) Except as permitted by Sentence 3.8.3.3.(7) and except for a door with a power door operator, a closer for a door in a barrier-free path of travel shall be designed to permit the door to open when the force applied to the handle, push plate or latch-releasing device is not more than

- (a) 38 N in the case of an exterior door, or
- (b) 22 N in the case of an interior door.

(7) Sentence 3.8.3.3.(6) does not apply to a door at the entrance to a dwelling unit, or where greater forces are required in order to close and latch the door against the prevailing difference in air pressure on opposite sides of the door. (See Appendix A, Division B, Volume 2, A-3.8.3.3.(8) NBC)

(8) Except for a door at the entrance to a dwelling unit, a closer for an interior door in a barrier-free path of travel shall have a closing period of not less than 3 s measured from when the door is in an open position of 70° to the doorway, to when the door reaches a point 75 mm from the closed position, measured from the leading edge of the latch side of the door. (See Appendix A, Division B, Volume 2, A-3.8.3.3.(9) NBC)

(9) Unless equipped for power door operation, a door in a barrier-free path of travel shall have a clear space on the latch side extending the height of the doorway and not less than

- (a) 600 mm beyond the edge of the door opening if the door swings toward the approach side, and
- (b) 300 mm beyond the edge of the door opening if the door swings away from the approach side. (See Appendix A, Division B, Volume 2, A-3.8.3.3.(10) NBC)

(10) A vestibule located in a barrier-free path of travel shall be arranged to allow the movement of wheelchairs between doors and shall provide a distance between 2 doors in series of not less than 1 200 mm plus the width of any door that swings into the space in the path of travel from one door to another.

(11) Only the active leaf in a multiple leaf door in a barrier-free path of travel need conform to the requirements of this Article.

(12) Except as provided in Clause 3.8.3.4.(1)(c), the floor surface on each side of a door in a barrier-free path of travel shall be level within a rectangular area

- (a) as wide as the door plus the clearance on the latch side required by Sentence 3.8.3.3.(9), and
- (b) whose dimension perpendicular to the closed door not less than the width of the barrier-free path of travel but need not exceed 1 500 mm.

(13) The power door operator required by Sentence (4) shall function for passage in both directions through the door.

(14) Where a power door operator is required at least one leaf in each set of doors in the barrier free path of travel through a vestibule shall meet the requirements. (See Appendix A-3.8.3.3.(14) NSBCR)

(15) Doorways in a path of travel to and into at least one bathroom within a suite of residential occupancy shall have a clear width of not less than 800 mm when the door is in the open position.

3.8.3.4. Ramps

(1) A ramp located in a barrier-free path of travel shall

- (a) have a width not less than 870 mm between handrails,
- (b) have a slope not more than 1 in 12 (See Appendix A, Division B, Volume 2 A-3.8.3.4.(1)(b) NBC),
- (c) have a level area not less than 1 500 by 1 500 mm at the top and bottom and at intermediate levels of a ramp leading to a door, so that on the latch side the level area extends not less than
 - i) 600 mm beyond the edge of the door opening where the door opens towards the ramp, or
 - ii) 300 mm beyond the edge of the door opening where the door opens away from the ramp (See Appendix A, Division B, Volume 2, A-3.8.3.4.(1)(c) NBC),
- (d) have a level area not less than 1 200 mm long and at least the same width as the ramp
 - i) at intervals not more than 9 m along its length, and
 - ii) where there is an abrupt change in the direction of the ramp, and
- (e) except as permitted by Sentence (2), be equipped with handrails and guards conforming to Articles 3.4.6.4. and 3.4.6.5.

(2) The requirement for handrails in Clause 3.8.3.4.(1)(e) need not apply to a ramp serving as an aisle for fixed seating.

(3) Floors or walks in a barrier-free path of travel having a slope steeper than 1 in 20 shall be designed as ramps.

3.8.3.5. Passenger-elevating Device

(1) A passenger-elevating device referred to in Sentence 3.8.1.1.(1)(c) shall conform to CSA B355, "Lifts for Persons with Physical Disabilities."

3.8.3.6. Spaces in Seating Area

(1) Spaces designated for wheelchair use referred to in Sentence 3.8.2.1.(3) shall be

- (a) clear and level, or level with removable seats,
- (b) not less than 900 mm wide and 1 525 mm long to permit a wheelchair to enter from a side approach and 1 220 mm long where the wheelchair enters from the front or rear of the space,
- (c) arranged so that at least 2 designated spaces are side by side,
- (d) located adjoining a barrier-free path of travel without infringing on egress from any row of seating or any aisle requirements, and
- (e) situated, as part of the designated seating plan, to provide a choice of viewing location and a clear view of the event taking place.

3.8.3.7. Assistive Listening Devices

(See Appendix A, Division B, Volume 2, A-3.8.3.7. NBC)

(1) Except as permitted in Sentence (2), in *buildings* of assembly occupancy, all classrooms, auditoria, meeting rooms, churches or places of worship, and theatres with an area of more than 100 m², and all courtrooms shall be equipped with an assistive listening system encompassing the entire seating area.

(2) Where the assistive listening system required in Sentence (1) is an induction loop system, only half the seating area in the room need be encompassed.

3.8.3.8. Water Closet Stalls

(1) At least one water closet stall or enclosure in a room or space required by Article 3.8.2.3. to be barrier-free shall

- (a) be not less than 1 500 mm wide by 1 500 mm deep,
- (b) be equipped with a door which shall
 - (i) be capable of being latched from the inside,
 - (ii) provide a clear opening not less than 800 mm wide with the door in the open position,
 - (iii) swing outward, unless sufficient room is provided within the stall or enclosure to permit the door to be closed without interfering with the wheelchair

(See Appendix A, Division B, Volume 2, A-3.8.3.8.(1) (b)(iii) NBC)

- (iv) be provided on the inside with a door pull not less than 140 mm long located so that its midpoint is not less than 200 mm and not more than 300 mm from the hinged side of the door and not less than 900 mm and not more than 1 000 mm above the floor (See Appendix A, Division B, Volume 2, A-3.8.3.8.(1) (b)(iv) NBC), and
- (v) be provided with a door pull on the outside, near the latch side of the door,

- (c) have a water closet located so that its centre line is 460 mm from the wall with the grab bar and 1030 mm from any obstruction on the other side wall.
- (d) be equipped with grab bars which shall
 - (i) be mounted horizontally on the side wall closest to the water closet and shall extend not less than 450 mm in both directions from the most forward point of the water closet
(See Appendix A, Division B, Volume 2, A-3.8.3.8.(1) (d)(i) NBC),
 - (ii) be mounted horizontally on the wall behind the water closet, extending not less than 600 mm and centred on the toilet bowl, if the water closet does not have an attached water tank,
 - (iii) be mounted not less than 840 mm and not more than 920 mm above the floor,
 - (iv) be installed to resist a load of not less than 1.3 kN applied vertically or horizontally,
 - (v) be not less than 30 mm and not more than 40 mm in diameter, and
 - (vi) have a clearance of not less than 35 mm and not more than 45 mm from the wall,
- (e) be equipped with a coat hook mounted not more than 1 200 mm above the floor on a side wall and projecting not more than 50 mm from the wall, and
- (f) have a clearance of not less than 1 700 mm between the outside of the stall face and the face of an in-swinging washroom door and 1 400 mm between the outside of the stall face and any wall-mounted fixture.

3.8.3.9. Water Closets

(See Appendix A, Division B, Volume 2, A-3.8.3.9.(1) NBC)

- (1) A water closet for a person with physical disabilities shall
 - (a) be equipped with a seat located at not less than 400 mm and not more than 460 mm above the floor,
 - (b) be equipped with hand-operated flushing controls that are easily accessible to a wheelchair user or be automatically operable,
 - (c) be equipped with a seat lid or other back support, and
 - (d) not have a spring-actuated seat.
 - (e) be located so that its centre line is 460 mm from the wall with the grab bar and 1030 mm from any obstruction on the other side wall.

3.8.3.10. Urinals

- (1) If urinals are provided in a barrier-free washroom, at least one urinal shall be
 - (a) wall mounted, with the rim located between 488 mm and 512 mm above the floor, or
 - (b) floor mounted, with the rim level with the finished floor.

- (2) The urinal described in Sentence (1) shall have
- (a) a clear width of approach of 800 mm centred on the urinal,
 - (b) no step in front, and
 - (c) installed on each side a vertically mounted grab bar that is not less than 300 mm long, with its centerline 1 000 mm above the floor, and located not more than 380 mm from the centerline of the urinal.

3.8.3.11. Lavatories

(See Appendix A, Division B, Volume 2, A-3.8.3.11.(1)(c) and (d) NBC)

- (1) A barrier-free washroom shall be provided with a lavatory which shall
- (a) be located so that the distance between the centerline of the lavatory and the side wall is not less than 460 mm,
 - (b) have a rim height not more than 865 mm above the floor,
 - (c) have a clearance beneath the lavatory not less than
 - (i) 760 mm wide,
 - (ii) 735 mm high at the front edge,
 - (iii) 685 mm high at a point 205 mm back from the front edge, and
 - (iv) 230 mm high over the distance from a point 280 mm to a point 430 mm back from the front edge
 - (d) have insulated pipes where they would otherwise present a burn hazard
 - (e) have soap dispensers located close to the lavatory, not more than 1 200 mm above the floor, and accessible to persons in wheelchairs, and
 - (f) have towel dispensers or other hand drying equipment located not more than 1 200 mm above the floor in an area that is accessible to persons in wheelchairs.
- (2) If mirrors are provided in a barrier-free washroom, at least one mirror shall be
- (a) mounted with its bottom edge not more than 1 000 mm above the floor, or
 - (b) be inclined to the vertical to be usable by a person in a wheelchair.

3.8.3.12. Universal Toilet Room (See NBC 3.7.2. (Part 3, Division B Volume 1) and (See Appendix A, Division B, Volume 2, A-3.8.3.12. NBC)

- (1) A universal toilet room shall
- (a) be served by a barrier-free path of travel,
 - (b) have a door capable of being locked from the inside and released from the outside in case of emergency and which has
 - (i) a graspable latch operating mechanism located not less than 900mm and not more than 1 000 mm above the floor,
 - (ii) on an outward swinging door, a door pull not less than 140 mm long located on the inside so that its midpoint is not less than 200 mm and not more than 300 mm from the hinged side of the door and not less than 900 mm and not more than 1 000 mm above the floor, and

- (See Appendix A, Division B, Volume 2, A-3.8.3.8.(1)(b)(iv) NBC)
- (iii) on an outward swinging door, have a door closer, spring hinges or gravity hinges, so that the door closes automatically
 - (c) have one lavatory conforming to Article 3.8.3.11.,
 - (d) have one water closet conforming to the requirements of Article 3.8.3.9. located so that its centre line is 460 mm from the wall with the grab bar and 1030 mm from any obstruction on the other side wall.
 - (e) have grab bars conforming to Clause 3.8.3.8.(1)(d),
 - (f) have no internal dimension between walls less than 1 700 mm,
 - (g) have a coat hook conforming to Clause 3.8.3.8.(1)(e) and a shelf located not more than 1 200 mm above the floor,
 - (h) be designed to permit a wheelchair to back in alongside the water closet in the space referred to in Subclause (d), and
 - (i) be designed to permit a wheelchair to turn in an open space that has a diameter not less than 1 500 mm.

3.8.3.13. Showers and Bathtubs

(See Appendix A, Division B, Volume 2, A-3.8.3.13.(1)(b) and (f) NBC)

(1) Except within a suite of residential occupancy, if showers are provided in a *building*, at least one shower stall in each group of showers shall be barrier-free and shall

- (a) be not less than 1 500 mm wide and 900 mm deep,
- (b) have a clear floor space at the entrance to the shower not less than 900 mm deep and the same width as the shower, except that fixtures are permitted to project into that space provided they do not restrict access to the shower,
- (c) have a slip-resistant floor surface,
- (d) have a bevelled threshold not more than 13 mm higher than the finished floor,
- (e) have a hinged seat that is not spring loaded, or a fixed seat that shall be
 - (i) not less than 450 mm wide and 400 mm deep,
 - (ii) mounted approximately 450 mm above the floor, and
 - (iii) designed to carry a minimum load of 1.3 kN,
- (f) have a horizontal grab bar conforming to Subclauses 3.8.3.8.(1)(d)(iv), (v) and (vi) that shall be
 - (i) not less than 900 mm long,
 - (ii) mounted approximately 850 mm above the floor, and
 - (iii) located on the wall opposite the entrance to the shower so that not less than 300 mm of its length is at one side of the seat, (See Appendix A, Division B, Volume 2, A-3.8.3.13.(1)(f) NBC),
- (g) have a pressure-equalizing or thermostatic mixing valve controlled by a lever or other device operable with a closed fist from the seated position,

- (h) have a hand-held shower head with not less than 1 500 mm of flexible hose located so that it can be reached from the seated position and equipped with a support so that it can operate as a fixed shower head, and
- (i) have fully recessed soap holders that can be reached from the seated position.

(2) If individual shower stalls are provided for use by residents and patients in *buildings* of Group B, Division 2 institutional occupancy shall conform to the requirements of Clauses (1)(a) to (i) except where

- (a) common showers are provided in conformance with Clauses (1)(a) to (i), or
- (b) common bath tubs equipped with hoist mechanisms to accommodate residents and patients are available.

(3) If a bathtub is installed in a suite of residential occupancy required to be barrier-free, the bathtub and entrance to the bathtub shall

- (a) comply with the dimensions of Clauses 3.8.3.13.(1)(a) and (b),
- (b) conform to Article 3.7.2.9.,
- (c) be equipped with a hand-held shower head and controls conforming to Clause 3.8.3.13(1)(h). but with a hose 1 800 mm long, and
- (d) have grab bars that are
 - (i) 1 200 mm long, located vertically at the end of the bathtub that is adjacent to the clear floor space, with the lower end between 180 mm and 280 mm above the bathtub rim,
 - (ii) 1 200 mm long located horizontally along the length of the bathtub located 180 mm to 280 mm above the bathtub rim.
 - (iii) be installed to resist a load of not less than 1.3 kN applied vertically or horizontally,
 - (iv) be not less than 30 mm and not more than 40 mm in diameter, and
 - (vi) have a clearance of not less than 35 mm and not more than 45 mm from the wall.

3.8.3.14. Counters (See Appendix A, Division B, Volume 2, A-3.8.3.14.(1) NBC)

(1) Every counter more than 2 m long, at which the public is served, shall have at least one barrier-free section not less than 760 mm long centred over the knee space required by Sentence (3).

(2) A barrier-free counter surface shall be not more than 865 mm above the floor.

(3) Except as permitted by Sentence (4), knee space beneath each side of a barrier-free counter intended to be used as a work surface shall be not less than

- (a) 760 mm wide,
- (b) 685 mm high, and
- (c) 485 mm deep.

(4) A counter that is used in a cafeteria or one that performs a similar function in which movement takes place parallel to the counter need not have knee space underneath the counter.

3.8.3.15. Shelves or Counters for Telephones and TTY/TDD Telephone Services (See Appendix A, Division B, Volume 2, A-3.8.3.15. NBC)

(1) If built-in shelves or counters are provided for public telephones, they shall be level and shall

a) be not less than 305 mm deep, and

b) have, for each telephone provided, a clear space not less than 250 mm wide having no obstruction within 250 mm above the surface.

(2) The top surface of a section of the shelf or counter described in Sentence (1) serving at least one telephone shall be not more than 865 mm above the floor.

(3) If a wall-hung telephone is provided above the shelf or counter section described in Sentence (2), it shall be located so that the receiver and coin slot are not more than 1 200 mm above the floor.

(4) Where public telephones are provided, at least one telephone shall be provided with a variable volume control on the receiver.

(5) At least one built-in teletypewriter telephone (TTY/TDD) shall be provided and located in a publicly accessible location where

(a) four or more public access telephones are provided, including interior and exterior locations, or

(b) the *building area* exceeds 600 m² in a Group A, Group B, Group D, Group E occupancy, or in a hotel or motel, or

(c) where a hotel or motel, is required by Sentence 3.8.1.1.(2) to provide a barrier free suite, or

(d) where a Tourist Cabin is required by Sentence 3.8.1.1.(2) to provide barrier free suites, at least one built-in teletypewriter telephone (TTY/TDD) must be located in public location, or a portable unit available for use.

(See Appendix A-3.8.3.15.(5)(d) NSBCR)

(6) Where public telephones are provided, at least one electrical receptacle shall be provided within 500 mm of one of the public telephones.

3.8.3.16. Drinking Fountains

(1) If drinking fountains are provided, at least one shall be barrier-free and shall

(a) have a spout located near the front of the unit not more than 915 mm above the floor, and

(b) be equipped with controls that are easily operable from a wheelchair using one hand with a force of not more than 22 N or be automatically operable.

3.8.3.17. Sleeping Units in Roofed Accommodation

(1) Where sleeping units suites are required by Sentence 3.8.1.1.(2), they shall have

- (a) sufficient space to provide a turning area of not less than 1 500 mm diameter on one side of a bed,
- (b) sufficient space to provide clearance of not less than 900 mm to allow for functional use of units by persons in wheelchairs,
- (c) an accessible balcony where balconies are provided,
- (d) at least one closet that provides
 - (i) a minimum clear opening of 900 mm,
 - (ii) clothes hanger rods located at a height of 1 200 mm, and
 - (iii) at least one shelf located at a height of 1 370 mm,
- (e) light switches, thermostats and other controls that are specifically provided for use by the occupant shall be mounted not more than 1 375 mm above the floor,
- (f) electrical receptacles located between 455 mm and 550 mm above the finished floor,
- (g) a GFI outlet located not more than 1 200 mm above the floor, and
- (h) an accessible bathroom which shall be designed to provide manoeuvring space up to each type of fixture required to be usable by persons in a wheelchair conforming to the following
 - (i) a floor space of not less than 3.7 m² with no dimension less than 1 700 mm when the door swings out and 4.0 m² with no dimension less than 1 800 mm when the door swings in,
 - (ii) fixtures located to provide maximum manoeuvrability for persons in wheelchairs,
 - (iii) have grab bars conforming to Clause 3.8.3.8.(1)(d),
 - (iv) have a coat hook conforming to Clause 3.8.3.8.(1)(e),
 - (v) a water closet conforming to Article 3.8.3.9.,
 - (vi) contain at least one lavatory conforming to Article 3.8.3.11,
- (i) washroom accessories conforming to Clause 3.8.3.11.(1)(f), and
- (j) a lock on the entrance door that is operable with one hand.

(2) If a bathtub is installed in a suite of residential occupancy required to be barrier-free, the bathtub and entrance to the bathtub shall

- (a) comply with the dimensions of Clauses 3.8.3.13.(1)(a) and (b),
- (b) be equipped with a hand-held shower head and controls conforming to Clause 3.8.3.13(1)(h). but with a hose 1 800 mm long, and
- (c) have grab bars, that
 - (i) are 1 200 mm long, located vertically at the end of the bathtub that is adjacent to the clear floor space, with the lower end between 180 mm and 280 mm above the bathtub rim, and

- (ii) are 1 200 mm long located horizontally along the length of the bathtub located 180 mm to 280 mm above the bathtub rim
- (iii) be installed to resist a load of not less than 1.3 kN applied vertically or horizontally,
- (iv) be not less than 30 mm and not more than 40 mm in diameter, and
- (v) have a clearance of not less than 35 mm and not more than 45 mm from the wall.

(3) If a shower is installed within a suite of residential occupancy, required to be barrier-free at least one shower stall shall be barrier-free and shall

- (a) be not less than 1 500 mm wide and 900 mm deep,
- (b) have a clear floor space at the entrance to the shower not less than 900 mm deep and the same width as the shower, except that fixtures are permitted to project into that space provided they do not restrict access to the shower (See Appendix A, Division B, Volume 2, A-3.8.3.13.(1)(b) NBC),
- (c) have a slip-resistant floor surface,
- (d) have a bevelled threshold not more than 13 mm higher than the finished floor,
- (e) have a hinged seat that is not springloaded or a fixed seat that shall be
 - (i) not less than 450 mm wide and 400 mm deep,
 - (ii) mounted approximately 450 mm above the floor, and
 - (iii) designed to carry a minimum load of 1.3 kN,
- (f) have a horizontal grab bar that shall be
 - (i) not less than 900 mm long,
 - (ii) mounted approximately 850 mm above the floor, and
 - (iii) located on the wall opposite the entrance to the shower so that not less than 300 mm of its length is at one side of the seat,
 - (iv) be installed to resist a load of not less than 1.3 kN applied vertically or horizontally,
 - (v) be not less than 30 mm and not more than 40 mm in diameter, and
 - (vi) have a clearance of not less than 35 mm and not more than 45 mm from the wall,
- (g) have a pressure-equalizing or thermostatic mixing valve controlled by a lever or other device operable with a closed fist from the seated position,
- (h) have a hand-held shower head with not less than 1 500 mm of flexible hose located so that it can be reached from the seated position and equipped with a support so that it can operate as a fixed shower head, and
- (i) have fully recessed soap holders that can be reached from the seated position.

3.8.3.18. Suites of Residential Occupancies Required to Be Barrier-Free General

(1) Where a suite of residential occupancy is required by Sentence 3.8.1.1.(6) to provide barrier free access it shall be served by

- (a) entrances in accordance with Article 3.8.1.2.,
- (b) barrier-free path of travel to, into, and throughout each required suite in accordance with Article 3.8.1.3.,
- (c) an accessible balcony if required in accordance with NBC 3.3.1.7. 1.(c) Part 3, Division B Volume 1, and
- (d) barrier free controls for the operation of *building* services or safety devices, including electrical switches, thermostats and intercom switches, shall be accessible to a person in a wheelchair, operable with one hand, and mounted not more than 1 200 mm above the floor and electrical receptacles shall be located between 400 mm and 550 mm above the finished floor, except as required by clause 3.8.3.18. (3)(f) (bathroom) and subclause 3.8.3.18.(4)(c)(v). (kitchen)

Sleeping Area

(2) Where a suite of residential occupancy is required by Sentence 3.8.1.1.(6) to provide barrier free access it shall contain at least one sleeping area with

- (a) a minimum floor area 12.25 m² ,
- (b) a least one horizontal room dimension not less than 3.35 m, and
- (c) at least one closet that provides
 - i) a minimum clear opening of 900 mm,
 - ii) clothes hanger rods located at a height of 1 200 mm, and
 - iii) at least one shelf located at a height of 1 370 mm.

Bathroom

(3) Where a suite of residential occupancy is required by Sentence 3.8.1.1.(6) to provide barrier free access, a minimum of one accessible bathroom shall be provided with

- (a) a floor space of not less than 3.7 m² with no dimension less than 1 700 mm when the door swings out and 4.0 m² with no dimension less than 1 800 mm when the door swings in,
- (b) a water closet conforming to Article 3.8.3.9.,
- (c) a lavatory conforming to Article 3.8.3.11.,
- (d) where a shower is provided, it shall conform to Clauses 3.8.3.13.(1)(a) to (i),
- (e) where a tub is provided, it shall conform to Clauses 3.8.3.13.(3)(a) to (d), and
- (f) a GFI razor outlet located not more than 1 200 mm above the floor, and

Kitchen

(4) Where a suite of residential occupancy is required by Sentence 3.8.1.1.(6) to provide barrier free access the kitchen shall have

- (a) a minimum 1 200 mm clearance between counters and all opposing base cabinets, counter tops, appliances, or walls except in a U shape kitchen the minimum distance shall be 1 500 mm and
- (b) a minimum clear floor space 750 mm x 1 200 mm shall be provided at each
 - (i) range
 - (ii) cooktop
 - (iii) oven
 - (iv) refrigerator/freezer
 - (v) dishwasher and
 - (vi) other major appliances
- (c) a minimum of one work surface that is
 - (i) 750 mm wide x 600 mm deep,
 - (ii) 810 mm to 860 mm above the floor,
 - (iii) have a clear floor area 750 mm 1 200 mm which may extent 480 mm under the work surface,
 - (iv) have a knee space a minimum of 750 mm wide, 480 mm deep, and 680 high, and
 - (v) have a minimum of one electrical receptacle shall be located at the front or side of the work surface.
- (d) base cabinets shall have a minimum toe space 150 mm dep and 230 mm high.
- (e) sinks
 - (i) shall be mounted with the rim between 810 mm and 860 mm above the floor,
 - (ii) have a knee space a minimum of 750 mm wide, 250 mm deep, and a toe space 750 mm wide 230 deep and 230 mm high,
 - (iii) have a clear floor area 750 mm 1 200 mm which may extent 480 mm under the work surface,
 - (iv) have faucets with lever handles, and
 - (v) have insulated hot water and drain pipes where they may abut required clear space.
- (f) upper cabinets shall have a minimum of one shelf not more than 1200 mm above the floor.
- (g) storage cabinets doors and drawers they shall
 - (i) have a handles that is easily graspable, and
 - (ii) be mounted at the top of base cabinets and bottom of upper cabinets.
- (h) all controls shall comply with Clause 3.8.3.18.(1)(d) except as required by subclause 3.8.3.18.(4)(c)(v).

Schedule D
ALTERNATE COMPLIANCE METHODS FOR EXISTING *Buildings*

No.	Code Requirement	Alternate Compliance Method
1	<p>Fire Separations 3.1.3.1. (Part 3, Division B, Volume 1) and Table 3.1.3.1. (Part 3, Division B, Volume 1); 9.10.9. (Part 9, Division B, Volume 1) 2 h fire separation required between some major occupancies.</p>	<p>Except for F1 occupancies, 1 h fire separation is acceptable, if the <i>building</i> is fully sprinklered.</p>
2	<p>Fire Separations 3.1.3. (Part 3, Division B, Volume 1) and Table 3.1.3.1. (Part 3, Division B, Volume 1); 9.10.9. (Part 9, Division B, Volume 1) 1 h fire separation required between some major occupancies.</p>	<p>½ h fire separation is acceptable if the <i>building</i> is fully sprinklered.</p>
3	<p>Noncombustible Construction 3.1.5. (Part 3, Division B, Volume 1) and 9.10.6.1. (Part 9, Division B, Volume 1) All materials used in noncombustible construction must be noncombustible unless otherwise permitted</p>	<p>1. Roofs may be of combustible construction provided the <i>building</i> is fully sprinklered. 2. Up to 10% gross floor area to a maximum of 10% of any one floor area may be of combustible construction provided the <i>building</i> is fully sprinklered.</p>
4	<p>Fire-resistance Rating 3.1.7.1.(1) (Part 3, Division B, Volume 1); 9.10.3.1. (Part 9, Division B, Volume 1) Where a material, assembly of materials or structural member is required to have a fire resistance rating it shall be tested in accordance with CAN/ULC-S101.</p>	<p>A fire-resistance rating may also be used based on 1. HUD No. 8 Guideline on Fire Ratings of Archaic Materials and Assemblies. 2. Fire Endurance of Protected Steel Columns and Beams, DBR Technical Paper No. 194. 3. Fire Endurance of Unit Masonry Walls, DBR Technical Paper No. 207. 4. Fire Endurance of Light-Framed and Miscellaneous Assemblies, DBR Technical Paper No. 222.</p>

No.	Code Requirement	Alternate Compliance Method
5	<p>Rating of Supporting Construction 3.1.7.5. (Part 3, Division B, Volume 1); 9.10.8.3. (Part 9, Division B, Volume 1) Supporting assemblies to have fire resistance rating at least equivalent to that of the supported floor.</p>	<p>Heavy timber construction is permitted to have a fire resistance rating less than would be required by the Code provided the <i>building</i>;</p> <ul style="list-style-type: none"> (a) is fully sprinklered, and (b) does not exceed 5 storeys in <i>building height</i>.
6	<p>Continuity of Fire Separations 3.1.8.3.(1) (Part 3, Division B, Volume 1) and (2); 9.10.9.2. (Part 9, Division B, Volume 1) Fire separations are required to be continuous above the ceiling space.</p>	<p>Fire separations are not required to be continuous above the ceiling space where</p> <ul style="list-style-type: none"> (a) the ceiling space is non-combustible construction, (b) both fire compartments are sprinklered, or (c) the ceiling has a minimum rating of 30 minutes.
7	<p>Wired Glass 3.1.8.5.(1) (Part 3, Division B, Volume 1) and 3.1.8.14.(2, Part 3, Division B, Volume 1); 9.10.13.1. (Part 9, Division B, Volume 1) and 9.10.13.5. (Part 9, Division B, Volume 1) 6 mm wired glass in steel frame required in fire separations.</p>	<p>For fixed transoms or sidelights, 6 mm wired glass fixed to a wood frame of at least 50 mm thickness with steel stops is permitted in a required fire separation.</p>
8	<p>Mezzanines 3.2.1.1.(3) to (6) (Part 3, Division B, Volume 1); 9.10.4.1. (Part 9, Division B, Volume 1) Mezzanines enclosing more than 10% above the horizontal plane are considered as storey in <i>building height</i>.</p>	<p>Mezzanines may enclose up to 20% above the horizontal plane and not be considered a storey in <i>building height</i> if the <i>building</i> is fully sprinklered.</p>
9	<p><i>Building Height</i> 3.2.2.21. to 3.2.2.84. (Part 3, Division B, Volume 1) Noncombustible construction required for <i>buildings</i> over 4 storeys in <i>building height</i>.</p>	<p><i>Buildings</i> may be of combustible construction up to 5 storeys provided</p> <ul style="list-style-type: none"> (a) the <i>building</i> is fully sprinklered, (b) the <i>building</i> contains Group C, D, E, F2 or F3 occupancies, and (c) floor assemblies not required to exceed 1 h fire separation requirements may be of heavy timber construction.

No.	Code Requirement	Alternate Compliance Method
10	Spatial Separation 3.2.3. (Part 3, Division B, Volume 1); 9.10.14. (Part 9, Division B, Volume 1) The maximum area of unprotected openings.	The area of unprotected opening is not limited provided <ul style="list-style-type: none"> (a) the exterior walls have a interior thermo barrier of 12.7 mm, thick gypsum board of lath, and plaster in good condition, (b) the limiting distance is a minimum 1 m, (c) the entire <i>building</i> has a supervised sprinkler system in conformance with Sentence 3.2.4.9.(2),(Part 3, Division B, Volume 1) and (d) the sprinkler system is connected to the fire department in conformance with Sentence 3.2.4.7.(4). (Part 3, Division B, Volume 1)
11	Construction of Exposing <i>Building</i> Face 3.2.3.7. (Part 3, Division B, Volume 1); 9.10.14.5. and 9.10.15.5. (Part 9, Division B, Volume 1) The exposing <i>building</i> face is required to have a fire resistance rating and/or be of noncombustible construction.	Exposing <i>building</i> face is not required to have a fire resistance rating if the <i>building</i> is fully sprinklered. Also, the exposing <i>building</i> face if not required to be of noncombustible construction if it is protected by an exterior sprinkler system conforming to NFPA 13 and has a thermo barrier as specified in No.10(a) of these compliance tables.
12	Roof Covering Rating 3.1.15.2. (Part 3, Division B, Volume 1) Class A, B or C roof covering in conformance with CAN/ULC-S107 required.	For existing roofs not covered by a Class A, B or C roofing a manually operated deluge system in accordance with NFPA 13 is permitted.

No.	Code Requirement	Alternate Compliance Method
13	<p>Interconnected Floor Space 3.2.8. (Part 3, Division B, Volume 1); 9.10.1.2.(6) (Part 9, Division B, Volume 1) Openings that are not protected by shafts or closures shall be protected in conformance with section 3.2. (Part 3, Division B, Volume 1) or sentence 9.10.1.2.(6) (Part 9, Division B, Volume 1)</p>	<p>1. An open stair in <i>buildings</i> of maximum 3 storeys in <i>building height</i> need not comply with Subsection 3.2.8. (Part 3, Division B, Volume 1) provided;</p> <ul style="list-style-type: none"> (a) it is not a required exit stair, (b) the <i>building</i> contains a Group C or D occupancy, (c) the <i>building</i> is fully sprinklered with fast response sprinklers, (d) corridors opening into the interconnected floor space are separated from the interconnected floor space by a fire separation with the rating required for the corridor, and (e) smoke detectors are installed in the rooms opening into the interconnected floor space.
14	<p>Separation of Suites 3.3.1.1. (Part 3, Division B, Volume 1); 9.10.9.13. and 9.10.9.14. (Part 9, Division B, Volume 1), Suites are required to be separated from adjoining suites by 3/4 h or 1 h rated fire separations.</p>	<p>Existing ½ h fire separations are acceptable in fully sprinklered <i>buildings</i> not exceeding 5 storeys in <i>building height</i>.</p>
15	<p>Corridor Fire Separation 3.3.1.4. (Part 3, Division B, Volume 1); 9.10.9.15. (Part 9, Division B, Volume 1) Public corridors are required to be separated from the remainder of the <i>building</i> by a fire separation having a fire resistance rating of at least 3/4 h.</p>	<p>Existing corridors with ½ h fire resistance ratings, are acceptable in residential occupancies provided the <i>building</i></p> <ul style="list-style-type: none"> (a) does not exceed 5 storeys in <i>building height</i>, and (b) is fully sprinklered with fast response sprinklers.
16	<p>Corridor Width 3.3.1.9. and 3.4.3.1. (Part 3, Division B, Volume 1); 9.9.3.3. (Part 9, Division B, Volume 1) Public corridors and exit corridors are permitted to have a minimum width of 1 100 mm.</p>	<p>Public corridors and exit corridors are permitted with a minimum width of 800 mm provided</p> <ul style="list-style-type: none"> (a) the occupant load of the <i>building</i> is maximum 20 people, and (b) the <i>building</i> does not exceed 3 storeys in <i>building height</i>.

No.	Code Requirement	Alternate Compliance Method
17	<p>Door Swing 3.3.1.11. and 3.4.6.11.(Part 3, Division B, Volume 1) ; 9.9.6.5. (Part 9, Division B, Volume 1) Doors required to swing in the direction of exit travel.</p>	<p>2nd egress door from a room is not required to swing in the direction of exit travel provided</p> <ul style="list-style-type: none"> (a) the <i>building</i> is fully sprinklered and the system is supervised in conformance with Sentence 3.2.4.9.(2), (Part 3, Division B, Volume 1) and (b) the occupant load of the <i>building</i> is maximum 100 people.
18	<p>Stairs, Ramps, Handrails and Guards 3.3.1.14., 3.3.1.16., 3.3.1.18., 3.4.6.4 to 3.4.6.8. (Part 3, Division B, Volume 1); 9.8. (Part 9, Division B, Volume 1)</p>	<p>Existing conditions that do not comply fully with the requirements are permitted if they do not create a hazardous condition and are acceptable to the authority having jurisdiction.</p>
19	<p>Transparent Doors and Panels 3.3.1.19. (Part 3, Division B, Volume 1); 9.6.6.2. (Part 9, Division B, Volume 1) Glass in doors and sidelights are required to be protected by guards and to be safety glass.</p>	<p>Existing glass or transparent panels that do not comply fully with the requirements are permitted if sufficiently discernible or guards are provided in hazardous situations.</p>
20	<p>Dead-end Corridors 3.3.1.9.(7) (Part 3, Division B, Volume 1); 9.9.7.3. (Part 9, Division B, Volume 1) Dead-end corridors are permitted to a maximum length of 6 m.</p>	<ol style="list-style-type: none"> 1. Dead-end corridors are permitted to a maximum length of 10 m in Group C occupancies provided <ul style="list-style-type: none"> (a) the <i>building</i> is fully sprinklered with fast response sprinklers, and (b) smoke detectors are installed in the corridor system. 2. Dead-end corridors are permitted to a maximum of 15 m in length in Group D, E, F2 and F3 occupancies provided <ul style="list-style-type: none"> (a) the <i>building</i> is fully sprinklered with fast response sprinklers, and (b) smoke detectors are installed in the corridor system.

No.	Code Requirement	Alternate Compliance Method
21	<p>Exits 3.4.2.1. (Part 3, Division B, Volume 1); 9.9.8.2. (Part 9, Division B, Volume 1) Floor areas shall be served by not fewer than 2 exits except as permitted by 3.4.2.1.(2) (Part 3, Division B, Volume 1).</p>	<p>Floor areas may be served by a single exit within the limits of 3.4.2.1.(2) (Part 3, Division B, Volume 1) provided</p> <ul style="list-style-type: none"> (a) the <i>building</i> does not exceed 3 storeys in <i>building height</i>, (b) the <i>building</i> is fully sprinklered with fast response sprinklers, and (c) the <i>building</i> contains an approved fire alarm system with smoke detectors located in accordance with sentence 3.2.4.11. (Part 3, Division B, Volume 1)
22	<p>Reduction of Exit Width 3.4.3.4.(3) (Part 3, Division B, Volume 1); 9.9.6.1. (Part 9, Division B, Volume 1) Swinging doors in their swing shall not reduce the effective width of exit stairs and landings to less than 750 mm.</p>	<p>Existing swinging doors in their swing are permitted to reduce the effective width of exit stairs and landings to a minimum of 550 mm provided</p> <ul style="list-style-type: none"> (a) they serve Group C or D occupancies, (b) the <i>building</i> does not exceed 5 storeys in <i>building height</i>, and (c) the <i>building</i> is fully sprinklered.
23	<p>Fire Separation of Exits 3.4.4.1. (Part 3, Division B, Volume 1); 9.9.4. (Part 9, Division B, Volume 1) Exits are required to be separated from the remainder of the floor area by a fire separation having a fire-resistance rating of not less than 3/4 h.</p>	<ol style="list-style-type: none"> 1. Existing fire separations of ½ h, are acceptable provided the <i>building</i> is fully sprinklered with fast response sprinklers and does not exceed 3 storeys in <i>building height</i>. 2. <i>Buildings</i> not exceeding 5 storeys in <i>building height</i> may have exits that are separated by a 3/4 h fire separation provided the <i>building</i> is fully sprinklered.
24	<p>Exits Through Lobbies 3.4.4.2. (Part 3, Division B, Volume 1); 9.9.8.5. (Part 9, Division B, Volume 1) Rooms adjacent to the lobby are required to be separated by a fire separation.</p>	<p>Rooms adjacent to the lobby are not required to be separated by a fire separation provided;</p> <ul style="list-style-type: none"> (a) the floor area is sprinklered with fast response sprinklers, and (b) smoke detectors are installed in the adjacent rooms

No.	Code Requirement	Alternate Compliance Method
25	Rooms Opening into an Exit 3.4.4.4.(7) (Part 3, Division B, Volume 1); 9.9.5.9. (Part 9, Division B, Volume 1) Service rooms and ancillary rooms are not permitted to open directly into an exit.	Service rooms and ancillary rooms may open directly into an exit provided <ul style="list-style-type: none"> (a) the <i>building</i> is fully sprinklered, (b) the room is sprinklered with fast response sprinklers, (c) the door assembly has a fire protection rating of at least 20 min., (d) the <i>building</i> does not exceed 3 storeys in <i>building height</i>, and (e) weatherstripping is installed on the door to prevent the passage of smoke.
26	Illumination of Exit Signs 3.4.5.1.(2) (Part 3, Division B, Volume 1); 9.9.10.5. (Part 9, Division B, Volume 1) Exit signs are required to be illuminated continuously while the <i>building</i> is occupied.	In provincial or municipal designated heritage <i>buildings</i> where exit signage may compromise historic appearances, or authenticity of displays, exit signs may be installed to light only on an emergency condition, such as by the fire alarm system or due to power failure.
27	Clearance from Exit Doors 3.4.6.10. (1) (Part 3, Division B, Volume 1); 9.9.6.6. (Part 9, Division B, Volume 1) Stair risers shall not be closer than 300 mm from an exit door.	Except as permitted in Sentences 3.4.6.10.(2) or 9.9.6.6.(2), existing exit doors shall not extend beyond the first riser.
28	Fire Escapes 3.4.7. (Part 3, Division B) (Volume 1); 9.9.2.1. (Part 9, Division B, Volume 1) Fire escapes are required to conform to Article 3.4.7. (Part 3, Division B, Volume 1).	Existing fire escapes that do not completely conform to Article 3.4.7.1. are acceptable provided <ul style="list-style-type: none"> (a) they are acceptable to the authority having jurisdiction and (b) the <i>building</i> is fully sprinklered.
29	Fire Escape Construction 3.4.7.2. (Part 3, Division B, Volume 1).; 9.9.2.1. (Part 9, Division B, Volume 1).	Existing combustible fire escapes are permitted if the <i>building</i> is permitted to be of combustible construction by Part 3, (Part 3, Division B, Volume 1) Part 9 (Part 9, Division B, Volume 1) or by these Compliance Tables.

No.	Code Requirement	Alternate Compliance Method
30	Protection of Fire Escapes 3.4.7.4. (Part 3, Division B, Volume 1); 9.9.2.3. (Part 9, Division B, Volume 1) Openings in the exterior wall adjacent to the fire escape are required to be protected by closures.	Existing openings in the exterior wall adjacent to the fire escape are not required to be protected by closures provided <ul style="list-style-type: none"> (a) the <i>building</i> is fully sprinklered, and (b) a sprinkler head is located within 1.5 m of the opening required to be protected by Article 3.4.7.4. (Part 3, Division B, Volume 1)
31	Vertical Service Space 3.6.3.1. (Part 3, Division B, Volume 1) Vertical service spaces are required to be separated from the adjacent floor area by a rated fire separation.	Existing vertical service spaces that do not completely conform to the rated fire separation requirements are acceptable provided the <i>building</i> is fully sprinklered.
32	Height and Area of Rooms 3.7.1. (Part 3, Division B, Volume 1); 9.5. (Part 9, Division B, Volume 1) The height and area of rooms are required to comply to minimum dimension requirements.	Existing rooms are not required to comply to the minimum dimension requirements of Subsection 3.6.1. (Part 3, Division B, Volume 1) or Section 9.5. (Part 9, Division B, Volume 1)
33	Window Areas 9.7.1.2. (Part 9, Division B, Volume 1) Windows in dwelling units are required to comply to minimum dimensions.	Existing windows are not required to comply with the minimum dimensions of Article 9.7.1.2. (Part 9, Division B, Volume 1)
34	Washrooms Required to be Barrier-Free 3.8.2.3. (1) NSBCR Except as permitted by Sentence (2), a washroom in a storey to which a barrier-free path of travel is required in accordance with Article 3.8.2.1., shall be barrier-free in accordance with the appropriate requirements in Articles 3.8.3.8. to 3.8.3.13. NSBCR	Except in Assembly occupancies and Group D Business and personal services occupancies intended to offer medical or therapeutic services, a barrier free washroom need not be provided in an existing <i>building</i> with a <i>building area</i> less than 120 m ² .

No.	Code Requirement	Alternate Compliance Method
35	<p>Entrances 3.8.1.2.(1) NSBCR</p> <p>(1) In addition to the barrier-free entrances required by Sentence (2), not less than 50% of the pedestrian entrances of a <i>building</i> referred to in Sentence 3.8.1.1.(1) shall be barrier-free and shall lead from</p> <p>a) the outdoors at sidewalk level, or</p> <p>b) a ramp that conforms to Article 3.8.3.4. and leads from a sidewalk.</p>	<p>Where an existing <i>building</i> has</p> <p>(a) a <i>building area</i> less than 120 m², (1292 sq. ft.), and</p> <p>(b) the slope from the entrance level floor at the entrance door to a street or public way is greater than 1 in 10, and</p> <p>(c) no entrance is more than 1 m to the property line, and</p> <p>(d) no alternate access to an entrance from a street or public way is possible; (See Appendix Note No. 35)</p> <p>the owner may use a stair with</p> <p>(a) a maximum rise of 150 mm (6"), and</p> <p>(b) a minimum run of 280 mm (11"), and</p> <p>(c) tactile landings, and</p> <p>(d) contrasting colour nosings, and</p> <p>(e) and unobstructed width of 1 m.</p>
36	<p>Mechanical Systems</p> <p>Part 6 and Part 7.</p>	<p>Existing mechanical systems in <i>buildings</i> are not required to fully comply to the requirements of Parts 6 or 7 provided</p> <p>(a) it is not an unsafe condition and</p> <p>(b) it is acceptable to the authority having jurisdiction.</p>

Schedule E
Part 10
Energy Efficiency Measures
Nova Scotia Building Code Regulations

Division A

See Objectives and Sub Objectives added under 3.1.1.24. NSBCR

Division B

Part 1

Acceptable Solutions

1.3.1.2. Referenced Documents

Table 1.3.1.2. amended

1.3.1.2. Applicable Editions

(1) Where documents are referenced in this Code, they shall be the editions designated in Column 2 of Table 1.3.1.2.

**Table 1.3.1.2.
Documents Referenced in the Building Code
Forming Part of Sentence 1.3.1.2.(1)**

Issuing Agency	Document Number	Title of Document	Code Reference
ASTM	ASTM E283	Determining the Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen	10.3.3.12.
CGSB	CAN/CGSB-63.14-M89	Plastic Skylights	10.3.2.8.(1) 10.3.3.3.(1)
CGSB	CAN/CGSB-82.1-M89	Sliding Doors	10.3.1.3.(1) 10.3.3.13.(2)
CGSB	CAN/CGSB-82.5-M88	Insulated Steel Doors	10.3.2.1.(1) 10.3.3.11.(2) 10.3.3.13.
CSA	CGA P.2-1991	Testing Method for Measuring Annual Fuel Utilization Efficiencies of Residential Furnaces and Boilers	10.3.1.2.
CSA	CGA P.8-97	Thermal Efficiencies of Industrial and Commercial Gas-Fired Package Furnaces	10.3.4.6.(1)
CSA	ANSI Z21.47-2003/CSA 2.3-2003	Gas-Fired Central Furnaces	10.3.4.6.(1)
CSA	ANSI Z83.8-2002/CSA 2.6-2002	Gas Unit Heaters and Gas-Fired Duct Furnaces	10.3.4.6.(1)
CSA	CAN/CSA-P.3-2004	Testing Method for Measuring Energy Consumption and Determining Efficiencies of Gas-Fired Water Heaters	10.3.4.6.(1)

Table 1.3.1.2. continued			
Issuing Agency	Document Number	Title of Document	Code Reference
CSA	ANSI Z21.10.3-2004/CSA 4.3-2004	Gas Water Heaters - Volume III, Storage Water Heaters With Input Ratings Above 75,000 Btu Per Hour, Circulating and Instantaneous	10.3.4.6.(1)
CSA	CAN/CSA-B211-00	Energy Efficiency of Oil-Fired Storage Tank Water Heaters	10.3.4.6.(1)
CSA	CSA B212-00	Energy Utilization Efficiencies of Oil-Fired Furnaces and Boilers	10.3.4.6.(1)
CSA	CAN/CSA-A440.2-00	Energy Performance Evaluation of Windows and Sliding Glass Doors	10.3.1.3.(1)
CSA	CAN/CSA-C191-04	Performance of Electric Storage Tank Water Heaters for Domestic Hot Water Service	10.3.4.6.(1)
CSA	CSA C368.1-M90	Performance Standard for Room Air Conditioners	10.3.4.4.(3)
CSA	CAN/CSA-C390-98	Energy Efficiency Test Methods for Three-Phase Induction Motors	10.3.4.12.
CSA	CAN/CSA-C654-M91	Fluorescent Lamp Ballast Efficacy Measurements	10.3.4.7. A-10.3.4.7.
CSA	CAN/CSA-C656-05	Performance Standard for Split-System and Single Package Central Air Conditioners and Heat Pumps	10.3.4.4.(3) 10.3.4.6.
CSA	CAN/CSA-C743-02	Performance Standard for Rating Packaged Water Chillers	10.3.4.4.
CSA	ARI 310/380-2004 / CAN/CSA-C744-04	Standard for Packaged Terminal Air Conditioners and Heat Pumps	10.3.4.4.(3)
CSA	CSA C745-03	Energy Efficiency of Electric Storage Tank Water Heaters and Heat Pump Water Heaters	10.3.4.6.(1)
CSA	CAN/CSA-C746-98	Performance Standard for Rating Large Air Conditioners and Heat Pumps	10.3.4.4.(3)
CSA	CAN/CSA-C13256-1-01	Water-Source Heat Pumps — Testing and Rating for Performance — Part 1 Water-to-Air Heat and Brine-to-Air Heat Pumps (Adopted ISO 13256-11998, first edition, 1998-08-15, with Canadian deviations)	10.3.4.4.(3) 10.3.4.6.
SMACNA	SMACNA	, "HVAC Duct Construction Standards - Metal and Flexible"	10.3.4.5.(1) 10.3.4.5.(2)
Column 1	Column 2	Column 3	Column 4

Division B

Part 3

Fire Protection, Occupant Safety and Accessibility

3.1.5. 22. Combustible Solar Collector Systems

(1) A combustibile solar collector system is permitted to be installed above the roof of a *building* required to be of noncombustible construction.

Division B

Part 10

Resource Conservation

10.1. General

10.1.1. Application

10.1.1.1. Scope

(1) The scope of this Part shall be as described in Article 1.3.1.2. of Division A NBCC.

10.1.1.2. Application

(1) This Part applies to resource conservation in the design and construction of *buildings*.

(2) This Part shall come into effect on and after December 31, 2009.

10.2. Energy Efficiency

10.2.1. General

10.2.1.1. Energy Efficiency Design

(1) Sentences (2) to (4) apply to construction for which a permit has been applied for on or after December 31, 2009.

(2) The energy efficiency of a *building* or part of a *building* of residential occupancy that is within the scope of Part 9 and is intended for occupancy on a continuing basis during the winter months shall,

(a) conform to the thermal insulation requirements of Subsection 10.3.2.,

(b) conform to the thermal design requirements of Subsection 10.3.3. for Residential buildings, or

(c) be designed in accordance with a performance protocol acceptable to the authority having jurisdiction that will achieve at least the minimum equivalent level of energy conservation performance required by Part 10.

(See Appendix A-10.2.1.1.(2) NSBCR and Appendix A, Division B, Volume 2, A-9.1.1.1. NBC)

(3) The energy efficiency of a *building* or part of a *building* shall conform to the design requirements of Subsection 10.3.4. if the *building* or part of the *building*,

(a) is within the scope of Part 9, and

(b) does not contain a residential occupancy.

- (4) Sentence (1) does not apply to,
- (a) *farm buildings*,
 - (b) *buildings* intended primarily for manufacturing or commercial or industrial processing,
 - (c) non heating season, or intermittently occupied *buildings*,
 - (See Appendix A, Division B, Volume 2, A-9.1.1.1.(1) NBC)
 - (d) heritage *buildings*
- (See Appendix Note A-10.3.4.1. NSBCR)

10.2.2. Motion Sensors

10.2.2.1. Motion Sensors

(1) Lighting installed to provide the minimum illumination levels required by this Code may be controlled by motion sensors except where the lighting is installed in an exit.

(2) Where motion sensors are used to control minimum lighting in a public corridor or corridor providing access to exit for the public, the motion sensors shall be installed with switch controllers equipped for fail-safe operation and illumination timers set for a minimum 15-minute duration.

(3) A motion sensor shall not be used to control emergency lighting.

10.3. Energy Efficiency for *Buildings* Within the Scope of Part 9

10.3.1. General

10.3.1.1. Application

(1) Except as provided in Sentence (2), this Section applies to the energy efficiency of *buildings* within the scope of Part 9 intended for occupancy on a continuing basis during the winter months.

- (2) This Section does not apply to,
- (a) *farm buildings*,
 - (b) *buildings* intended primarily for manufacturing or commercial or industrial processing,
 - (c) non heating season, or intermittently occupied *buildings*,
 - (d) heritage *buildings*
- (See Appendix Note A-10.3.4.1. NSBCR)

10.3.1.2. Equipment Efficiency for *Buildings of Residential Occupancy*

(1) The minimum annual fuel utilization efficiency of a *space-heating* and domestic hot water *appliances* serving a *building* of residential occupancy shall conform to Table 10.3.1.2.

Table 10.3.1.2.
***Space-heating* and domestic hot water *appliances* Minimum Annual Fuel Utilization Efficiency**
Forming Part of Sentence 10.3.1.2.(1)

Column 1	Column 2
<i>Space-heating</i> and domestic hot water <i>appliances</i> Fuel Source	Minimum Annual Fuel Utilization Efficiency
Natural gas	90%
Propane	90%
Oil - Hot Air Oil - Hot Water	85% 85%

10.3.1.3. Residential Windows and Sliding Glass Doors

(1) The energy rating and the overall coefficient of heat transfer required for windows and sliding glass doors in a residential occupancy shall be determined in conformance with CAN/CSA-A440.2, "Energy Performance Evaluation of Windows and Sliding Glass Doors". (See Appendix A, Division B, Volume 2, A-9.7.2.1.(1) NBC)

10.3.2. Thermal Insulation for *Buildings of Residential Occupancy*

10.3.2.1. Required Insulation

(1) All walls, ceilings, floors, windows and doors that separate heated space from unheated space, the exterior air or the exterior soil shall have thermal resistance ratings conforming to this Subsection.

(2) Insulation shall be provided between heated and unheated spaces and between heated spaces and the exterior, and around the perimeter of concrete slabs-on-ground.

(3) Reflective surfaces of insulating materials shall not be considered in calculating the thermal resistance of *building* assemblies.

(4) Except as permitted in Articles 10.3.2.3., 10.3.2.4., 10.3.2.6., 10.3.2.7., 10.3.2.8. and 10.3.2.9., the minimum thermal resistance of insulation shall conform to Table 10.3.2.1.

**Minimum Thermal Resistance of Insulation to be Installed
Forming Part of Sentence 10.3.2.1.(4)**

	Building Element Exposed to the Exterior or to Unheated Space	Minimum RSI [R] Values Required ₃
1	Ceiling below attic or roof space	7.00 [40]
2	Roof assembly without attic or roof space	5.46 [31]
3	Wall other than foundation wall [including walls between heated and unheated spaces]	4.23 [24]
4	ICF wall above grade ₁	3.75 [21.3]
5	ICF wall below grade enclosing heated space [full height insulation] ₁	3.75 [21.3]
6	Foundation walls enclosing heated space [full height insulation]	3.52 [20]
7	Floors over unheated spaces including Overhanging [cantilevered] Floors	5.46 [31]
8	Floor joist header space	4.23 [24]
9	Frost Wall (with slab-on-ground) ₂	1.76 [10]
10	Slab-on-ground perimeter insulation (see Sentence 10.3.3.8.(1)) ₂	1.76 [10]
11	Under Slab-on-ground containing heating pipes, tubes, ducts or cables ₂	1.76 [10]
12	Under Slab-on-ground not containing heating pipes, tubes, ducts or cables ₂	1.76 [10]
13	Basement floor slabs located not more than 1 m below grade ₂	1.76 [10]
14	Basement floor slabs located more than 1 m below grade	nil

1. ICF walls provide an effective insulating value of not less than R 21.3. Walls of this construction have inherently effective air barriers and minimal thermal bridging characteristics.
2. This value may be reduced to R 4 at the thermal break between the slab and wall.
3. "Insulation values" shown are for the insulation only.

10.3.2.2. Elements Acting as a Thermal Bridge

(1) Except for a foundation wall, the insulated portion of a wall that incorporates wood stud framing elements that have a thermal resistance of less than RSI 0.90 shall be insulated to restrict heat flow through the studs by a material providing a thermal resistance at least equal to 25 per cent of the thermal resistance required for the insulated portion of the assembly in Sentence 10.3.2.1.(4).

(2) Except as provided in Sentence (3), the thermal resistance of the insulated portion of a *building* assembly in Sentence 10.3.2.1.(4) that incorporates metal framing elements, such as steel studs and steel joists, that act as thermal bridges to facilitate heat flow through the assembly, shall be 20 per cent greater than the values shown in Table 10.3.2.1., unless it can be shown that the heat flow is not greater than the heat flow through a wood frame assembly of the same thickness.

(3) Sentence (2) does not apply to *building* assemblies incorporating thermal bridges where the thermal bridges are insulated to restrict heat flow through the thermal bridges by a material providing a thermal resistance at least equal to 25 per cent of the thermal resistance required for the insulated portion of the assembly in Sentence 10.3.2.1.(4).

10.3.2.3. Thermal Resistance Values for Roof and Ceiling Assemblies

(1) The thermal resistance values in Table 10.3.2.1. for exposed roofs or ceilings may be reduced near eaves to the extent made necessary by the roof slope and required ventilation clearances.

10.3.2.4. Insulation of Foundation Walls

(1) Foundation walls enclosing heated space shall be insulated from the underside of the subfloor of the floor above, down to the finished floor slab.

(2) The insulation required by Sentence (1) may be provided by a system installed,

- (a) on the interior of the foundation wall,
- (b) on the exterior face of the foundation wall, or
- (c) partially on the interior and partially on the exterior, provided the thermal performance of the system is equivalent to that permitted in Clause (a) or (b).

(3) Insulation applied to the exterior of a slab-on-ground floor shall extend down at least 600 mm below the adjacent exterior ground level or shall extend down and outward from the floor or wall for a total distance of at least 600 mm. (See Appendix Note A-10.3.3.8. NSBCR)

(4) If a foundation wall is constructed of hollow masonry units, one or more of the following shall be used to control convection currents in the core spaces,

- (a) filling the core spaces,
- (b) at least one row of semi-solid blocks at or below grade , or
- (c) other similar methods.

(5) Masonry walls of hollow units that penetrate the ceiling shall be sealed at or near the ceiling adjacent to the roof space to prevent air within the voids from entering the attic or roof space by,

- (a) capping with masonry units without voids, or
- (b) installation of flashing material extending across the full width of the masonry.

10.3.2.5. Enclosed Unheated Space

(1) Where an enclosed unheated space is separated from a heated space by glazing, the unheated enclosure may be considered to provide a thermal resistance of RSI 0.16.

10.3.2.6. Thermal Resistance of Windows

(1) Except as permitted in Sentence (2), where a storm window is not provided, all windows that separate heated space from unheated space shall have,

- (a) an overall coefficient of heat transfer of not more than $1.8 \text{ W/ m}^2\text{°C}$, or
- (b) an energy rating of not less than,
 - (i) 25 for operable windows, and
 - (ii) 35 for fixed windows.

(2) A basement window that incorporates a loadbearing structural frame shall be double glazed with a low-E coating.

10.3.2.7. Minimum Thermal Resistance of Doors

(1) Except for doors on enclosed unheated vestibules and cold cellars, and except for glazed portions of doors, all doors that separate heated space from unheated space shall have a thermal resistance of not less than RSI 0.7 where a storm door is not provided.

(2) All sliding glass doors that separate heated space from unheated space shall have

- (a) an overall coefficient of heat transfer of not more than $1.8 \text{ W/ m}^2\text{°C}$, or
- (b) an energy rating of not less than 25.

10.3.2.8. Minimum Thermal Resistance of Skylights

(1) All skylights that separate heated space from unheated space shall have

- (a) an overall coefficient of heat transfer of not more than $2.6 \text{ W/ m}^2\text{°C}$, or
- (b) a U value of not more than 2.7.

10.3.2.9. Log Wall Construction and Post, Beam and Plank Construction

(1) Except as provided in Sentences (2) and (3), log wall construction and post, beam and plank construction shall have a minimum thermal resistance of RSI 2.1 for the total assembly.

(2) The thermal resistance value in Sentence (1) for the total wall assembly may be reduced to not less than RSI 1.61 if,

(a) the thermal resistance of insulation for the exposed roof or ceiling required in Table 10.3.2.1. is increased by an amount equivalent to the reduction permitted in this Sentence, and

(b) for log walls, the logs have tongue-and-groove or splined joints.

(3) Where milled log walls are installed, the thermal resistance value in Sentence (1) for the total wall assembly does not apply if,

(a) the mean thickness of each log is not less than 150 mm,

(b) the thermal resistance of insulation for the exposed roof or ceiling required in Table 10.3.2.1. is increased by RSI 0.53, and

(c) the logs have tongue-and-groove or splined joints.

10.3.3. Thermal Design for *Buildings* of Residential Occupancy Within the Scope of Part 9

10.3.3.1. Application

(1) This Subsection applies to the thermal design of *buildings* to which Clause 10.2.1.1.(2)(b) applies.

10.3.3.2. General Requirements

(1) The materials for, and the installation of, thermal insulation, air barrier and vapour barrier protection shall conform to Section 9.25

(2) Foamed plastic thermal insulation shall be protected as described in Article 9.10.17.10.

(3) Crawl spaces shall conform to Section 9.18.

(4) Roof spaces shall conform to Section 9.19.

(5) Ventilation requirements shall conform to Section 9.32.

(6) Heating and air-conditioning requirements shall conform to Section 9.33.

10.3.3.3. Thermal Resistance

(1) Except as provided in Articles 10.3.3.4. to 10.3.3.8., and except for doors, windows, skylights and other closures, the thermal resistance of each *building* assembly through any portion that does not include framing or furring shall conform to Table 10.3.3.3.

Table 10.3.3.3.
Minimum Thermal Resistance of *Building Assemblies*
Forming Part of Sentence 10.3.3.3.(1)

	Building Element Exposed to the Exterior or to Unheated Space	Minimum RSI [R]
1	Ceiling below attic or roof space	7.00 [40]
2	Roof assembly without attic or roof space	5.46 [31]
3	Wall other than foundation wall [including walls between heated and unheated spaces]	4.23 [24]
4	ICF wall above grade ₁	3.75 [21.3]
5	ICF wall below grade enclosing heated space [full height insulation] ₁	3.75 [21.3]
6	Foundation walls enclosing heated space [full height insulation]	3.52 [20]
7	Floors over unheated spaces including Overhanging [cantilevered] Floors	5.46 [31]
8	Floor joist header space	4.23 [24]
9	Frost Wall (with slab-on-ground) ₂	1.76 [10]
10	Slab-on-ground perimeter insulation (see Sentence 10.3.3.8.(1)) ₂	1.76 [10]
11	Under Slab-on-ground containing heating pipes, tubes, ducts or cables ₂	1.76 [10]
12	Under Slab-on-ground not containing heating pipes, tubes, ducts or cables ₂	1.76 [10]
13	Basement floor slabs located not more than 1 m below grade ₂	1.76 [10]
14	Basement floor slabs located more than 1 m below grade	nil

1. ICF walls provide an effective insulating value of not less than R 21.3. Walls of this construction have inherently effective air barriers and minimal thermal bridging characteristics.
2. This value may be reduced to R 4 at the thermal break between the slab and wall.

10.3.3.4. Metal Framing Elements Acting as Thermal Bridge

(1) Except as provided in Article 10.3.3.5., the thermal resistance of the insulated portion of a *building* assembly that incorporates metal framing elements, such as steel studs and steel joists, that act as thermal bridges to facilitate heat flow through the assembly, shall be 20 per cent greater than the values shown in Table 10.3.3.3., unless it can be shown that the heat flow is not greater than the heat flow through a wood frame assembly of the same thickness.

10.3.3.5. Insulated Thermal Bridges

(1) Article 10.3.3.4. does not apply for *building* assemblies incorporating thermal bridges where the thermal bridges are insulated to restrict heat flow through the thermal bridges by a material providing a thermal resistance at least equal to 25 per cent of the thermal resistance required for the insulated portion of the assembly in Article 10.3.3.3.

10.3.3.6. Reduction of Thermal Resistance

(1) The thermal resistance of a *building* assembly may be reduced by not more than 20 per cent from that required in Articles 10.3.3.3. and 10.3.3.4., and the amount of glazing may be increased to more than permitted in Sentence 10.3.3.10.(2), where it can be shown that the total calculated heat loss from the *building* enclosure does not exceed the heat loss that would result if the enclosure were constructed in conformance with the minimum thermal resistance requirements in Articles 10.3.3.3. and 10.3.3.4. and with the maximum amount of glazing permitted in Sentence 10.3.3.10.(2), provided no allowance is made for solar heat gains or for the orientation of the glazing as described in Sentence 10.3.3.10.(4).

10.3.3.7. Thermal Resistance Values for Roof and Ceiling Assemblies

(1) The thermal resistance values in Articles 10.3.3.3. and 10.3.3.4. for roof or ceiling assemblies that separate heated space from unheated space or the exterior may be reduced near the eaves to the extent made necessary by the roof slope and required ventilation clearances, except that the thermal resistance at the location directly above the inner surface of the exterior wall shall be at least $2.1 \text{ m}^2\text{C/W}$.

10.3.3.8. Foundation Wall Insulation

(1) Insulation applied to the exterior of a slab-on-ground floor shall extend down at least 600 mm below the adjacent exterior ground level or shall extend down and outward from the floor or wall for a total distance of at least 600 mm. (See Appendix Note A-10.3.3.8. NSBCR)

10.3.3.9. Enclosed Unheated Space

(1) Where an enclosed unheated space, such as a sun porch, enclosed verandah or vestibule, is separated from a heated space by glazing, the unheated enclosure may be considered to provide thermal resistance of $0.16 \text{ m}^2\text{C/W}$, or the equivalent of one layer of glazing.

10.3.3.10. Windows and Glazing

(1) Except as provided in Sentences (2) and (3), windows and all glazing that separates heated space from unheated space or the exterior shall conform to Article 10.3.2.6.

(2) Except as provided in Sentences (3) and (4), the total area of glazing, including glazing for doors and skylights, that separates heated space from unheated space or the exterior shall not exceed 20 per cent of the *floor area* of the storey served by the glazed areas and shall not exceed 40 per cent of the total area of the walls of that storey that separates heated space from unheated space or the exterior. (In the case of a sloping wall, the area of the opaque portion of the wall is calculated as its projected area on a vertical plane.)

(3) Where the thermal resistance of glazing is different from that required in Sentence (1) and Article 10.3.3.9., the area of such glazing for the purpose of applying Sentence (2) may be assumed as being equal to the actual area multiplied by the ratio of the required thermal resistance divided by the actual thermal resistance of the glazing.

(4) Except as provided in Sentence (5), the area of glazing that contains clear glass or that has a shading coefficient of more than 0.70 that is unshaded in the winter and faces a direction within 45° of due South may be assumed to be 50 per cent of its unshaded area in calculating the maximum area of glazing in Sentences (2) and (3) provided the *building* is designed with a system that is capable of distributing the solar heat gain from such glazed areas throughout the *building*. For the purpose of determining whether or not the glazing is shaded in the winter, the shading shall be calculated using the noon sun angles of December 21.

(5) Sentence (4) shall not apply where the *building* is designed to be cooled unless the glazing described in Sentence (4) is shaded in the summer with exterior devices. For the purpose of determining whether or not the glazing is shaded in the summer, the shading shall be calculated using the noon sun angles of June 21.

10.3.3.11. Doors

(1) Air curtains shall not be used in place of exterior doors. (See Appendix A, A-10.3.3.11(1) NSBCR)

(2) Except for doors used primarily to facilitate the movement of vehicles or handling of material, infiltration around doors shall conform to the appropriate requirements in Article 10.3.3.12.

(3) Except for doors on enclosed unheated vestibules, all doors that separate heated space from the outside shall conform to Articles 10.3.2.7.

10.3.3.12. Air Infiltration

(1) Windows that separate heated space from unheated space or the exterior shall be designed to limit the rate of air infiltration to not more than 0.775 L/s for each metre of sash crack when tested at pressure differential of 75 Pa in conformance with ASTM E283, "Determining the Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen".

(2) Manually operated exterior sliding glass door assemblies that separate heated space from unheated space or the exterior shall be designed to limit air infiltration to not more than 2.5 L/s for each square metre of door area when tested in conformance with Sentence (1).

(3) Except where the door is weather-stripped on all edges and protected with a storm door or by an enclosed unheated space, exterior swing type door assemblies for dwelling units, individually rented hotel rooms and suites shall be designed to limit the rate of air infiltration to not more than 6.35 L/s for each square metre of door area when tested in conformance with Sentence (1).

(4) Door assemblies other than those described in Sentences (2) and (3), that separate heated space from unheated space or the exterior shall be designed to limit the rate of air infiltration to not more than 17.0 L/s for each metre of door crack when tested in conformance with Sentence (1).

(5) Caulking material to reduce air infiltration shall conform to the requirements in Subsection 9.27.4.

(6) The junction between the sill plate and the foundation, joints between exterior wall panels and any other location where there is a possibility of air leakage into heated spaces in a *building* through the exterior walls, such as at utility service entrances, shall be caulked, gasketed or sealed to restrict such air leakage.

(7) Air leakage between heated space and adjacent roof or attic space caused by the penetration of services shall be restricted in conformance with the requirements of Subsection 9.25.3.

10.3.4. *Buildings* of Non-residential Occupancy

10.3.4.1. Application

(1) Except where exempted by 10.2.1.1.(4), this Subsection applies to the energy efficiency of *buildings* or parts of *buildings* described in Sentence 10.2.1.1.(3). (See Appendix Note A-10.3.4.1.(1) NSBCR)

10.3.4.2. Thermal Resistance of the *Building Envelope*

(1) Except as permitted in Sentences (2) and (3), the minimum thermal resistance of all walls, ceilings and floors that separate heated space from unheated space, the exterior air or the exterior soil shall conform to Table 10.3.4.2.A.

(2) Where the top of a foundation wall is less than 1 200 mm above the adjoining ground level, those portions of the foundation wall that are above ground may be insulated to the level required for the below grade portion of the foundation wall.

**Table 10.3.4.2.A.
Minimum Thermal Resistance of *Building Assemblies*
Forming Part of Sentence 10.3.4.2.(1)**

<i>Building Assembly</i>	minimum RSI [R] Value Required
Opaque wall assembly	2.63 [15]
Wall assembly adjacent to unconditioned space	1.61 [9]
Below grade wall	2.11 [12]
Roof assembly	3.91 [22]
Floor assembly over unconditioned space	4.52 [26]
Column 1	Column 2

Notes to Table 10.3.4.2.A.

1. The thermal resistance determined for the *building* assembly shall take into account the thermal bridging in the assembly.
2. "Insulation values" shown are for insulation only.
3. For the purposes of this Table the effects of thermal bridging are waived for
 - (a) intermediate structural connections of continuous steel shelf angles (or similar structural element) used to support the building facade provided there is a thermal break between the remaining contact surface of the supporting element and the building structure. This provision is intended to substantially reduce thermal bridging effects caused by the continuous bearing between structural elements supporting building facade and the building frame (ie. steel shelf angle attached to perimeter floor slab to support brick veneer), or
 - (b) structural connections of load bearing elements where a thermal break cannot be achieved.
4. In addition to the exceptions permitted above, the effects of thermal bridging are also waived for
 - (a) exposed structural projections of buildings where the total cross-sectional area of the exposed element does not exceed 2% of the exterior building envelope area and the cross-sectional area of the exposed structural element is measured where it penetrates the insulation component of the building envelope. For example, the total cross-sectional area of cantilevered concrete balconies and other projections penetrating the insulation component of the building envelope cannot exceed 2% of the exterior building envelope area,
 - (b) ties in masonry construction,
 - (c) insulation clips in masonry construction,
 - (d) flashing, and
 - (e) top exposed portion of foundation walls provided the exposure does not exceed 200 mm measured from the top of the foundation wall to the top of exterior wall insulation which meets the minimum insulation RSI-Value for wall below grade stipulated in the appropriate Alternate Component Package Tables. (See Appendix Notes Table 10.3.3.3. Figure 1 NSBCR)

(3) The minimum thermal resistance of a slab-on-ground shall conform to Table 10.3.4.2.B.

**Table 10.3.4.2.B.
Minimum Thermal Resistance for Slab-On-Ground Insulation
Forming Part of Sentence 10.3.4.2.(3)**

Type of Slab-On-Ground	Position of Insulation	Length of Insulation, mm	Minimum RSI Value(1)
Unheated	Horizontal	600	3.17
		1200	1.94
	Vertical	600	1.41
		1200	0.7
Heated	Horizontal	600	3.52
		1200	2.29
	Vertical	600	1.76
		1200	1.06
Column 1	2	3	4

Notes to Table 10.3.4.2.B.

(1) "RSI value" shown is for insulation only.

(4) The maximum overall coefficient of heat transfer for windows that separate heated space from unheated space shall conform to Table 10.3.4.2.C.

**Table 10.3.4.2.C.
Maximum Overall Coefficient of Heat Transfer for Windows
Forming Part of Sentence 10.3.4.2.(4)**

Window-to-Wall Ratio	Maximum Overall Coefficient of Heat Transfer Required, W/ m ² .°C
less than 0.2	3.01
0.2 to 0.4	2.28
more than 0.4	1.7
Column 1	Column 2

(5) Except for swinging glass doors, the minimum thermal resistance of doors that separate heated space from unheated space shall be not less than RSI 0.7.

10.3.4.3. Air Infiltration

(1) Where a *building* component or assembly separates interior conditioned space from exterior space, interior space from ground or environmentally dissimilar interior spaces, the component or assembly shall contain an air barrier system conforming to the applicable requirements of Part 5 or Subsection 9.25.3.

10.3.4.4. Heating, Ventilating and Air-Conditioning

- (1) A heating, ventilating and air-conditioning system that serves more than one heating, ventilating and air-conditioning zone shall conform to ANSI/ASHRAE/IESNA 90.1 “Energy Standard for *Buildings* Except Low-Rise Residential *Buildings*”. (See Appendix Note Tables 10.3.4.4(1) to Table 10.3.4.4(7) NSBCR)
- (2) Sentences (3) to (11) and Article 10.3.4.5. apply to a heating, ventilating and air-conditioning system that serves a single heating, ventilating and air-conditioning zone.
- (3) The energy efficiency of equipment in a heating, ventilating and air-conditioning system that serves a single heating, ventilating and air-conditioning zone shall conform to
- (a) CAN/CSA-C656-05 Performance Standard for Split-System and Single Package Central Air Conditioners and Heat Pumps
 - (b) CAN/CSA-C743-02 Performance Standard for Rating Packaged Water Chillers
 - (c) ARI 310/380-2004 /CAN/CSA-C744-04 / Standard for Packaged Terminal Air Conditioners and Heat Pumps
 - (d) CAN/CSA-C746-98 Performance Standard for Rating Large Air Conditioners and Heat Pumps
 - (e) CAN/CSA-C13256-1-01 Water-Source Heat Pumps —Testing and Rating for Performance Part 1 Water-to-Air Heat and Brine-to-Air Heat Pumps (Adopted ISO 13256-11998, first edition, 1998-08-15, with Canadian deviations)
- (4) An air-conditioning system with a cooling capacity of 40 kW or more shall have an economizer,
- (a) controlled by appropriate high limit shut-off control, and
 - (b) equipped with either barometric or powered relief sized to prevent excess pressurization of the *building*.
- (5) Outdoor air dampers for economizer use shall be provided with blade and jamb seals.
- (6) A heat recovery ventilator with a recovery effectiveness of 50% or more at the outside winter design temperature shall be provided where the quantity of the outdoor air supplied to the air duct distribution system is,
- (a) more than 1 400 L/s, and
 - (b) more than 70% of the supply air quantity of the system.
- (7) Where a heat recovery ventilator is installed, the system shall have provisions to bypass or control the heat recovery ventilator to permit operation of the air economizer.

(8) A heating, ventilating and air-conditioning system shall be controlled by a manual changeover or dual set point thermostat.

(9) Except for a system requiring continuous operation, a heating, ventilating and air-conditioning system that has a cooling or heating capacity greater than 4.4 kW and a supply fan motor rated for more than 0.5 kW shall be provided with a time clock that,

- (a) is capable of starting and stopping the system under different schedules for seven different day-types per week,
- (b) is capable of retaining programming and time setting during a loss of power for a period of 10 hours or more,
- (c) includes an accessible manual override that allows temporary operation of the system for up to two hours,
- (d) is capable of temperature setback down to 13°C during off-hours, and
- (e) is capable of temperature setup to 32°C during off-hours.

(10) Where separate heating and cooling equipment serves the same temperature zone, thermostats shall be interlocked to prevent simultaneous heating and cooling.

(11) A heating, ventilating and air-conditioning system with a design supply air capacity greater than 5000 L/s shall have optimum start controls

10.3.4.5. Ducts, Plenums and Piping

(1) A duct or a plenum that is not protected by an insulated exterior envelope or that is exposed to an unheated space shall be,

- (a) sealed to a Class A seal level in accordance with the SMACNA, "HVAC Duct Construction Standards - Metal and Flexible", to minimize air leakage, and
- (b) insulated to provide a thermal resistance of not less than RSI 1.4.

(2) A supply or exhaust duct or plenum that is located in a conditioned space shall be sealed to a Class C seal level in accordance with the SMACNA, "HVAC Duct Construction Standards - Metal and Flexible", to minimize air leakage.

(3) Except for piping within prefabricated equipment, piping used for steam, hot water heating or cooling shall be insulated in accordance with Table 10.3.4.5.

**Table 10.3.4.5.
Minimum Thickness of Pipe Insulation (1)
Forming Part of Sentences 10.3.4.5.(3) and 10.3.4.6.(2)**

Use of pipe	Nominal pipe size not more than 40 mm	Nominal pipe size more than 40 mm
Steam	40	50
Hot water heating	25	40
Domestic hot water	12	25
Cooling	12	25
Column 1	Column 2	Column 3

Notes to Table 10.3.4.5.

(1) Insulation material shall have a thermal conductivity of not more than 0.42 W/ m °C.

(4) Insulation exposed to weather shall be protected by a covering such as aluminum, sheet metal, painted canvas or plastic.

(5) An exhaust duct with a design capacity of more than 140 L/s on a heating, ventilating and air-conditioning system that does not operate continuously shall be equipped with a gravity or motorized damper that will automatically shut when the system is not in operation.

(6) An air duct distribution system shall be balanced in the following sequence

(a) Minimize throttling losses.

(b) If the fan is rated for more than 0.75 kW, adjust the fan speed to meet design flow conditions.

(7) A hydronic system shall be proportionately balanced to minimize throttling losses.

10.3.4.6. Service Water Heating

(See Appendix Note A-Table 10.3.4.6.(1))

(1) Water heating equipment, hot water supply boilers used solely for heating potable water and hot water storage tanks shall meet the minimum efficiency values in

(a) CSA C745-03 Energy Efficiency of Electric Storage Tank Water Heaters and Heat Pump Water Heaters

(b) CAN/CSA-P.3-2004 Testing Method for Measuring Energy Consumption and Determining Efficiencies of Gas-Fired Water Heaters

(c) ANSI Z21.10.3-2004 / CSA 4.3-2004 Gas Water Heaters - Volume III, Storage Water Heaters With Input Ratings Above 75,000 Btu Per Hour, Circulating and Instantaneous

(d) CAN/CSA-B211-00 Energy Efficiency of Oil-Fired Storage Tank Water Heaters

(2) Domestic hot water heating piping shall be insulated in accordance with Table 10.3.4.5. if it is,

- (a) recirculating system piping,
- (b) located within the first 2.5 m of outlet piping in a constant temperature non-recirculating storage system,
- (c) an inlet pipe located between the storage tank and a heat trap in a non-recirculating storage system, or
- (d) a pipe that is externally heated by methods such as a heat trace or impedance heating.

(3) A hot water storage tank shall be provided with a temperature control to permit adjustment of the water storage temperature.

(4) An automatic time switch or other control that can be set to switch off the usage temperature maintenance system during extended periods when hot water is not required shall be installed in a domestic hot water system that is designed to maintain usage temperatures in hot water pipes such as recirculating hot water systems or heat trace.

(5) If a recirculating pump is used to maintain storage tank water temperature, the pump shall be equipped with a control to limit its operation to a period from the start of the heating cycle to a maximum of five minutes after the end of the heating cycle.

(6) In a washroom located in a public facility, a device shall be provided to control the maximum temperature of water delivered from a lavatory faucets to not more than 43°C.

(7) A vertical pipe riser that serves a storage water heater or a storage tank shall have heat traps on both the inlet and outlet piping as close as practical to the tank if,

- (a) the riser is in a non-recirculating system, and
- (b) the storage water heater or the storage tank does not have integral heat traps.

10.3.4.7. Lighting

- (1) Except as provided in Sentence (2), Articles 10.3.4.7. to 10.3.4.11. apply to,
- (a) interior spaces of a *building* ,
 - (b) exterior *building* features, including facades, illuminated roofs, architectural features, entrances, exits , loading docks and illuminated canopies, and
 - (c) exterior *building* ground lighting provided through the *building's* electrical service.

- (2) Articles 10.3.4.7. to 10.3.4.11. do not apply to emergency lighting that is automatically turned off during the normal use of the *building* .
- (3) Fluorescent light ballasts shall meet or exceed the minimum ballast efficacy factors. (See Appendix Note A-10.3.4.7.(3) NSBCR)
- (4) Except as provided in Sentence (5), luminaires designed for use with one or three linear fluorescent lamps greater than 30 W each shall use two-lamp tandem-wired ballasts in place of single-lamp ballasts when two or more luminaires are in the same space and on the same control device.
- (5) The tandem wiring required by Sentence (4) is not required for,
- (a) recessed luminaires located more than 3 m apart, measured centre to centre,
 - (b) surface mounted or pendant luminaires that are not continuous,
 - (c) luminaires that use single-lamp high-frequency electronic ballasts,
 - (d) luminaires that use three-lamp high-frequency electronic or three-lamp electromagnetic ballasts, and
 - (e) luminaires on emergency circuits.

10.3.4.8. Interior Lighting

- (1) The interior lighting power allowance for a *building* is the sum of the lighting power allowances, in watts, of all *building* area types and shall include all permanently installed general, task and furniture lighting systems and luminaires.
- (2) The interior lighting power allowance shall be determined by multiplying the lighting power density given in Table 10.3.4.8. by the gross lighted areas of the *building* area type.

**Table 10.3.4.8.
Interior Lighting Power Densities
Forming Part of Sentence 10.3.4.8.(2)**

<i>Building Area Type</i>	Lighting Power Density, W/m ²
Automotive Facility	10
Fast Food	15
Dormitory	11
Health Care Clinic	11
Manufacturing Facility	14
Office	11
Parking Garage	3
Police Station without detention quarters/Fire Station	11
Post Office	12
Retail	16
Transportation	11
Warehouse	9
Workshop	15
Column 1	Column 2

(3) The installed interior lighting power shall not exceed the interior lighting power allowance.

(4) Except as provided in Sentence (5), the installed interior lighting power shall include all power used by luminaires, including lamps, ballasts, current regulators and control devices.

(5) The following lighting equipment and applications shall not be considered when determining the installed interior lighting power or the interior lighting power allowance

- (a) lighting that is integral to equipment or instrumentation and is installed by its manufacturer,
- (b) lighting specifically designed for use only during medical or dental procedures and lighting integral to medical equipment,
- (c) lighting that is integral to both open and glass-enclosed refrigerator and freezer cases,
- (d) lighting that is integral to food warming and food preparation equipment,
- (e) lighting for plant growth or maintenance,

- (f) lighting in spaces specifically designed for use by visually impaired persons,
- (g) lighting in retail display windows if the display area is enclosed by ceiling-height partitions,
- (h) lighting in interior spaces that have been specifically designated as a heritage *building* ,
- (i) lighting that is an integral part of advertising or directional signage,
- (j) exit signs,
- (k) lighting that is displayed for sale, and
- (l) educational lighting demonstration systems.

(6) Trade-offs among *building* area types are permitted provided that the total installed interior lighting power does not exceed the interior lighting power allowance.

10.3.4.9. Interior Lighting Controls

(1) Except as provided by Sentence (2), interior lighting in a *building* that exceeds 500 m² in *building* area shall be controlled with an automatic control device to shut off *building* lighting in all spaces.

(2) Sentence (1) does not apply to,

- (a) lighting intended for 24-hour operation,
- (b) emergency lighting, or
- (c) lighting for spaces where an automatic shut-off would endanger safety or security

(3) The automatic control device required in Sentence (1) shall operate on,

- (a) a scheduled basis using a time-of-day operated control device that turns lighting off at specific programmed times,
- (b) an occupant sensor that shall turn lighting off within 30 minutes of an occupant leaving a space, or
- (c) a signal from another control or alarm system that indicates the area is unoccupied.

(4) Where the automatic control device conforms to Clause 10.3.4.9.(3)(a), an independent program schedule shall be provided for each floor.

(5) Each space enclosed by partitions that extend to the ceiling shall have at least one control device to independently control the general lighting within the space.

(6) Each manual operated control device shall be readily accessible and located so the occupants can see the controlled lighting.

(7) Except as required by Sentences (8) and (9) and except for reasons of safety or security, an individual control device shall,

- (a) be capable of being activated,
 - (i) either manually, or
 - (ii) automatically by sensing an occupant,
- (b) control a floor area having an area not more than 240 m², and
- (c) be capable of overriding at any time of-day scheduled shut-off control for not more than 4 h.

(8) Except in spaces with multi-scene control, a control device that automatically turns lighting off within 30 minutes of all occupants leaving a space shall be provided in,

- (a) conference rooms,
- (b) meeting rooms, and
- (c) employee lunch and break rooms.

(9) A separate control device shall control,

- (a) display lighting,
- (b) accent lighting,
- (c) case lighting,
- (d) task lighting,
- (e) non-visual lighting, and
- (f) demonstration lighting.

10.3.4.10. Exterior Lighting

(1) Except as provided in Sentence (2), this Article applies to exterior areas conforming to Sentence 10.3.4.7.(1).

(2) If the lighting is equipped with a control device independent of the control of other lighting, Sentence (1) does not apply to,

- (a) specialized signal, directional, and marker lighting associated with transportation,
- (b) advertising signage or directional signage,
- (c) lighting integral to equipment or instrumentation and installed by its manufacturer,
- (d) temporary lighting,
- (e) lighting for industrial production, material handling, transportation sites, and associated storage areas, and
- (f) lighting used to highlight features of public monuments and heritage *buildings*.

(3) The exterior lighting power allowance for the exterior areas appurtenant to a *building* shall be determined by multiplying the lighting power density given in Table 10.3.4.10. by the areas or lengths of lighted exterior spaces.

**Table 10.3.4.10.
Exterior Lighting Power Densities
Forming Part of Sentence 10.3.4.10.(3)**

Uncovered parking lots and drives	1.6 W/m ²
Walkways less than 3 m wide	3.3 W/linear m
Walkways 3 m or greater, plaza areas, special feature areas	2.2 W/m ²
Stairways	10.8 W/m ²
<i>Building</i> main entries	98 W/linear m of door width
Other doors	66 W/linear m of door width
Canopies (free standing and attached and overhangs)	13.5 W/m ²
Outdoor sales open areas (including vehicle sale lots)	5.4 W/m ²
Street frontage for vehicle sales lots in addition to "open area" allowance	66 W/linear m
<i>Building</i> facades	2.2 W/m ² for each illuminated wall or surface or 16.4 W/linear m for each illuminated wall or surface length
Automated teller machines and night depositories	270 W per location plus 90 W per additional ATM per location
Entrances and gatehouse inspection stations at guarded facilities	13.5 W/m ² of uncovered area
Loading areas for law enforcement and emergency service vehicles	5.4 W/m ² of uncovered area
Drive-up windows	400 W per drive-through
Parking near 24-hour retail entrances	800 W per main entry
Column 1	Column 2

(4) The total exterior lighting power allowance for the exterior areas appurtenant to a *building* is the sum of the individual power allowances determined from Sentence (3) plus an additional unrestricted allowance of 5% of that sum.

(5) The installed exterior lighting power shall not exceed the exterior lighting power allowance.

(6) All exterior *building* grounds luminaires that operate at greater than 100 watts shall contain lamps having a minimum efficacy of 60 lm/W unless the luminaire is controlled by a motion sensor.

10.3.4.11. Exterior Lighting Controls

- (1) Except as provided in Sentence (2), lighting for exterior applications shall have automatic controls capable of turning off exterior lighting when,
 - (a) sufficient daylight is available, or
 - (b) the lighting is not required during night time hours.
- (2) Sentence (1) does not apply to,
 - (a) lighting for covered vehicle entrances or exits from a *building* ,
 - (b) parking structures, and
 - (c) where required for safety, security, or eye adaptation.
- (3) Lighting designated for dusk-to-dawn operation shall be controlled by a time switch or photosensor.
- (4) Lighting not designated for dusk-to-dawn operation shall be controlled by a time switch.

10.3.4.12. Electric Motors

- (1) Electric motors shall conform to the Nova Scotia Energy Efficient Appliance Act, based on CSA-C390-M. (See Appendix Note A-10.3.4.12. NSBCR)

10.4. Objectives and Functional Statements

3.9.1. Objectives and Functional Statements

3.9.1.1. Attribution to Acceptable Solutions

For the purposes of compliance with this Code as required in Clause 1.2.1.1.(1)(b) of Division A NBC, the objectives and functional statements attributed to the acceptable solutions in this Part shall be the objectives and functional statements listed in Table 3.9.1.1. as amended by NSBCR 3.1.1.24. and 3.1.1.25..

**Table 3.9.1.1.
Objectives and Functional Statements Attributed to the
Acceptable Solutions in Part 3 Forming part of Sentence 3.9.1.1.(1)**

Acceptable Solutions	Objectives and Functional Statements
Part 10	F131-OR2

Appendix A

Explanatory Material for the Nova Scotia *Building Code Regulations* 2009

This Appendix is included for explanatory purposes only and does not form part of the requirements. The bold-face reference numbers that introduce each item refer to the requirement in the Code.

Appendix notes which are contained in these regulations are noted as (See Appendix Note A-3.8.3.9. NSBCR).

Throughout the regulation Appendix notes which are contained in the NBC 2005 are noted as (See Appendix A, Division B, Volume 2 NBC A-3.8.3.8.).

Appendix notes contained in the NBC 2005 edition apply to the Nova Scotia *Building Code Regulation* unless specifically deleted or replaced by this regulation.

A-1.2.1.2.(1)(i) and (j) Modular and Manufactured Homes

Compliance with Nova Scotia Regulations

The CSA A277 label or the Z240 label and the Specification Name Plate, are evidence that a product is manufactured to the requirements of the Nova Scotia Building Code.

The A277 and Z240 labels provide the date of manufacture. Where the date of manufacture is after December 31, 2009, the manufactured unit complies with all of the Nova Scotia requirements including energy efficiency measures. The Specification Name Plate for Z240 products must indicate Nova Scotia as the Province of Destination or, for units manufactured after December 31, 2009 specify that the unit complies with the energy requirements of the Nova Scotia Building Code.

The requirement for energy efficiency is not retro-active. All existing product bearing a CSA label produced prior to January 1, 2010 remain acceptable in Nova Scotia provided they have not been structurally altered. Foundations must comply with the Code in force on the date when an application for a building permit is made.

Exceptions

Exemptions from requirements of the Building Code Regulation do not extend to on-site preparations (foundations, basements, anchorage), interconnection of modules, connection to services or installation of appliances which shall meet the requirements of CSA Z240 MH Series or the National Building Code.

A-1.3.3.2.(2) Group C Residential Occupancies that exceed 300 m²

This article requires that, for any building containing Group C Residential Occupancies and exceeding 300 m² in building area, including those buildings which otherwise are considered to be Part 9 buildings, the fire protection requirements be determined on the basis of the provisions for Group C occupancies under Subsection 3.2.2.

For Part 9 buildings, which typically are 3 storeys in height and have access from only 1 street, this means that when the building area exceeds 300 m², sprinklers are required. In other cases, depending on the building height, fire resistance and number of streets faced, some Part 9 and many Part 3 buildings with a building area greater than 300 m² may still be constructed without sprinkler protection. To determine when sprinkler protection is mandated, the provisions of Articles 3.2.2.42 to 3.2.2.48 apply.

Compliance with Articles 3.2.2.18. and 3.2.2.44. to 3.2.2.48. does not necessitate compliance with other provisions of Part 3 unless additional requirements of Part 9 specifically apply.

The *building* is required to conform to design requirements in Part 9 unless specifically directed by Part 9 requirements to other sections of the Code.

For example, unless a fire alarm system were required under provisions of sentence 9.10.18. Fire Alarm System Required, the installation of a sprinkler system under these provisions would not automatically require conformance to sentence 3.2.4.1. (1) Determination of Requirement for a Fire Alarm System.

A-2.1.1.11.(1) and (2) Notification for Inspection and Certification of Field Review of Construction

The *owner* of a *building* being *constructed* under the scope of Part 9 of the Code is required to inform the *authority having jurisdiction* to inspect for compliance with the *Code* at each of the seven stages listed. This includes all site constructed, modular, and manufactured buildings. However, the municipality may conduct more or fewer inspections as a particular project may require.

For example, inspections made under clauses 2.1.1.11. (1) (a) footings in place, (b) subfloor plumbing and (c) subfloor and foundation insulation, could be combined into one inspection for a single dwelling where there is no insulation required under a floor slab, and the home is on a large lot, not near a property line.

In other instances, such as a multi suite building, several inspections may be required as various stages of work are completed. In this scenario, some suites might be finished and occupied while others are still under construction.

A-2.1.1.11.(3) Notification for Inspection and Certification of Field Review of Construction

The *owner* of a *building* being *constructed* outside the scope of Part 9 of the Code is required to request the *authority having jurisdiction* to inspect for compliance with the *Code* at times agreed to by the *authority having jurisdiction*. The timing of these inspections should be established to assure review of construction for compliance to the Code.

A-1.4.1.12. Temporary Building or Occupancy

This article allows the erection of a temporary *building*, or a temporary change of occupancy classification for a short term use of an existing *building* which may not fully comply to all requirements of the *building* code. However, any matter of life safety must be adequately addressed.

A-3.1.1.13. Referenced Standards Designated under the following Acts and Regulations of the Province of Nova Scotia

Standards are sometimes adopted under more than one Act or Regulation. To provide consistency in the adoption of standards the Nova Scotia *Building Code* recognizes the editions as adopted by those Acts and Regulations.

Where the Nova Scotia *Building Code* provides specific requirements that may differ from those in a standard the *Building Code* prevails as per National *Building Code* of Canada

2.7.2.1. Priority of the National *Building Code*

(1) In the case of conflict between the provisions of this Code and those of a referenced document, the provisions of this Code shall govern.

Code users are advised that they should confirm which edition of a standard are in place under the following provincial acts and or regulations

Elevators and Lifts Act and Regulations

CSA CAN/CSA-B44 Safety Code for Elevators

CSA B355 Lifts for Persons with Physical Disabilities

Fuel Safety Regulations

CGA CAN/CGA-B149.1 Natural Gas Installation Code

CGA CAN/CGA-B149.2 Propane Installation Code

CSA CAN/CSA-B139 Installation Code for Oil Burning Equipment

Electrical Installation and Inspection Act and Regulations

CSA C22.1 Canadian Electrical Code, Part 1

Boilers and Pressure Vessels Act and Regulations

CSA B51 Boiler, Pressure Vessel and Pressure Piping Code

A-3.1.1.24. Division A NBC and NPC 2.2 Objectives

The National Building and Plumbing codes are amended to add the Objective, Sub-objectives and Functional Statements in their respective Tables.

A-3.8.1. Barrier-Free Design General

Barrier free requirements, with few exceptions, apply to all *buildings*. The revised version, for example, continues to exempt a few occupancies such as houses and small residential *buildings*, not more than 3 units as it has in the past.

A-3.8.1.1.(1)(f) Emergency Facilities Exempt The exemption is intended to include sleeping quarters and associated kitchen and washroom facilities, but does not extend to assembly occupancies, administration or call-centre type operations within fire, rescue, or emergency response facilities.

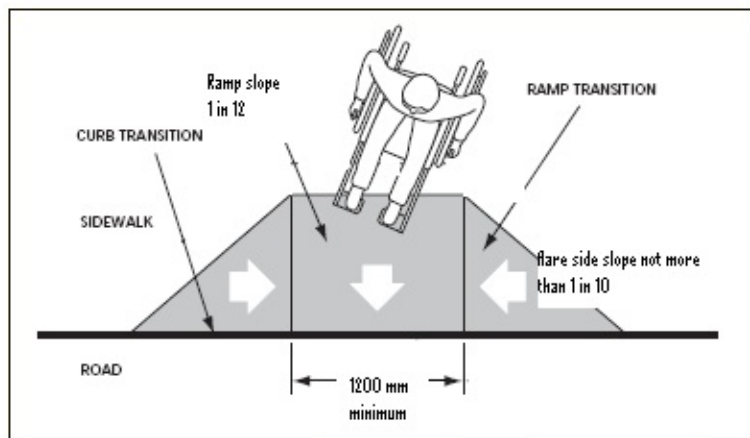
A-3.8.1.1.(6) Residential Suites required to be barrier free. Where there are more than 3 residential suites in a *building*, 1 suite for every 20 suites, or part thereof, must conform to the requirements of 3.8.3.18. Suites of Residential Occupancies required to be Barrier Free.

A-3.8.2.1. Barrier free Path of Travel In the previous versions 3.8.2.1. Barrier Free Path of Travel included an extensive list where the path was required, however it was not all inclusive, and lead to inconsistent application of the requirement. The intent of the Code is now emphasized to require the barrier free path of travel everywhere, with some few exceptions which are listed. For general guidance readers may refer to the NBC but are cautioned that Nova Scotia applies these concepts for employees as well as the general public. For example, the NBC comments that small raised office areas are not required to be barrier free in retail and industrial premises. In Nova Scotia the view is this would only be allowed if there were a fully accessible office as well as a raised office to serve the same function.

A-3.8.2.1.(1)(c) Passenger-elevating Device A passenger-elevating device must conform to those devices as defined in the CSA Standard B355, "Lifts for Persons with Physical Disabilities"

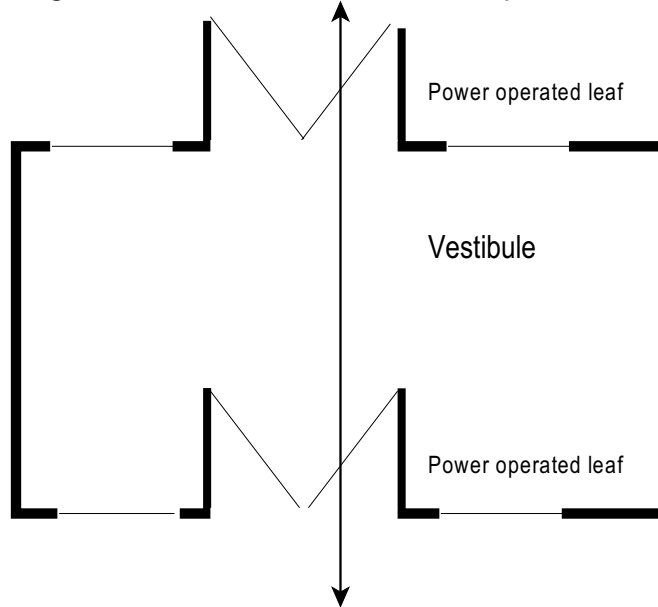
A-3.8.2.3. Washrooms Required to be Barrier Free A universal toilet room may be substituted for a barrier free water closet stall in new construction as well as where alterations are being made to an existing building. There should be no fewer water closets in total in a building, as a result of the substitution except as permitted by Article 3.7.2.2. Water Closet in the NBC.

A-3.8.3.2. Curb Ramp Curb ramps commonly referred to as curb cut. Curb ramps are required where there are curbs in the path of travel, typically from a passenger loading zone or designated parking area to a *building*.



Curb ramps shall have a minimum width of not less 1200 mm in areas measured across the ramp. The sides of the curb ramp shall be flared. The gradients of the curb ramp shall be 1 in 12 and the flared sides shall be not more than 1 in 10. Curb ramps should have a surface that is slip-resistant and colour- and texture contrasted with the adjacent surfaces.

A-3.8.3.3.(14) Power Door Operators in Vestibules Where a power door operator is required at least one leaf in each set of doors in the barrier free path of travel through a vestibule shall meet the requirements.



A-3.8.3.15.(5)(d) Provision of TTY Phones Cell phones with text messaging capabilities satisfies this requirement.

A-No. 35 Schedule "D" ALTERNATE COMPLIANCE METHODS FOR EXISTING Buildings The code requires 50 per cent of all public entrances to have barrier free access. Typically small *buildings* may only have 1 or 2 entrances. Public way means a sidewalk, street, highway, square, or other open space to which the public has access, as of right or by invitation, expressed or implied. Street means any highway, road, boulevard, square or other improved thoroughfare 9 m or more in width, which has been dedicated or deeded for public use, and is accessible to fire department vehicles and equipment. The intent is to allow the use of a stair conforming to the alternate requirement for an existing *building* where no ramped or lift access is possible either at the front door or another door into the *building*. This would occur most frequently where a *building* sits on the lot line at the sidewalk, and there is no other door accessible from the public way.

The acceptance of an alternative barrier free path of travel to the entrance does not relieve any other barrier free requirement provisions of the Code. It is anticipated that even if the only access is by a stair, in compliance with the alternate compliance measure, the balance of the premises shall comply.

A-10.2.1.1. (2) Energy Efficient Design

There are three potential paths to follow to achieve compliance with the energy conservation requirements of Part 10.

These are

- (a) a pure prescriptive solution, which is achieved by meeting the prescriptive solutions found in 10.3.2.;
- (b) performance solutions, which are achieved by submitting such design drawings, methodology and calculations as required by the authority having jurisdiction to demonstrate conformance to the thermal design requirements found in 10.3.3. or 10.3.4.; or
- (c) performance paths, which are achieved by conforming to existing protocols and supported by such documentation as required by the authority having jurisdiction, such as
 - (i) the “EnerGuide¹ Rating System: Administrative Procedures (New Homes), January 2010” and its accompanying technical document the “EnerGuide Rating System: Energy Advisor Manual, January 2010”, and achieve a design rating of not less than 80,
 - (ii) NRCan “R-2000™ Standard” (2005), or
 - (iii) other performance paths which conform to “Specifications for Calculation Procedures for Demonstrating Compliance to the Model Energy Code for Houses Using Trade-offs,” published by the Canadian Commission on Building and Fire Codes that will achieve at least the minimum level of performance required by Part 10.

A-10.3.3.11. (1) Doors

An air curtain is a wall of air generated by specialized fans to separate areas of pressure or temperature differential.

A-10.3.4.1.(1) Exceptions to the Application of Requirements

- (1) The requirements of 10.3.4. do not apply to
- (a) a *building* or part of a *building* of *residential occupancy* that is within the scope of Part 9 of Division B.
 - (b) a heritage *building*,
 - (c) any *building* space which uses energy at a rate less than 12 W/m² under peak conditions,
 - (d) temporary structures such as construction trailers, tents, air-supported structures and portable classrooms,
 - (e) warehouses and storage rooms where the design indoor temperature does not exceed 10°C, and
 - (f) unheated storage garages and unheated storage rooms except as required in Sentence (2).

¹“EnerGuide is an official mark of Natural Resources Canada.”

(2) Conditioned spaces of *buildings* exposed to unheated storage garages and unheated storage rooms shall meet the *building* envelope requirements 10.3.4..

(3) Energy consumption of systems and equipment located in a storage garage but which do not serve the storage garage need not be considered as energy used in the storage garage but shall be included as energy used for the rest of the *building*.

(4) The exceptions listed in Sentence 10.2.1.1.(4) exempts *buildings* or parts of *buildings* from compliance with energy efficient design requirements where

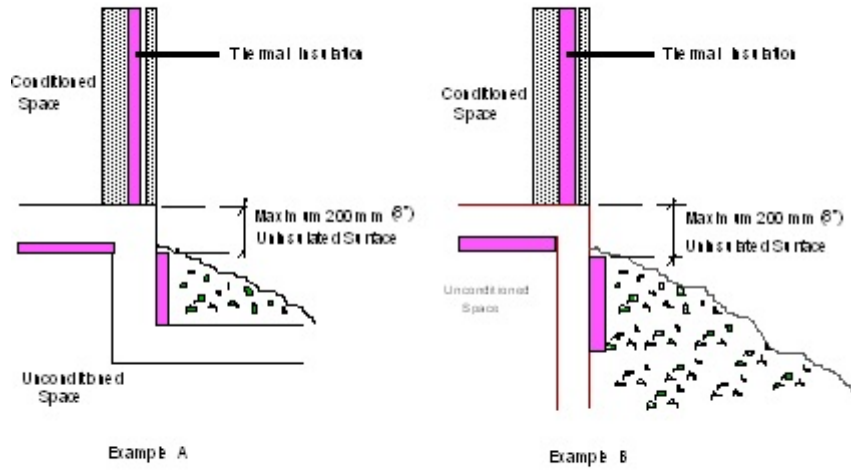
- (a) the areas are intended primarily for manufacturing processing, commercial processing or industrial processing, and
- (b) the environmental condition within the *buildings* or parts of *buildings* are governed by the operation or process within the *building*.

(5) A-Table 10.3.4.1.(1) contains some examples of occupancies which can be exempted from compliance with 10.3.4. The list is not intended to be exhaustive and other exemptions may be made.

A-Table 10.3.4.1.(1)
Examples of Occupancies Exempt from Compliance

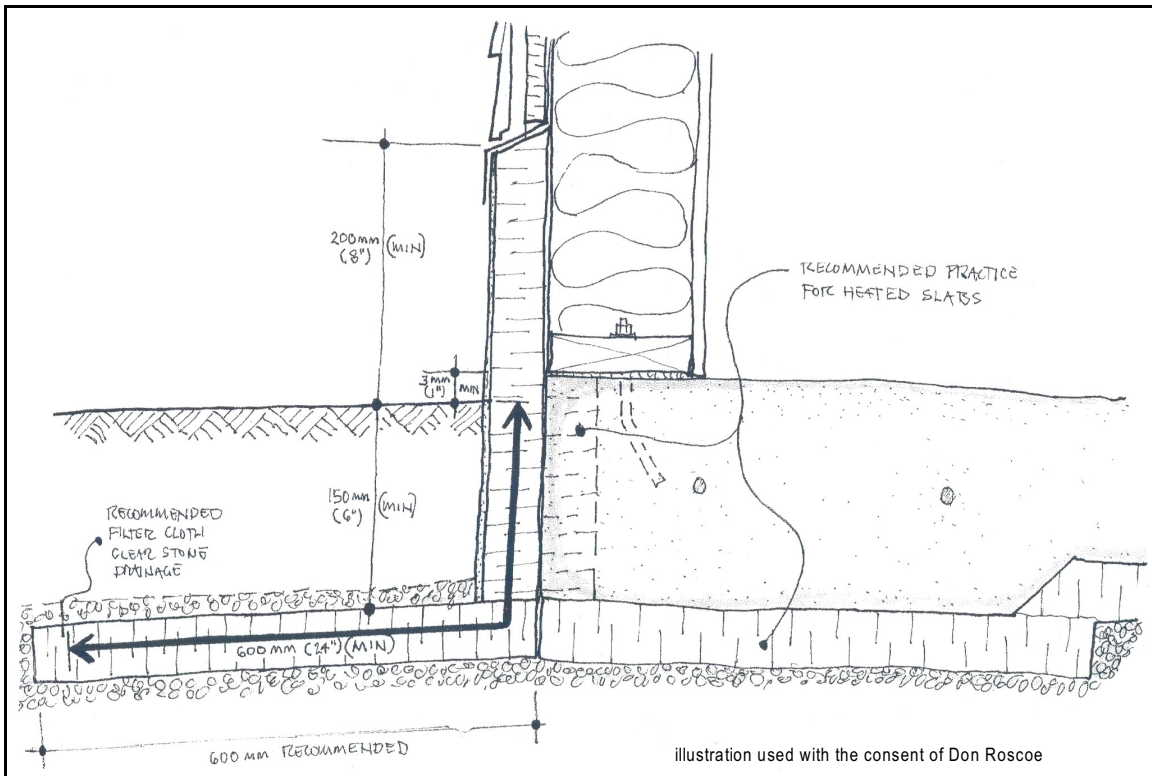
GROUP C Must comply with Subsection 10.3.2. or 10.3.3. except for seasonally occupied buildings. (See Appendix A, Division B, Volume 2 NBC A-9.1.1.1.) Application of Part 9 to Seasonally and Intermittently Occupied <i>Buildings</i>)	GROUP F, DIVISION 2 Dry Cleaning Establishments not using flammable or explosive solvents or cleaners Electrical Substations Helicopter Landing Areas on Roofs Laundries, except self-service Planing Mills Printing Plants Repair Garages Woodworking Factories	GROUP F, DIVISION 3 Creameries Power Plants Open-air Parking Garages Pumping Stations
Column 1	2	3

A-10.3.4.2. Maximum Uninsulated Surface of Foundation Wall



Maximum Uninsulated Surface of Foundation Wall

A-10.3.3.8. Foundation Wall Insulation



Configuration for Thermal Insulation Installed Down and Outward from the Floor or Wall

- Notes:
1. Exterior ground should be below and slope away from the top of the slab.
 2. Ground insulation should be vertical or sloped away from the slab for drainage and be protected by a drainage plane to minimize water absorption.
 3. Vertical insulation should extend 200mm (8") above finished grade to protect siding.

A-10.3.4.4. Heating, Ventilating and Air-Conditioning See the following Tables 10.3.4.4.(1) to 10.3.4.4.(7).

A-Table 10.3.4.4.(1)

Unitary Air Conditioners and Condensing Units, Electrically Operated, Minimum Efficiency Requirements

Equipment Type	Size Category	Sub-Category or Rating Condition	Minimum Efficiency ⁽¹⁾	Test Procedure
Air Conditioners, Air Cooled	< 19 kW (< 65,000 Btu/h)	Split System and Single Package	13.0 SEER ⁽²⁾	CAN/CSA-C656 ARI 210/240
	≥ 19 kW and < 40 kW (≥ 65,000 Btu/h and < 135,000 Btu/h)	Split System and Single Package	10.3 EER ⁽²⁾ 10.6 IPLV ⁽²⁾	CAN/CSA-C746 ARI 340/360
	≥ 40 kW and < 70 kW (≥ 135,000 Btu/h and < 240,000 Btu/h)	Split System and Single Package	9.7 EER ⁽²⁾ 9.9 IPLV ⁽²⁾	CAN/CSA-C746 ARI 340/360
	≥ 70 kW and < 223 kW (≥ 240,000 Btu/h and < 760,000 Btu/h)	Split System and Single Package	9.5 EER ⁽³⁾ 9.7 IPLV ⁽³⁾	ARI 340/360
	≥ 223 kW (≥ 760,000 Btu/h)	Split System and Single Package	9.2 EER ⁽³⁾ 9.4 IPLV ⁽³⁾	ARI 340/360
Through-the-Wall, Air Cooled	≤ 8.8 kW (≤ 30,000 Btu/h)	Split System and Single Package	10.9 SEER ⁽²⁾ (before 1/23/2010) 12.0 SEER ⁽²⁾ (as of 1/23/2010)	CAN/CSA-C656 ARI 210/240
Small-Duct High-Velocity, Air Cooled	< 19 kW (< 65,000 Btu/h)	Split System	11.0 SEER ⁽²⁾	CAN/CSA-C656 ARI 210/240
Air Conditioners, Water and Evaporatively Cooled	< 19 kW (< 65,000 Btu/h)	Split System and Single Package	12.1 EER ⁽³⁾	ARI 210/240
	≥ 19 kW and < 40 kW (≥ 65,000 Btu/h and < 135,000 Btu/h)	Split System and Single Package	11.5 EER ⁽²⁾	CAN/CSA-C746 ARI 340/360
	≥ 40 kW and < 70 kW (≥ 135,000 Btu/h and < 240,000 Btu/h)	Split System and Single Package	11.0 EER ⁽²⁾	CAN/CSA-C746 ARI 340/360
	≥ 70 kW (≥ 240,000 Btu/h)	Split System and Single Package	11.0 EER ⁽³⁾ 10.3 IPLV ⁽³⁾	ARI 340/360
Condensing Units, Air Cooled	≥ 40 kW (≥ 135,000 Btu/h)		10.1 EER ⁽²⁾ 11.2 IPLV ⁽²⁾	CAN/CSA-C746 ARI 365
Condensing Units, Water or Evaporatively Cooled	≥ 40 kW (≥ 135,000 Btu/h)		13.1 EER ⁽²⁾ 13.1 IPLV ⁽²⁾	CSA C746 ARI 365

Notes to A-Table 10.3.4.4.(1)

- (1) IPLV's are only applicable to equipment with capacity modulation. For units with other than electric resistance heat deduct 0.2 EER and 0.2 IPLV.
- (2) Minimum efficiency regulated by Nova Scotia Energy Efficiency Act.
- (3) Minimum efficiency specified in ANSI/ASHRAE/IESNA Standard 90.1.

A-Table 10.3.4.4.(2)
Unitary and Applied Heat Pumps, Electrically Operated,
Minimum Efficiency Requirements

Equipment Type	Size Category	Sub-Category or Rating Condition	Minimum Efficiency(1)	Test Procedure
Air Cooled, (Cooling Mode)	< 19 kW (< 65,000 Btu/h)	Split System and Single Package	13.0 SEER(2)	CAN/CSA-C656 ARI 210/240
	≥ 19 kW and < 40 kW (≥ 65,000 Btu/h and < 135,000 Btu/h)	Split System and Single Package	10.1 EER(2) 10.4 IPLV(2)	CAN/CSA-C746 ARI 340/360
	≥ 40 kW and < 70 kW (≥ 135,000 Btu/h and < 240,000 Btu/h)	Split System and Single Package	9.3 EER(2) 9.5 IPLV(2)	CAN/CSA-C746 ARI 340/360
	≥ 70 kW (≥ 240,000 Btu/h)	Split System and Single Package	9.0 EER(3) 9.2 IPLV(3)	ARI 340/360
Through-the-Wall (Air Cooled, Cooling Mode)	≤ 8.8 kW (≤ 30,000 Btu/h)	Split System and Single Package	10.9 SEER(2) (before 1/23/2010) 12.0 SEER(2) (as of 1/23/2010)	CAN/CSA-C656 ARI 210/240
Small-Duct High-Velocity (Air Cooled, Cooling Mode)	< 19 kW (< 65,000 Btu/h)	Split System	11.0 SEER(2)	CAN/CSA-C656 ARI 210/240
Water-Source (Cooling Mode)	< 5 kW (< 17,000 Btu/h)	30°C (86°F) Entering Water	3.28 COPc(2)	CAN/CSA-C13256-1
	≥ 5 kW and < 19 kW (≥ 17,000 Btu/h and < 65,000 Btu/h)	30°C (86°F) Entering Water	3.52 COPc(2)	CAN/CSA-C13256-1
	≥ 19 kW and < 40 kW (≥ 65,000 Btu/h and < 135,000 Btu/h)	30°C (86°F) Entering Water	3.52 COPc(2)	CAN/CSA-C13256-1
Groundwater Source (Cooling Mode)	< 40 kW (< 135,000 Btu/h)	15°C (59°F) Entering Water	4.75 COPc(2)	CAN/CSA-C13256-1
Ground Source (Cooling Mode)	< 40 kW (< 135,000 Btu/h)	25°C (77°F) Entering Water	3.93 COPc(2)	CAN/CSA-C13256-1
Air Cooled, (Heating Mode)	< 19 kW (< 65,000 Btu/h) Cooling Capacity	Split System and Single Package	6.7 HSPF V(2)	CAN/CSA-C656 ARI 210/240
	≥ 19 kW and < 40 kW (≥ 65,000 Btu/h and < 135,000 Btu/h) Cooling Capacity	8.3°C db / 6.1°C wb (47°F db / 43°F wb) Outdoor Air	3.2 COP(2)	CAN/CSA-C746 ARI 340/360
		-8.3°C db / -9.4°C wb (17°F db / 15°F wb) Outdoor Air	2.2 COP(2)	
	≥ 40 kW (≥ 135,000 Btu/h) Cooling Capacity	8.3°C db / 6.1°C wb (47°F db / 43°F wb) Outdoor Air	3.1 COP(2)	CAN/CSA-C746 ARI 340/360
		-8.3°C db / -9.4°C wb (17°F db / 15°F wb) Outdoor Air	2.0 COP(2)	

A-Table 10.3.4.4.(2) Continued
Unitary Air Conditioners and Condensing Units, Electrically Operated, Minimum Efficiency Requirements

Equipment Type	Size Category	Sub-Category or Rating Condition	Minimum Efficiency(1)	Test Procedure
Through-the-Wall (Air Cooled, Heating Mode)	≤ 8.8 kW (≤ 30,000 Btu/h) Cooling Capacity	Split System and Single Package	6.2 HSPF V(2) (before 1/23/2010) 6.4 HSPF V(2) (as of 1/23/2010)	CAN/CSA-C656 ARI 210/240
Small-Duct High-Velocity (Air Cooled, Heating Mode)	< 19 kW (< 65,000 Btu/h) Cooling Capacity	Split System	5.9 HSPF V(2)	CAN/CSA-C656 ARI 210/240
Water-Source (Heating Mode)	< 40 kW (< 135,000 Btu/h) Cooling Capacity	20°C (68°F) Entering Water	4.2 COP(2)	CAN/CSA-C13256-1
Groundwater Source (Heating Mode)	< 40 kW (< 135,000 Btu/h) Cooling Capacity	10°C (50°F) Entering Water	3.6 COP(2)	CAN/CSA-C13256-1
Ground Source (Heating Mode)	< 40 kW (< 135,000 Btu/h) Cooling Capacity	0°C (32°F) Entering Water	3.1 COP(2)	CAN/CSA-C13256-1

Notes to A-Table 10.3.4.4.(2)

- (1) IPLV's are only applicable to equipment with capacity modulation.
- (2) Minimum efficiency regulated by Nova Scotia Energy Efficiency Act.
- (3) Minimum efficiency specified in ANSI/ASHRAE/IESNA Standard 90.1.

A-Table 10.3.4.4.(3)
Water Chilling Packages, Minimum Efficiency Requirements

Equipment Type	Size Category	Nova Scotia Energy Efficiency Act Minimum Efficiency	Test Procedure
Air Cooled, With Condenser, Electrically Operated	< 528 kW (< 150 tons)	2.80 COP 3.05 IPLV	CAN/CSA-C743 ARI 550, ARI 590
	≥ 528 kW (≥ 150 tons)	2.80 COP 3.05 IPLV	CAN/CSA-C743 ARI 550, ARI 590
Air Cooled, Without Condenser, Electrically Operated	All Capacities	3.10 COP 3.45 IPLV	CAN/CSA-C743 ARI 550, ARI 590
Water Cooled, Electrically Operated, Positive Displacement (Reciprocating)	All Capacities	4.20 COP 5.05 IPLV	CAN/CSA-C743 ARI 590
Water Cooled, Electrically Operated, Positive Displacement (Rotary Screw and Scroll)	< 528 kW (< 150 tons)	4.45 COP 5.20 IPLV	CAN/CSA-C743 ARI 550
	≥ 528 kW and < 1055 kW (≥ 150 tons and < 300 tons)	4.90 COP 5.60 IPLV	CAN/CSA-C743 ARI 550
	≥ 1055 kW (≥ 300 tons)	5.50 COP 6.15 IPLV	CAN/CSA-C743 ARI 550
Water Cooled, Electrically Operated, (Centrifugal)	< 528 kW (< 150 tons)	5.00 COP 5.25 IPLV	CAN/CSA-C743 ARI 550
	≥ 528 kW and < 1055 kW (≥ 150 tons and < 300 tons)	5.55 COP 5.90 IPLV	CAN/CSA-C743 ARI 550
	≥ 1055 kW (≥ 300 tons)	6.10 COP 6.40 IPLV	CAN/CSA-C743 ARI 550
Single Effect Absorption Air Cooled	All Capacities	0.60 COP	CAN/CSA-C743 ARI 560
Single Effect Absorption Water Cooled	All Capacities	0.70 COP	CAN/CSA-C743 ARI 560
Double Effect Absorption Indirect-Fired	All Capacities	1.00 COP 1.05 IPLV	CAN/CSA -C743 ARI 560
Double Effect Absorption Direct-Fired	All Capacities	1.00 COP 1.00 IPLV	CAN/CSA-C743 ARI 560

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A-Table 10.3.4.4.(4)**Packaged Terminal Air Conditioners, Packaged Terminal Heat Pumps, Single-Package Vertical Air Conditioners, Single-Package Vertical Heat Pumps, Room Air Conditioners and Room Air Conditioner Heat Pumps, Electrically Operated, Minimum Efficiency Requirements**

Equipment Type	Size Category (input)	Sub-Category or Rating Condition	Minimum Efficiency	Test Procedure
PTAC (Cooling Mode) New Construction	All Capacities	35°C (95°F) db Outdoor Air	12.5 - (0.213 x Cap/293.1) EER(1) 12.5 - (0.213 x Capo/1000) EER(1)	CAN/CSA C744 ARI 310/380
PTAC (Cooling Mode) Replacements b	All Capacities	35°C (95°F) db Outdoor Air	10.9 - (0.213 x Cap/293.1) EER(1) 10.9 - (0.213 x Capo/1000) EER(1)	CAN/CSA-C744 ARI 310/380
PTHP (Cooling Mode) New Construction	All Capacities	35°C (95°F) db Outdoor Air	12.3 - (0.213 x Cap/293.1) EER(1) 12.3 - (0.213 x Capo/1000) EER(1)	CAN/CSA-C744 ARI 310/380
PTHP (Cooling Mode) Replacements b	All Capacities	35°C (95°F) db Outdoor Air	10.8 - (0.213 x Cap/293.1) EER(1) 10.8 - (0.213 x Capo/1000) EER(1)	CAN/CSA-C744 ARI 310/380
PTHP (Heating Mode) New Construction	All Capacities		3.2 - (0.026 x Cap/293.1) COP(1) 3.2 - (0.026 x Capo/1000) COP(1)	CAN/CSA-C744 ARI 310/380
PTHP (Heating Mode) Replacements b	All Capacities		2.9 - (0.026 x Cap/293.1) COP(1) 2.9 - (0.026 x Capo/1000) COP(1)	CAN/CSA-C744 ARI 310/380
SPVAC (Cooling Mode)	All Capacities	35°C db / 23.9°C wb (95°F db / 75°F wb) Outdoor Air	8.6 EER(1)	CAN/CSA-C746 ARI 390
SPVHP (Cooling Mode)	All Capacities	35°C db / 23.9°C wb (95°F db / 75°F wb) Outdoor Air	8.6 EER(1)	CAN/CSA-C746 ARI 390
SPVHP (Heating Mode)	All Capacities	8.3°C db / 6.1°C wb (47°F db / 43°F wb) Outdoor Air	2.7 COP(1)	CAN/CSA-C746 ARI 390

A-Table 10.3.4.4.(4) continued
**Packaged Terminal Air Conditioners, Packaged Terminal Heat Pumps, Single-
 Package Vertical Air Conditioners, Single-Package Vertical Heat Pumps,
 Room Air Conditioners and Room Air Conditioner Heat Pumps, Electrically
 Operated, Minimum Efficiency Requirements**

Equipment Type	Size Category (input)	Sub-Category or Rating Condition	Minimum Efficiency	Test Procedure
Room Air Conditioners, With Louvered Sides	< 1.8 kW (< 6,000 Btu/h)		9.7 EER	CSA C368.1-M C368.1 only applies to equipment < 10.55kW (< 36,000 Btu/h) ANSI/AHAM RAC-1
	≥ 1.8 kW and < 2.3 kW (≥ 6,000 Btu/h and < 8,000 Btu/h)		9.7 EER ⁽¹⁾	
	≥ 2.3 kW and < 4.1 kW (≥ 8,000 Btu/h and < 14,000 Btu/h)		9.8 EER ⁽¹⁾	
	≥ 4.1 kW and < 5.9 kW (≥ 14,000 Btu/h and < 20,000 Btu/h)		9.7 EER ⁽¹⁾	
	≥ 5.9 kW (≥ 20,000 Btu/h)		8.5 EER ⁽¹⁾	
Room Air Conditioners, Without Louvered Sides	< 2.3 kW (< 8,000 Btu/h)		9.0 EER ⁽¹⁾	CSA C368.1-M ANSI/AHAM RAC-1
	≥ 2.3 kW and < 5.9 kW (≥ 8,000 Btu/h and < 20,000 Btu/h)		8.5 EER ⁽¹⁾	
	≥ 5.9 kW (≥ 20,000 Btu/h)		8.5 EER ⁽¹⁾	
Room Air Conditioner Heat Pumps With Louvered Sides	< 5.9 kW (< 20,000 Btu/h)		9.0 EER ⁽¹⁾	CSA C368.1-M ANSI/AHAM RAC-1
	≥ 5.9 kW (≥ 20,000 Btu/h)		8.5 EER ⁽¹⁾	
Room Air Conditioner Heat Pumps Without Louvered Sides	< 4.1 kW (< 14,000 Btu/h)		8.5 EER ⁽¹⁾	CSA C368.1-M ANSI/AHAM RAC-1
	≥ 4.1 kW (≥ 14,000 Btu/h)		8.0 EER ⁽¹⁾	
Room Air Conditioner, Casement Only	All Capacities		8.7 EER ⁽²⁾	ANSI/AHAM RAC-1
Room Air Conditioner, Casement-Slider	All Capacities		9.5 EER ⁽²⁾	ANSI/AHAM RAC-1

Notes to A-Table 10.3.4.4.(4)

- (1) Minimum efficiency regulated by Nova Scotia Energy Efficiency Act.
- (2) Minimum efficiency specified in ANSI/ASHRAE/IESNA Standard 90.1.
- (3) Cap is the rated cooling capacity in W, Capo is the rated cooling capacity in Btu/h. If unit capacity is less than 2,030 W (7,000 Btu/h), use 2,030 W (7,000 Btu/h) in calculation. If greater than 4,390 W (15,000 Btu/h), use 4,390 W (15,000 Btu/h) in calculation.
- (4) Replacements must be factory labeled as follows "MANUFACTURED FOR REPLACEMENT APPLICATIONS ONLY; NOT TO BE INSTALLED IN NEW CONSTRUCTION PROJECTS." Replacement efficiencies apply only to units with existing wall sleeves/less than 0.41 m (16 in) high and less than 1.07 m (42 in.) wide.

A-Table 10.3.4.4.(5)**Warm Air Furnaces and Combination Warm Air Furnaces/Air-Conditioning Units, Warm Air Duct Furnaces and Units Heaters Minimum Efficiency Requirements**

Equipment Type	Size Category (input)	Sub-Category or Rating Condition	Nova Scotia Energy Efficiency Act Minimum Efficiency	Test Procedure
Warm Air Furnace, Gas-Fired	< 66 kW (< 225,000 Btu/h)	Single-phase	78% AFUE	CGA-P.2 DOE 10 CFR Part 430 or ANSI Z21.47
		Three-phase	78% AFUE or 80% Et	
	≥ 66 kW and < 117 kW (≥ 225,000 Btu/h and < 400,000 Btu/h)	Maximum Capacity*	80% Et	CSA 2.3 ANSI Z21.47
	≥ 117 kW (≥ 400,000 Btu/h)	Maximum Capacity*	80% Et	CGA P.8 ANSI Z21.47
Warm Air Furnace, Oil-Fired	< 66 kW (< 225,000 Btu/h)		78% SEUE	CSA B212 DOE 10 CFR Part 430 or UL 727
	≥ 66 kW (≥ 225,000 Btu/h)	Maximum Capacity*	81% Et	UL 727
Warm Air Duct Furnaces, Gas-Fired	All Capacities	Maximum Capacity*	80% Et	ANSI Z83.9
Warm Air Unit Heaters, Gas-Fired	All Capacities	Maximum Capacity*	80% Ec	CSA 2.6 ANSI Z83.8
Unit Heaters, Oil-Fired	All Capacities	Maximum Capacity*	80% Ec	UL 731
Et is thermal efficiency and E c is combustion efficiency. E c = 100% less flue losses *Maximum capacity as provided for and allowed by unit controls.				

A-Table 10.3.4.4.(6)
Gas-Fired and Oil-Fired Boilers, Minimum Efficiency Requirements

Equipment Type	Size Category (input)	Sub-Category or Rating Condition	Minimum Efficiency	Test Procedure
Boilers, Gas-Fired	< 88 kW (< 300,000 Btu/h)	Hot Water	80% AFUE ⁽¹⁾	CGA P.2 DOE 10 CFR Part 430
		Steam	75% AFUE ⁽¹⁾	
	> 733 kW (> 2,500,000 Btu/h)	Hot Water	80% ⁽²⁾ E _c	Hydronics Institute BTS
		Steam	80% ⁽²⁾ E _c	
Boilers, Oil-Fired	< 88 kW (< 300,000 Btu/h)		80% SEUE ⁽¹⁾	CSA B212 DOE 10 CFR Part 430
	> 733 kW (> 2,500,000 Btu/h)	Hot Water	83% ⁽²⁾ E _c	Hydronics Institute BTS
		Steam	83% ⁽²⁾ E _c	
	> 733 kW (> 2,500,000 Btu/h)	Hot Water	83% ⁽²⁾ E _c	Hydronics Institute BTS
Steam		83% ⁽²⁾ E _c		
Boilers, Oil-Fired (Residual)	> 733 kW (> 2,500,000 Btu/h)	Hot Water	83% ⁽²⁾ E _c	Hydronics Institute BTS
		Steam	83% ⁽²⁾ E _c	
	> 733 kW (> 2,500,000 Btu/h)	Maximum Capacity*	78% ⁽²⁾ E _t	Hydronics Institute BTS

E_t is thermal efficiency and E_c is combustion efficiency. E_c = 100% less flue losses.

*Maximum capacity as provided for and allowed by the unit's controls.

Notes to A-Table 10.3.4.4.(6)

- (1) Minimum efficiency regulated by Nova Scotia Energy Efficiency Act.
- (2) Minimum efficiency specified in ANSI/ASHRAE/IESNA Standard 90.1.

A-Table 10.3.4.4.(7)
Cooling Tower Performance Requirements

Equipment Type	Size Category	Sub-Category or Rating Condition	ASHRAE 90.1-2004 Performance Required	Test Procedure
Propeller or Axial Fans	All Capacities	35°C (95°F) Entering Water 29°C (85°F) Leaving Water 24°C (75°F) wb Outdoor Air	≥ 3.23 L/s · kW (≥ 38.2 gpm/hp)	CTI ATC-105
Centrifugal Fans	All Capacities	35°C (95°F) Entering Water 29°C (85°F) Leaving Water 24°C (75°F) wb Outdoor Air	≥ 1.7 L/s · kW (≥ 20.0 gpm/hp)	CTI ATC-105
Air-cooled Condensers	All Capacities	52°C (125°F) Condensing Temperature R-22 Test Fluid 88°C (190°F) Entering Gas Temperature 35°C (95°F) Entering db 8°C (15°F) Subcooling	≥ 69 COP ($\geq 176,000$ Btu/h · hp)	ARI 460

For purpose of this Table, cooling tower performance is maximum flow rating divided by fan nameplate rated motor power.

Air-cooled condenser performance is defined as heat rejected from the refrigerant divided by the fan nameplate rated motor power.

A-Table 10.3.4.6.(1)
Water Heating Equipment, Performance Requirements

Equipment Type	Size Category	Sub-Category or Rating Condition	Minimum Efficiency	Test Procedure
Electric Storage Water Heaters	All Capacities	Resistance ≥ 50 L and ≤ 284 L (≥ 13.2 gal and ≤ 75 gal)	0.97 - 0.000349V EF(4) (0.97 - 0.00132 Vo EF)(4) 35 + 0.20V SL(1) (119.4 + 2.583Vo SLo)(1) 40 + 0.20V SL(2) (136.5 + 2.583Vo SLo)(2)	CSA C745 CAN/CSA - C191
	All Capacities	Resistance > 284 L and ≤ 454 L (> 75 gal and < 120 gal)	0.97 - 0.000349V EF(4) (0.97 - 0.00132 Vo EF)(4) 0.472V - 38.5 SL(1) (6.095Vo - 131.4 SLo)(1) 0.472V - 33.5 SL(2) (6.095Vo - 114.3 SLo)(2)	CSA C745 CAN/CSA - C191
	≤ 24 Amps and ≤ 250 volts	Heat Pump	0.93 - 0.000349 V EF(4) (0.93 - 0.00132 Vo EF)(4)	CSA C745 DOE 10 CFR Part 430
Gas Storage Water Heaters	≤ 21.98 kW (≤ 75,000 Btu/h)	≥ 75.7L and < 378.5 L (≥ 20 gal and < 100 gal)	0.67 - 0.0005V EF(4) (0.67 - 0.00189 Vo EF)(4)	CSA P.3 DOE 10 CFR Part 430
	> 21.98 kW (> 75,000 Btu/h)	< 309.75 W/L (< 4,000 Btu/h/gal)	80% Et(3),(5) $Q / 800 + 16.57\sqrt{V} SL$ $Q / 800 + 110\sqrt{V} SL$	CSA P.3 ANSI Z21.10.3
Gas Instantaneous Water Heaters	> 14.66 kW and < 58.62 kW (> 50,000 Btu/h and < 200,000 Btu/h)	≥ 309.75 W/L and < 7.57 L (≥ 4,000 Btu/h/gal and < 2 gal)	0.62 - 0.0005V EF(4) (0.62 - 0.00189 Vo EF)	CSA 4.3 DOE 10 CFR Part 430
	≥ 58.62 kW (≥ 200,000 Btu/h)	≥ 309.75 W/L and < 37.85 L (≥ 4,000 Btu/h/gal and < 10 gal)	80% Et(3),(4)	CSA 4.3 ANSI Z21.10.3
	≥ 58.62 kW (≥ 200,000 Btu/h)	≥ 309.75 W/L and ≥ 37.85 L (≥ 4,000 Btu/h/gal and ≥ 10 gal)	80% Et(3),(5) $Q / 800 + 16.57\sqrt{V} SL$ $Q / 800 + 110\sqrt{V} SL$	CSA 4.3 ANSI Z21.10.3

A-Table 10.3.4.6.(1) (continued)
Water Heating Equipment, Performance Requirements

Equipment Type	Size Category	Sub-Category or Rating Condition	Minimum Efficiency	Test Procedure
Oil Storage Water Heaters	≤ 30.78 kW ($\leq 105,000$ Btu/h)	≥ 75.7 L (≥ 20 gal)	0.59 - 0.0005V EF(4) (0.59 - 0.00189 Vo EF)	CAN/CSA-B211 DOE 10 CFR Part 430
	> 30.78 kW ($> 105,000$ Btu/h)	< 309.75 W/L ($< 4,000$ Btu/h/gal)	78% Et(3),(5) $Q / 800 + 16.57\sqrt{SL}$ $Q / 800 + 110\sqrt{SL}$	ANSI Z21.10.3
Oil Instantaneous Water Heaters	≤ 61.55 kW ($\leq 210,000$ Btu/h)	≥ 309.75 W/L and < 7.57 L ($\geq 4,000$ Btu/h/gal and < 2 gal)	0.59 - 0.0005V EF (5) (0.59 - 0.0019Vo EF)(5)	DOE 10 CFR Part 430
	> 61.55 kW ($> 210,000$ Btu/h)	≥ 309.75 W/L and < 37.85 L ($\geq 4,000$ Btu/h/gal and < 10 gal)	80% Et(3),(5)	ANSI Z21.10.3
	> 61.55 kW ($> 210,000$ Btu/h)	≥ 309.75 W/L and ≥ 37.85 L ($\geq 4,000$ Btu/h/gal and ≥ 10 gal)	78% Et(3),(5) $Q / 800 + 16.57\sqrt{SL}$ $Q / 800 + 110\sqrt{SL}$	ANSI Z21.10.3
Hot Water Supply Boilers Gas and Oil	≥ 87.93 kW and < 3663.8 kW ($\geq 300,000$ Btu/h and $< 12,500,000$ Btu/h)	≥ 309.75 W/L and < 37.85 L ($\geq 4,000$ Btu/h/gal and < 10 gal)	80% Et(3),(5)	ANSI Z21.10.3
Hot Water Supply Boilers Gas		≥ 309.75 W/L and ≥ 37.85 L ($\geq 4,000$ Btu/h/gal and ≥ 10 gal)	80% Et(3),(5) $Q / 800 + 16.57\sqrt{SL}$ $Q / 800 + 110\sqrt{SL}$	ANSI Z21.10.3
Hot Water Supply Boilers Oil		≥ 309.75 W/L and ≥ 37.85 L ($\geq 4,000$ Btu/h/gal and ≥ 10 gal)	78% Et(3),(5) $Q / 800 + 16.57\sqrt{SL}$ $Q / 800 + 110\sqrt{SL}$	ANSI Z21.10.3
Pool Heaters, Gas	All		78% Et(3),(4)	CGA P.6 ASHRAE 146
Pool Heaters, Oil	All		78% Et(3),(4)	ASHRAE 146
Heat Pump Pool Heaters	All		4.0 COP(5)	ASHRAE 146
Unfired Storage Tanks	All		RSI-2.2 (R-12.5)(5)	NONE

Notes to Table 10.3.4.4.(8)

- (1) Without bottom inlet SL is the standby loss in WV is the storage capacity in litres
- (2) With bottom inlet SLo is the standby loss in Btu/hVo is the storage capacity in gallons
- (3) Et is the thermal efficiency.
- (4) Minimum efficiency regulated by Nova Scotia Energy Efficiency Act.
- (5) Minimum efficiency specified in ANSI/ASHRAE/IESNA Standard 90.1.

A-10.3.4.7.(3) Fluorescent Lamp Ballasts

1. The ballast efficacy factor (BEF) of fluorescent lamp ballasts shall conform to A-Table 10.3.4.7. where

- (a) the ballast operates at nominal input voltages of 120, 277 or 347 volts;
- (b) the input frequency is 60 Hz;
- (c) the maximum lamp operating current is less than 1, 000 milliamperes;
- (d) the ballast is used to operate one of the following lamp types
 - 1. one or two 4-ft, nominal 40 W, rapid-start lamps,
 - 2. two 8-ft, nominal 75 W, slimline lamps,
- 3. two 8-ft, nominal 110 W, high-output rapid-start lamps;
- (e) the ballast is not specifically designed for starting at temperatures below 4.5°C (40°F); and
- (f) the ballast is not specifically designed for use with dimming controls.

2. The ballast efficacy factor (BEF) shall be calculated in accordance with Equation 9-1

$$\text{BEF} = \frac{\text{BF}}{\text{Power input}}$$

where BF = ballast factor, expressed as a percent, such as 95;
power input = total wattage of combined lamps and ballasts.

3. Tests for BF and power input shall be in accordance with CAN/CSA-C654, "Fluorescent Lamp Ballast Efficacy Measurements".

4. Other Fluorescent Lamp Ballasts. Ballasts that do not have all the characteristics listed in Sentence 1 are not required to meet the BEF in A-Table 10.3.4.7. and may be used as required.

5. One-lamp or three-lamp fluorescent luminaires recess-mounted within 3 m (10 ft) center to center of each other or pendant mounted or surface mounted within 0.3 m (1 ft) of each other, and within the same room, shall be tandem wired to eliminate unnecessary use of single-lamp ballasts.

Exception Three-lamp ballasts may be used.

6. All ballasts shall have a power factor of 90% or greater.

Exceptions

- (a) ballasts for circline and compact fluorescent lamps and low-wattage high-intensity discharge lamps of 100 W or less;
- (b) dimming ballasts.

A-Table 10.3.4.7.

Fluorescent Lamp Ballast Efficacy Factors(1)

Application for Operation of	Ballast Input Voltage	Total Nominal Lamp Watts	Nova Scotia Energy Efficiency Act Ballast Efficacy Factor
One F40T12 Lamp(2)	120 V	40	2.29
	277 V	40	2.29
	347 V	40	2.22
Two F40T12 Lamps(2)	120 V	80	1.17
	277 V	80	1.17
	347 V	80	1.12
Two F96T12 Lamps(3)	120 V	150	0.63
	277 V	150	0.63
	347 V	150	0.62
Two 110W/F96T12HO Lamps(4)	120 V	220	0.39
	277 V	220	0.39
	347 V	220	0.38
Two F32T8 Lamps	120 V	64	1.25
	277 V	64	1.23
	347 V	64	1.2
Column 1	2	3	4

Notes to A-Table 10.3.4.7.

- (1) All fluorescent lamp ballasts must have a minimum power factor of at least 0.9 at indicated voltage.
- (2) Also for use on 34 W/48T12/RS and 40 W/48T10/RS lamps
- (3) Also for use on 60 W/96T12/IS lamps.
- (4) Also for use on 95 W/96T12/HO lamps.

A-10.3.4.12. Electric motors are regulated under the Nova Scotia Energy Efficient Appliance Act, based on CSA-C390-M. The following values may be found in the Energy Regulation. In case of conflict between the provisions of this Code and those of the Energy Regulation, the provisions of the Regulation shall govern.

**A- Table 10.3.4.12.
Minimum Nominal Efficiency for Motors
forming part of Sentence 10.3.4.12.(2)**

Motor		Open Motors				Enclosed Motors			
		Speed (RPM)				Speed (RPM)			
		3600	1800	1200	900	3600	1800	1200	900
		Number of Poles				Number of Poles			
kW	(hp)	2	4	6	8	2	4	6	8
0.8	-1	75.5	82.5	80.0	84.0	75.5	82.5	80.0	74.0
1.1	-1.5	82.5	84	84	75.5	82.5	84	85.5	77
1.5	-2	84	84	85.5	85.5	84	84	86.5	82.5
2.2	-3	84	86.5	86.5	86.5	85.5	87.5	87.5	84
3.7	-5	85.5	87.5	87.5	87.5	87.5	87.5	87.5	85.5
5.6	-7.5	87.5	88.5	88.5	88.5	88.5	89.5	89.5	85.5
7.5	-10	88.5	89.5	90.2	89.5	89.5	89.5	89.5	88.5
11.1	-15	89.5	91	90.2	89.5	90.2	91	90.2	88.5
14.9	-20	90.2	91	91	90.2	90.2	91	90.2	89.5
18.7	-25	91	91.7	91.7	90.2	91	92.4	91.7	89.5
22.4	-30	91	92.4	92.4	91	91	92.4	91.7	91
29.8	-40	91.7	93	93	91.7	91.7	93	93	91
37.3	-50	92.4	93	93	91.7	92.4	93	93	91.7
44.8	-60	93	93.6	93.6	92.4	93	93.6	93.6	91.7
56	-75	93	94.1	93.6	93.6	93	94.1	93.6	93
74.6	-100	93	94.1	94.1	93.6	93.6	94.5	94.1	93
93.3	-125	93.6	94.5	94.1	93.6	94.5	94.5	94.1	93.6
111.9	-150	93.6	95	94.5	93.6	94.5	95	95	93.6
130.6	-175	94.5	95	94.5	93.6	95	95	95	94.1
149.2	-200	94.5	95	94.5	93.6	95	95	95	94.1
Column 1		2	3	4	5	6	7	8	9

Additional Conversion Factors

To Convert	To	Multiply by	Notes
$^{\circ}\text{C}$	$^{\circ}\text{F}$	1.8 and add 32	
$\text{m}^2\cdot\text{C}/\text{W}$ (RSI)	$\text{h}\cdot\text{ft}^2\cdot^{\circ}\text{F}/\text{Btu}$ (R)	5.678	
W	Btu/h	3.413	
W/m^2	$\text{Btu}/\text{h}\cdot\text{ft}^2$	0.317	
$\text{W}/\text{m}\cdot^{\circ}\text{C}$	$\text{Btu}/\text{h}\cdot\text{ft}^2\cdot^{\circ}\text{F}$	0.17612	U value
$\text{W}/\text{m}\cdot^{\circ}\text{C}$	$\text{Btu}\cdot\text{ft}/\text{h}\cdot\text{ft}^2\cdot^{\circ}\text{F}$ or $\text{Btu}\cdot\text{in}/\text{h}\cdot\text{ft}^2\cdot^{\circ}\text{F}$	0.5777 6.9444	Conductivity (per foot) Conductivity (per inch)
W/L	Btu/h-US gal	12.916	

December 31, 2009