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Potential Changes to Ontario's Building Code  
Summer and Fall 2017 Consultation:  
Large Buildings  
(All Part 3 and non-residential Part 9 Buildings)

# Purpose

- To provide information on proposed changes to the Building Code for Large Buildings (all new Part 3 and non residential Part 9 buildings) as described in the Overview Summary Document entitled “[Potential Changes to Ontario’s Building Code: Summer and Fall 2017 Consultation](#)”.
- To respond to questions of clarification and technical issues.

# Context – Climate Change Action Plan

- “... the government intends to update the Building Code with long-term energy efficiency targets for new **net zero carbon emission** small buildings that will come into effect by 2030 at the latest, and consult on initial changes that will be effective by 2020. Ontario will consult on how to best achieve these targets through Building Code improvements.”

Source: [Climate Change Action Plan June 2016](#)

# Energy Efficiency and Ontario's Building Code

- Energy efficiency requirements have been included in Ontario's Building Code since its inception in 1975, and have been enhanced in each subsequent edition.
- The Ontario Building Code is objective-based.
- Energy efficiency has been an objective since 2006.
- The Building Code sets current energy efficiency requirements and energy efficiency requirements that come into effect in the future.
  - Requirements included in the 2006 and 2012 editions of the Building Code came into effect in 2012 and 2017. As a result, today, a new building uses on average 35% less energy compared to an equivalent 2005 large building.
  - Under the proposed requirements for the next edition of the Building Code, when all proposed requirements come into effect, a large building would consume 48% less energy of an equivalent 2005 large building.
- This makes Ontario's Building Code one of the most advanced energy efficiency regulations in North America.

# Next Edition of Ontario's Building Code: Consultations

- The ministry is currently seeking input on proposed requirements to reduce greenhouse gas (GHG) emissions in the building sector through changes to the Building Code in support of the government's Climate Change Action Plan.
- Proposals are detailed in the Overview Summary Document "[Potential Changes to Ontario's Building Code: Summer and Fall 2017 Consultation](#)".
  - Note: 22 of the 25 code change proposals related to Climate Change Action Plan commitments.
- Proposals include:
  - energy efficiency performance levels for houses and large buildings in the next Code cycle
  - requirements for EV charging in multi-unit residential buildings
  - energy efficiency requirements for renovations in houses and large buildings
  - requirements that support climate change adaptation (hurricane straps)
- The deadline for providing feedback is **September 29, 2017**.

# Building Code Change Implementation Timelines: Proposed to come into effect January 1, 2019

## Proposals include:

- energy efficiency requirements for renovations
- electrical vehicle charging in new multi-unit residential buildings
- green building standards and green roofs
- referencing a new standard for grey-water reuse
- water conservation
- solar-ready roofs
- hurricane straps in new houses
- option to meet air tightness targets in exchange for credits in large buildings
- other technical proposals

# Building Code Change Implementation Timelines: Proposed to come into effect 2020

Proposals include:

- Energy efficiency requirements for **houses**:
  - continuous insulation
  - triple-pane windows and sliding doors
  - air leakage testing
  - further limitations to building envelope trade-offs
- Energy efficiency requirements for **large buildings**:
  - removal of insulation exceptions to reduce thermal bridging effects

# Building Code Change Implementation Timelines: Proposed to come into effect 2022

## Proposals include:

- 20 per cent decrease in energy **consumed by houses**:
  - air tightness requirement
  - improved wall insulation
  - under-slab insulation
  - more energy efficient triple-pane windows and sliding doors
  - eliminating building envelope trade-offs
  - enhanced mechanical equipment efficiency

# Building Code Change Implementation Timelines: Proposed to come into effect 2022

Proposals include:

- 20 per cent decrease in energy **consumed by large building types**:
  - mandatory air tightness testing without concern for results
  - further limitations to building envelope trade-offs
  - expansion of heat or energy recovery requirements to apartment buildings

# Proposed Requirements for Large Buildings: Effective 2019

## Key points

- Housekeeping and removing of redundant requirements.
- Building Code's "Supplementary Standard SB-10 – Energy Efficiency Requirements" will remain unchanged and will be relabeled as "SB-10A".
- A new article to be added to Part 12 of the Building Code that provides designers:
  - with the option of meeting voluntary air-tightness targets where they are confident that air leakage rates can be reduced
  - with the ability to claim credits for meeting specified air-tightness targets

[Link for proposal # 2-CC-B-12-02-02 with Code Reference Div. B, 12.2.1.2.](#)

# Proposed Requirements for Large Buildings: Effective 2020

## Key points

- Energy efficiency performance improvement:
  - a new Article to be added to Section 12.2. to remove existing exemptions that related to thermal bridging

[Link for proposal # 2-CC-B-12-02-03 with Code Reference Div. B, 12.2.1.3.](#)

# Proposed Requirements for Large Buildings: Effective 2022

## Key points

- Overall energy efficiency performance improvement:
  - move towards net zero in the future – overall 20% decrease in energy consumed by large buildings compared to current construction
  - improvements to building envelope requirements
  - mandatory air tightness testing, without a requirement for meeting a target.
  - requirement for heat or energy recovery in multi-unit residential buildings.

[Link for proposal # 2-CC-B-12-02-05 with Code Reference Div. B, 12.2.1.2. and 12.2.1.5.](#)

# Green Construction Requirements

- To support the goals of the Climate Change Action Plan the government committed to:
  - Consider legislative amendments that would set the stage for municipalities to pass by-laws to reduce building emissions where relevant technical standards exist in the Building Code but are not mandatory.
- On May 31, 2017, the Ontario Legislature passed Bill 68: Modernizing Ontario's Municipal Legislation Act 2017.
  - 97.1 (1) Without limiting sections 9, 10 and 11, those sections authorize a local municipality to pass a by-law respecting the protection or conservation of the environment that requires buildings to be constructed in accordance with provisions of the building code under the *Building Code Act, 1992*, that are prescribed under that Act, subject to such conditions and limits as may be prescribed under that Act.

# Green Construction Requirements

- Bill 68 amended the *Municipal Act, 2001*, the *City of Toronto Act, 2006*, and the *Building Code Act, 1992*, to establish authority for municipalities to pass by-laws requiring green construction practices but only if the following criteria are met:
  1. The by-law must be in respect of the protection or conservation of the environment.
  2. The by-law can require that buildings must be constructed in accordance with certain Building Code technical requirements.
  3. Power would not be able to be exercised until Building Code has been amended to list **specific** Code provisions for this purpose – a “Green Pick List”.  
See: [Proposal 2-CC-A-01-04-01](#) .
  4. The by-law power is subject to any conditions and limits on the power that are specified in the Building Code.
  5. Power may only be exercised by single and lower-tier municipalities.

# Green Construction Requirements

- The ministry is proposing to establish this “Green Pick List” in: [Proposal 2-CC-A-01-04-01](#).
- At this time, only green and white roofs (vegetative and reflective roofs) are on the proposed list.
- The changes in the *Municipal Act, 2001*, are also added to applicable law in the Building Code to enable an exception to Section 35.1 (the “supercedence” clause) of the *Building Code Act, 1992*.

# Green Roof Proposal

- The following proposals together form the technical requirements for vegetative and reflective roofs:
  - [2-CC-B-05-06-01](#) would add a standard already referenced in the National Building Code of Canada to protect vegetative roofing systems from root penetration to prevent ingress of precipitation.
  - [2-CC-B-05-10-01](#) proposes the new “SB-14”.
  - The proposed SB-14, would be one of a number of technical solutions that could be used by the designer to submit a building permit that included a green or reflective roof.
  - This solution would form the benchmark for other designs that could be offered for evaluation under an alternative solution proposal.

# Green Roof Proposal

- Operationalizing vegetative or reflective roof requirements if the proposal is approved:
  - After the Building Code is amended, if a municipality chooses to pass a by-law to require vegetative or reflective roof green or white roofs, the municipality would be able to determine the conditions under which requirements would apply.
    - For example, if a building roof top has little access to sun, or if the rooftop is too small or the wrong shape, (eg. a pinnacle tower), the by-law could exempt green-roof requirements from those buildings.
    - The by-law could also determine maximum and minimum sizes for vegetative cover and the kinds of buildings to include.
- The proposed SB-14 would limit the by-law by preventing it from being applied to Part 9 buildings.

# Provide Feedback

- Consultation period for proposed changes to the Building Code consultation will conclude **September 29, 2017**.
- Feedback on the content of the proposed Building Code changes should be submitted by completing the online comment form.
- Comments on the proposed Building Code changes and discussion items can also be sent by mail to:

2017 Next Edition Building Code Consultation  
c/o Building and Development Branch  
Ministry of Municipal Affairs  
16th – 777 Bay Street  
Toronto ON M5G 2E5

# Provide Feedback

- Technical Advisory Committees will meet after the consultation period closes to review comments and provide advice to the ministry.
- See Section 5 of the: “[Overview Summary Document - Potential Changes to Ontario’s Building Code: Summer and Fall 2017 Consultation](#)” for more details.
- Comments or questions of clarification can be submitted to:
  - by email: [buildingcode.consultation@ontario.ca](mailto:buildingcode.consultation@ontario.ca)
  - by phone: 416-585-6666.