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The new 2006 Building Code includes over 700 technical changes. This bulletin will cover the more significant changes as they relate to new single family dwellings. This is far from a comprehensive list and it is a requirement under the Building Code Act that all building code practitioners, including designers and builders must make themselves familiar with all changes.

General Contractors, builders and property owners should check with all suppliers and subcontractors to ensure the materials, systems and methods used will comply with the new requirements of the 2006 Ontario Building Code.

General

- New requirements for reinforced concrete slabs over cold rooms in basements with a maximum clear span of 2.5 m (8 ft) along the shortest dimension of the slab. 9.40
- Attic hatches that serve a single family dwelling unit, shall have a minimum area of 0.32 sq.m (3.4 sq.ft) with no dimension less than 545 mm (21 ½ in). 9.19.2
- Bedroom windows must be capable of maintaining the required opening without the need for additional support. 9.7.1.3
- Where a protective enclosure is installed over the window-well it shall be openable from the inside without the use of keys, tools or special knowledge of the opening mechanism. 9.7.1.4.
- Asphalt shingles on slopes of less than 1 in 3 shall be secured with a continuous band of cement. 9.26.8.4.
- Significant changes for windows and doors have been introduced. Check with your supplier to ensure they meet the new regulations. 12.3.2.6 and 12.3.2.8

HVAC

- The minimum annual fuel utilization efficiency (AFUE) of a natural gas or propane furnace is required to be not less than 90 % (High efficiency). 12.3.1.2
- All ductwork and fittings shall be constructed and installed in conformance with SMACNA Manuals and ASHRAE Handbooks. 6.2.3.2
- Ductwork passing through unconditioned spaces shall have all joints taped or be otherwise sealed to ensure that the ducts are airtight throughout their length. 6.2.4.3.(11)
- Combustible grills, diffusers and other devices for the supply and return air openings installed in walls and ceilings shall have a flame-spread rating of,
 - not more than 200 in bathrooms, and
 - not more than 150 in rooms or spaces other than bathrooms. 6.2.4.13.(5)

Stairs, Guards and Handrails

- Stairs shall have uniform rise and run with a maximum tolerance of 6mm. 9.8.4.1
- A clearance of not less than 50 mm (2 in) shall be provided between a handrail and any surface behind it. 9.8.7.5
- Handrails and projections below handrails, including handrail supports and stair stringers shall not project more than 100 mm (4 in) into the required width of the stair. 9.8.7.6
- Handrails and any building element that could be used as a handrail shall be designed and attached in such a manner to resist a concentrated load of not less than 0.9 KN (202lb) at any point. 9.8.7.7.
- Handrails in single dwelling units must have the first attachment point located within 300 mm from either end of handrail. 9.8.7.7.(2)
- The minimum height of guards at stairs in dwelling units has been increased from 800 mm to 900 mm. 9.8.8.3.
- Where windows over stairs, ramps and landings extend to less than 900 mm (2 ft 11in) above the surface to the treads, ramp or landing the window shall be protected by a guard or be non-openable and designed to withstand the specified lateral loads for guards. 9.7.5.3.
- Guards are now required along both sides of stairs to an unfinished basement. 9.8.8.1.
- Guards are now required if the ground slope within 1.2 m of a walking surface is more than 1 in 2. 9.8.8.1.
- New criteria for openings in guards to prevent climbing. 9.8.8.6.
- New requirements for the finish for treads and landings. (high-pile carpet or highly slippery surfaces are prohibited) 9.8.9.6.
- Where a stair contains 3 or less risers a landing may be omitted at sliding doors, storm or screen doors that swing over stairs when equipped with hardware to hold the door open and at bottom of an exterior stair or ramp where there is no obstruction such as a gate or door. 9.8.6.2.

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- A landing is not required at the top of a flight of stairs in a garage provided the door swing is away from the stair. 9.8.6.2
- Angled landings are allowed within a flight of stairs. 9.8.6.3.

Barrier to Gas and Exhaust Fumes

- In attached garages where the membrane materials of an air barrier system, is used to provide the required barrier to gas and exhaust fumes, all joints shall be sealed and structurally supported. 9.10.9.16.

Decks

- The minimum size of wood columns for decks shall not be less than 140 mm X 140mm (6"X6") unless calculations are provided from a qualified person that a lesser size is adequate. 9.17.4.1.
- Deck columns greater than 600mm (23 5/8 in) in length shall be laterally supported by cross-bracing or other suitable means. 9.17.2.2.
- Deck blocks can only be used where the deck is not attached to the house, the deck is less than 55m² (592 ft²), and the distance from the finished ground to the under side of the floor joists is not more than 600mm (23 5/8 in). 9.12.2.2.

Footings, Foundations and Masonry

- Step Footings - Removed step footing specification for sandy soils. Maximum rise 600mm. Minimum run 600mm. 9.15.3.9.
- New formula to determine size of footings where supported joist spans exceed 4.9 m. 9.15.3.4.
- New Table for reinforced concrete block foundation walls. 9.15.4.2.B.
- New prescriptive requirements for flat ICF foundations. 9.15.4.5.
- New and expanded Tables for openings in Masonry Veneer
 - Increased spans and new lintel sizes for steel lintels supporting masonry veneer. Table 9.20.5.2 B
 - NEW table for Steel Beams supporting masonry veneer and wood studs walls with required steel posts for support. Table 9.20.5.2.C

Framing

- The maximum unsupported wall stud lengths have increased from 4.2 m to 5.6 m. However additional requirements apply. NEW TABLES A30 to A33. 9.23.10.1.
- The joint between the sill plate for exterior walls and the foundation shall be sealed to provide an air barrier system. 9.23.7.2
- Stud reinforcement shall be installed to permit the future installation of a grab bars on walls adjacent to the water closet, shower and bathtub. 9.5.2.3.
- The number of studs in a wall directly below a girder truss or roof beam shall conform to Tables A-34 to A-37. 9.23.10.7
- Span tables for Glue laminated lintels and beams (Table A-16 & A-11 for 20f-E only) have been added. 9.23.12.3 and 9.23.4.2

Insulation and Vapour Barrier

- Location of Vapour Barrier is dependent on the Mild Climate Indicator as determined from the formula. 9.25.1.2.
$$MCI = \text{abs}(2.5\%JMT) \times 200 + DD$$
- Required flashing at all roof-wall junctions. 9.26.4.1.
- New minimum insulation (RSI) values (Only non-electric space heating requirements are listed below. For electric space heating changes please refer to the OBC): 12.3.3.3.
 - Ceiling below attic or roof space changed from 5.40 (R 31) to 7.00 (R 40)
 - Roof assembly without attic or roof space changed from 3.52 (R 20) to 4.93 (R 28)
 - Wall other than foundation wall changed from 3.00 (R 17) to 3.34 (R 19)
 - Foundation wall changed from 1.41 (R 8) to 2.11 (R12)
 - Designers can also use EnerGuide 80 to achieve compliance.
- Wood studs that have a thermal resistance of less than RSI 0.9 shall be covered by insulated, equivalent to not less than 25 % of the required insulation for the assembly. A 38 mm x 140 mm stud (2x6) has a thermal value of approximately RSI 0.9 (R-5) and would therefore not be required to be covered by insulation but a 2X4 stud will require a thermal bridge. 12.3.2.2.
- NEW STANDARD – Spray-in-place polyurethane insulation shall be installed in accordance with the requirements CAN/ULC-S705.2, "Thermal Insulation – Spray Applied Rigid Polyurethane Foam, Medium Density, Installer's Responsibilities – Specification" 5.3.1.3.(3)