

Introduction



• This slide deck is part of a series of slide decks prepared to accompany the Ministry of Municipal and Affairs and Housing's information sessions on the 2006 Building Code. Other slide decks and locations for the Ministry's information sessions are available from the Building Code website at www.abc.mah.gov.on.ca.

- The complete series of slides is intended to:
 - Provide an overview of the 2006 Building Code's new objective-based format and
 - Introduce certain technical highlights of Ontario's 2006 Building Code



**2006 Building Code:
Information Session**

**Presented by:
Building & Development Branch
Ministry of Municipal Affairs & Housing**

August 23, 2006 version

Notice:



This presentation is intended for general information purposes only. It only identifies certain highlights of the Building Code. Code users are strongly advised to consult the official records for specific legislative and regulatory requirements, including:

- The *Building Code Act, 1992*, as amended; and
- The Building Code, including amendments not yet in force

Copies of these documents are available from Publications Ontario at 1-800-668-9938 or eLaws at www.e-laws.gov.on.ca

Agenda



- The morning session:
 - Purpose
 - Introduction
 - Format and Structure
 - Highlights of changes to Part 3
 - Highlights of changes to Part 9
- The afternoon session:
 - Highlights of changes to Parts 4, 5, 6, 7, 8 and 11
 - Part 12: Resource Conservation (Energy and Water)

Purpose:



- The purpose of today's information session is to:
 - Provide an overview of the 2006 Building Code's new objective-based format; and
 - Introduce certain technical highlights of Ontario's 2006 Building Code
- Today's session is designed only to increase awareness of the 2006 Building Code, and will be followed in the coming months with more in-depth technical training



2006 Building Code:

Introduction

Introduction:
Legislation



- The *Building Code Act, 1992* is the legislative framework governing the construction, renovation and change of use of buildings

- The Building Code is a regulation authorized by the Act, and sets out detailed administrative and technical requirements

Building Code Act, 1992
R.O. 1992, CHAPTER 23

Amended by: 1997, c. 24, s. 224; 1997, c. 30, Sched. B, ss. 1-20, 1999, c. 12, Sched. M, ss. 1-13, 2000, c. 2, s. 2; 2000, c. 24, Sched. K, s. 1; 2002, c. 2, ss. 1-15, 2002, c. 17, Sched. C, ss. 1-6, 2002, c. 17, Sched. F, Table, 2005, c. 33, s. 1, 2006, c. 19, Sched. O, s. 1

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Introduction:
Legislation



- The Act and Code are administered by the Ministry of Municipal Affairs and Housing (MAH)
- Enforcement is a local responsibility:
 - Primarily in the hand of municipalities
 - But some conservation authorities and health units are responsible for enforcing on-site sewage provisions in certain areas of the province

Introduction:
Code Development in Canada



- Work on Ontario's 2006 Building Code began in 1998:
 - Part of a joint Federal/Provincial/Territorial Process coordinated by the Canadian Commission on Building and Fire Codes (CCBFC)
- Objectives of this coordinated strategy:
 - Achieve greater harmonization among the model National and provincial codes; and
 - Create a more uniform code development process

Introduction:



Code Development in Canada

- New editions of the model National Building, Plumbing and Fire codes (mNBC, mNPC and mNFC) were released in September 2005
 - However, these Codes have no force in law unless provinces or territories adopt them in whole or in part
- Ontario's Building Code is based in large measure on the mNBC and mNPC



Introduction:



Code Development in Canada

- However, Ontario's Building Code is different from the mNBC and mNPC in key areas where Ontario has its own policy priorities:
 - Unique Code requirements in areas such as energy efficiency, water conservation and building conservation
 - Consolidation of construction-related regulations in the Building Code including on-site sewage systems, pools, spas, and rapid transit stations
 - Higher or modified requirements in areas of overlapping scope such as barrier-free access

Introduction:



Development of the 2006 Building Code

- Several rounds of public consultation were held, including:
 - Fall 2000 – Winter 2001: potential move to an objective-based format (Joint F/P/T consultation)
 - Winter 2002: Priorities for improving barrier-free access
 - Spring 2003: Potential objectives for the Building Code and over 700 potential changes to the technical requirements (Joint F/P/T consultation)
 - Winter 2006: Potential energy efficiency changes

Introduction:



Development of the 2006 Building Code

- Potential Code changes were reviewed by Building Code Technical Advisory Committees based on technical feasibility, impact and enforceability
- Committees included:
 - Municipalities and the enforcement community
 - Architects, professional engineers and other designers
 - Residential builders, non-residential builders and general contractors
 - Product manufacturers
 - Energy providers
 - Consumer advocates

Introduction:



Code History

- This is the 30th Anniversary of Ontario's first Building Code, which came into force on December 31, 1975
- Other editions were released in 1983, 1986, and 1990
- The current Code dates from 1997:
 - But its technical and administrative requirements have been amended by 19 Regulations, including O.Reg. 349/06 that was filed on June 28



Introduction:



Status of the 2006 Building Code

- Ontario's new Building Code has been approved:
 - Ontario Regulation 350/06 was filed on June 28, 2006
- Upon coming into force, the new Code will replace the current Building Code (O.Reg. 403/97)
- The 2006 Building Code is the first provincial regulation drafted in an objective-based format



Introduction:
Effective Dates



- Most provisions of the new Code come into force on December 31, 2006
- However, additional Code requirements related to the energy efficiency of buildings come into force on:
 - December 31, 2008 and
 - December 31, 2011

Introduction:
Transition Rules



- The 2006 Building Code sets out transition rules for projects where:
 - A permit is issued before December 31, 2006; or
 - Working drawings, plans and specifications are substantially complete before December 31, 2006, and an application for a permit is made before March 31, 2007

Introduction:
Transition Rules



- In these circumstances, the current Code (O.Reg 403/97, as amended) is deemed to continue in force
- Transition rules do not apply unless construction commences within six months after the permit is issued



Introduction:



Transition Regulation

- A separate transition regulation (O.Reg 349/06) was also filed on June 28, 2006 to amend the current Building Code
- The transition regulation includes provisions that took effect immediately, including:
 - Promoting the use of certain green technologies;
 - Creating more flexibility in the construction of small care homes; and
 - Updating the list of applicable law

Introduction:



Publication of the 2006 Building Code

- Copies of O.Reg. 350/06 will be available late August 2006 at a cost of \$35
 - A special printing of the Regulation only, not the complete Office Compendium of the Building Code
- The full Office Compendium of the Code will be available in binder and soft-cover formats
 - To be ready in Fall, 2006
 - The compendium will include a fully formatted and indexed edition of O.Reg. 350/06, supplementary standards, appendices and related materials. Pre-orders will be accepted in September 2006

Introduction:



Publication of the 2006 Building Code

- To contact Publications Ontario:

Publications Ontario	ServiceOntario
880 Bay St., 1st Floor	110 Laurier Ave. West
Toronto, ON M7A 1N8	Ottawa, ON K1P 1J1

- **By Phone**
416-326-5300
Toll free 1-800-668-9938

- **By Fax**
613-566-2234

- **Online**
www.publications.gov.on.ca



Introduction:
Training and Education



- More detailed transition training is being developed to familiarize building practitioners with the format and use of the new objective-based code
- Existing technical Code courses will be updated to reflect new technical content. For example:
 - Part 3 Building - Health and Safety; and
 - Part 9 - The House - Building Envelope
- New technical courses will be prepared to reflect new subject areas (e.g., energy conservation)

Introduction:
Qualification



- There will be no immediate requirement for the re-qualification of building practitioners:
 - MAH will be consulting with stakeholders on the best way to ensure that the currency of Code knowledge is maintained
- MAH will also consult with stakeholders prior to updating qualification examinations and qualification courses to reflect the new content of the Code

Ontario's Building Code:
Keep Informed



- Visit the Building Code website:
www.obc.mah.gov.on.ca
- Subscribe to CodeNews:
 - A free email newsletter issued by the Building and Development Branch that includes notifications of Building Code amendments, training, public consultations and other Building Code announcements
 - Register on the Building Code website or www.codenews.ca



2006 Building Code:

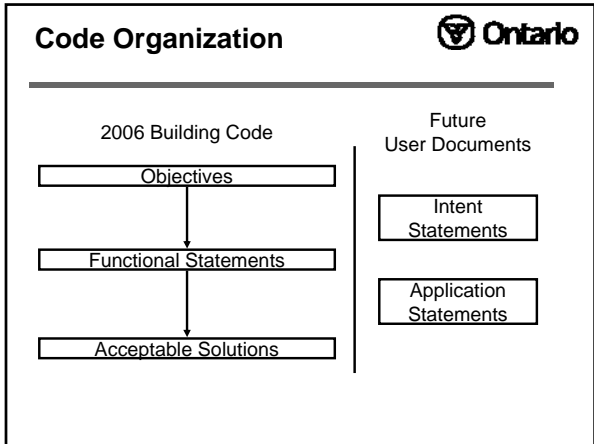
Format and Structure

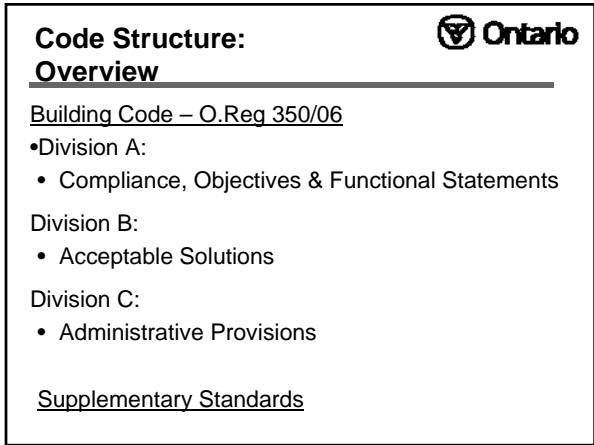
Objective-based Format:
Introduction

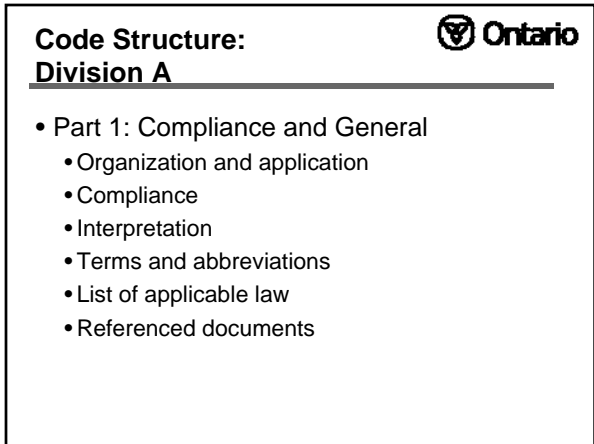
- Ontario's 2006 Building Code is drafted in an "objective-based" format
- Consistent with the 2005 model national codes
- Under an objective based format, Code still contains specific technical requirements:
 - May be prescriptive or performance-based
 - Redefined as "acceptable solutions"
 - However, Code also now includes the "why" behind Code requirements

Objective-based Format:
Advantages

- Increases consistency in the application of the Code
- Encourages innovation in design and construction
- Retains acceptable solutions to assure certainty and continuity:
 - In most cases, existing prescriptive requirements will continue to be used







Code Structure:
Division A



- Part 2: Objectives
 - Every Code requirement is related to one or more objective(s)
 - Consistent with “purposes” behind the Building Code set out in subsection 34(5) of the Act
 - public health and safety, fire protection, structural sufficiency, conservation and environmental integrity, and barrier-free accessibility

Code Structure:
Division A



- Categories for Objectives:
 - Safety:
 - Fire Safety
 - Structural Safety
 - Safety in Use
 - Resistance to Unwanted Entry
 - Health:
 - Indoor Conditions
 - Sanitation
 - Noise Protection
 - Vibration and Deflection Limitation
 - Hazardous Substances Containment

Code Structure:
Division A



- Categories for Objectives:
 - Accessibility:
 - Accessibility – Barrier-free Path of Travel
 - Accessibility – Barrier-free Facilities
 - Fire, Structural, Water & Sewage Protection of Buildings:
 - Fire Protection of the Building
 - Structural Sufficiency of the Building
 - Protection of Adjacent Buildings from Fire
 - Protection of Adjacent Buildings from Structural Damage
 - Water and Sewage Protection of Buildings and Facilities

Code Structure:
Division A



- Categories for Objectives:
 - Resource Conservation*
 - Water Conservation
 - Energy Conservation
 - Environmental Integrity*
 - Conservation of Buildings*
 - * Ontario's unique objectives

Code Structure:
Division A



- Example of Specific Objective:
 - Category of Objective:
 - Safety – Fire Safety
 - Specific Objective:
 - *O.S. 1.1 An objective of this Code is to limit the probability that, as a result of the design or construction of a building, a person in or adjacent to the building will be exposed to an unacceptable risk of injury due to fire caused by a fire or explosion*

Code Structure:
Division A



- Part 3: Functional Statements
 - Describe what the design and construction of the building must do to achieve the objectives
 - At least one functional statement is linked to each technical requirement

Code Structure:
Division B



- Technical provisions from the 1997 Building Code, along with over 700 new technical changes, are now referred to as “Acceptable Solutions” in the 2006 Building Code
- Much of the content and format of this portion of the 2006 Code is similar to the current Code

Code Structure:
Division B



- Part 1 General including referenced standards
- Part 2 (Reserved)
- Part 3 Fire Protection, Occupant Safety and Accessibility
- Part 4 Structural Design
- Part 5 Environmental Separation
- Part 6 Heating, Ventilating and Air-conditioning
- Part 7 Plumbing
- Part 8 Sewage Systems
- Part 9 Housing and Small Buildings
- Part 10 Change of Use
- Part 11 Renovation
- Part 12 Resource Conservation

Code Structure:
Division C



- Part 1: Administrative Provisions, including:
 - Design and general review;
 - Permits and inspections; and
 - Building permit fees
- Part 2: Alternative Solutions, Disputes and Interpretations, including:
 - Building Code Commission;
 - Building Materials Evaluation Commission;
 - Minister’s Rulings; and
 - Minister’s Interpretations

Code Structure:
Division C



- Part 3: Qualification:
 - Requirements for chief building officials, inspectors, registered code agencies, designers and on-site sewage installers
- Part 4: Transition, Revocation & Commencement

Code Structure:
Supplementary Standards



- Code makes reference to Supplementary Standards:
 - “Supplementary Standards” replace “Supplementary Guidelines” under the current Code and are broadened to include:
 - **SA:** Attribution Tables that relate objectives of Division A to acceptable solutions of Division B
 - **SB:** Climatic data and former technical Supplementary Guidelines (eg, SG-2 Fire Performance and SG-7, Guards)
 - **SC:** Administrative provisions, eg Code of Conduct for Registered Code Agencies

Code Structure:
Application and Intent Statements



- Intent statements will also be published to assist Code users:
 - Detailed, plain language, explanation of the purpose of each requirement
 - Non-regulatory, and will have the same standing as Appendix notes
- This user document will likely be available in an electronic format (e.g., CD)

Compliance



Two compliance approaches:

- 1) Design to the “acceptable solutions” (prescriptive requirements) of Division B

or

- 2) Design using an “alternative solution” that will achieve the same level of performance as the relevant “acceptable solution”

**Compliance:
Alternative Solutions**



- Alternative solutions are not “anything goes”:
 - In general, the Code specifies that the level of performance of an “alternative solution” is evaluated based on the objectives and functional statements attributed to the corresponding “acceptable solution” – prescriptive solution in Division B
 - Code establishes specific documentation requirements for alternative solutions

**Compliance:
Alternative Solutions**



- Article 1.2.1.1 of Division A:
- (1) Compliance with Division B shall be achieved,
- (a) by complying with the applicable “acceptable solutions” in Division B, or
 - (b) by using “alternative solutions” that will achieve the level of performance required by the applicable “acceptable solutions” in respect of the objectives and functional statements attributed to the applicable “acceptable solutions” in Supplementary Standard SA-1

Compliance:  **Alternative Solution Documentation**

- The person proposing an alternative solution must provide documentation to the chief building official that:
 - Identifies applicable objectives, functional statements and acceptable solutions, and
 - Establishes on the basis of past performance, tests or other evaluation that the proposed alternative solution will achieve the level of performance required under Division A



Compliance:  **Alternative Solution Documentation**

- The documentation must include information on:
 - Relevant assumptions
 - Limiting or restricting factors
 - Testing procedures, studies or building performance parameters and
 - Commissioning, operational and maintenance requirements



How to use the new Code:  **Example - Alternative Solution**

- The following illustrates how alternative Code compliance might be achieved using objectives and functional statements where compliance with a particular provision of Division B (acceptable solution) is impractical or not desired
- Article 3.7.4.11. of Division B – Safety Glass reads:

(1) Glass, other than safety glass, shall not be used for a shower or bathtub enclosure.

How to use the new Code: 

Example - Alternative Solution

- What if a designer, seeking a different aesthetic approach, wanted to propose the construction of a glass block shower enclosure as an innovative alternative to Article 3.7.4.11.?



How to use the new Code: 

Example - Alternative Solution

- **Step 1:** Determine which Objective(s) and Functional Statement(s) are relevant to Article 3.7.4.11 of Division B by referring to the Attribution Tables found in Supplementary Standard SA-1:
- “SA-1” means:
 - “S” stands for Supplementary Standard
 - “A” means it is a Supplementary Standard under Division A
 - “1” is the number of this particular Supplementary Standard
- Supplementary Standard SA-1 indicates Article 3.7.4.11. is supported by (F20 - OS3.1) ... Objective OS3.1 and Functional Statement F20

How to use the new Code: 

Example - Alternative Solution

- **Step 2:** Refer to Objective OS3.1
- Objectives are found in Article 2.2.1.1. of Division A
- In this example “OS3.1” means:
 - “O” stands for Objective Statement
 - “S” stands for Safety Objective (in this case Safety in Use)
 - “3.1” is the number of this particular Safety in Use Objective
- OS3.1 reads:
 - An *Objective* of this Code is to limit the probability that, as a result of the design or construction of a *building*, a person in or adjacent to the *building* will be exposed to an unacceptable risk of injury because of hazards caused by tripping, slipping, falling, contact, drowning or collision.

How to use the new Code: 

Example - Alternative Solution

- **Step 3:** Refer to Functional Statement F20
- Functional Statements are found in Article 3.2.1.1. of Division A
- In this example "F20" means:
 - "F" stands for Functional Statement
 - "20" is the number of this particular Functional Statement
- F20 reads:
 - "To support and withstand expected loads and forces."

How to use the new Code: 

Example - Alternative Solution

- **Step 4:** Having identified the relevant Objectives and Functional Statements, the designer could, for example, propose to provide the same or greater level of performance as Code provisions with respect to:
 - Limiting the risk of injury because of hazards caused by tripping, slipping, falling, contact, drowning or collision, and
 - supporting and withstanding expected loads and forces

How to use the new Code: 

Example - Alternative Solution

- **Step 4 (cont'd):** The level of performance of the alternative solution would be evaluated against the applicable performance criteria set out in Article 3.7.4.11. of Division B:
 - i.e., equivalence would need to be achieved with the requirement for safety glass referred to in 3.7.
 - Glass, other than safety glass, shall not be used for a shower or bathtub enclosure.*
 - In particular, whether the glass block would meet the level of performance provided by safety glass for the relevant objectives and functional statements

How to use the new Code:  **Example - Alternative Solution**

- **Step 5:** The designer would be required to submit appropriate documentation to the principal authority to enable review, including:
 - Identifying applicable objectives, functional statements and acceptable solutions
 - Establishing on the basis of past performance, tests, etc., that the proposed alternative solution will achieve the level of performance required
 - Information about relevant assumptions, limiting or restricting factors, testing procedures, etc., including any commissioning, operational and maintenance requirements

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