(W) Ontario **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 (V) Ontario Part 3 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.obc.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 (V) Ontario Overview: Agenda - The morning session: • Highlights of changes to Part 3

- The afternoon session:

Highlights of changes to Parts 4, 5, 6, 7, 8 and 11
Part 12: Resource Conservation (Energy and Water)

(W) Ontario 2006 Building Code: **Technical Changes** Division B - Part 3 Fire Protection, Occupant Safety and Accessibility (W) Ontario **Outline** 3.1. Combustibility, Firestopping, Raceways, Firewalls and Exposing Building Face (3.2.3.) 3.2. Fire Alarm Systems, Sprinkler Systems and Emergency Lighting 3.2. Mezzanines and Interconnected Floor Spaces 3.3. Safety within Floor Areas 3.4. Exits 3.5. Elevators 3.6. Service Facilities 3.7. Health Requirements 3.8. Barrier-Free Design 3.16. Shelf and Rack Storage Systems • O. Reg. 349/06 **Ontario** Outline Combustibility, Firestopping, Raceways, Firewalls and Exposing Building Face (3.2.3.) Fire Alarm Systems, Sprinkler Systems and Emergency Lighting Mezzanines and Interconnected Floor Spaces • 3.1. Safety within Floor Areas Exits Elevators Service Facilities 3.7. Health Requirements 3.8. Barrier-Free Design 3.16. Shelf and Rack Storage Systems

(W) Ontario Outline Combustibility, Firestopping, Raceways, Firewalls and Exposing Building Face (3.2.3.) Combustible Materials in Combustible and Noncombustible Construction Firestopping Nonmetallic Combustible Raceways Firewalls **Exposing Building Face** 3.1.2.3.(2) (W) Ontario **Arena Type Buildings** • This Sentence has been moved to Articles 3.2.2.29., 3.2.2.30. and 3.2.2.32. 3.1.2.3.(2) - If the building area of an arena type building is more than 1 500 m², the building shall be sprinklered. 3.1.4.2. (W) Ontario **Protection of Foamed Plastics** • Flame-spread rating of foamed plastics shall not be more than 500 • (Same limit as for noncombustible construction).

3.1.4.6

Heavy Timber Construction



- Sentence 3.1.4.6.(2) which references CAN/CSA-0141, "Softwood Lumber" has been replaced as the same dimension are given in Table 3.1.4.6.
- · Article structure was re-organized and additional changes made to clarify requirements.

3.1.5.1.

(W) Ontario

Noncombustible Materials

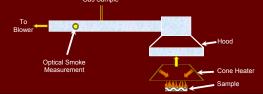
- OBC 1997:
 - Defined as meeting CAN/ULC-S114
 - Excludes materials that are marginally combustible
 - Excludes laminated materials with combustible components

3.1.5.1.

Noncombustible Materials



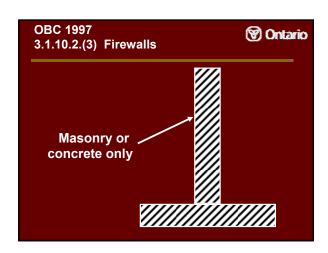
- The Article has been revised to expand the criteria for non-combustibility
 Cone Calorimeter Test for material properties CAN/ULC-S135
- Criteria: heat release, smoke
 Allows marginally combustible materials, including laminations



3.1.5.2. Minor (W) Ontario **Combustible Components** • Gypsum board moved to a separate Article 3.1.5.11. • Article 3.1.5.11. Gypsum Board • Facing paper limited to 1 mm thick • Flame-spread rating of paper limited to 25 3.1.5.5. Combustible Components (W) Ontario for Exterior Walls • Wood decorative cladding in Sentence 3.1.5.5.(5) has been relocated to Article 3.1.5.25. 3.1.5.20. (W) Ontario **Nonmetallic Raceways** · Larger raceways permitted No change in rating 0 (FT-4) • ULC/ORD-C2024, "Fire Tests for Optical Fibre Cable 1997 Raceways" ~ 28 mm





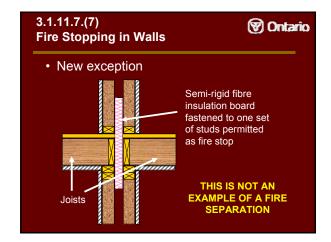


OBC 2006 Ontario 3.1.10.2.(4) Firewalls · Level of performance equal to that of masonry or concrete: - During fire conditions, Damage protection - Normal use of building, and - Resistant to moisture damage • For 2 h firewalls · Cannot be used: - In B1 major occupancies, - In B2 major occupancies, - In 3.2.6. high buildings Material other than masonry or concrete permitted

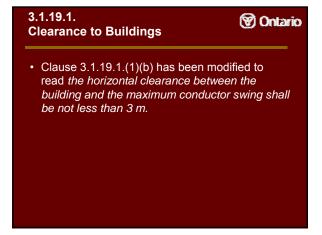


(W) Ontario **Horizontal Concealed Spaces** · Article renamed from "Fire Stopping of Roof Spaces, Balconies and Canopies", and revised to clarify that the requirement applies to floor as well as roof assemblies.

3.1.11.5. Fire Stopping of



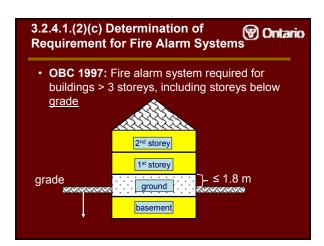
Flame-Spread Ratings Flame-spread rating of 75 for walls and ceilings has been added in Table 3.1.13.2. for Group B occupancies that are not sprinklered.

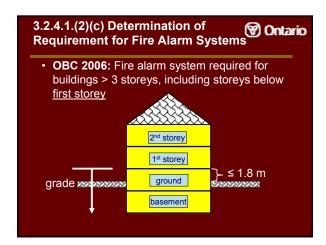


3.2.3.2. Area of Exposing (W) Ontario **Building Face** Simplification • OBC 1997: • rating of fire separations varied in accordance with Subsection 3.2.2. where the building was divided into fire compartments for the purpose of calculation of the exposing building face • OBC 2006: • rating of fire separations standardized to 45 min (W) Ontario 3.2.3.7. Construction of **Exposing Building Face** • Sentences 3.2.3.7.(7) and (8) moved to form Article 3.2.3.8., and Sentence 3.2.3.7.(9) was revised and renumbered to 3.2.3.7.(7). • New Sentence 3.2.3.7.(8) added. • (8) The construction requirements for the exposing building face that are required by Sentences (1) to (6) shall be satisfied before applying the increased opening area permitted by Sentence 3.2.3.12.(1). 3.2.3.12. Area Increase for (Ontario **Unprotected Openings** • Sentence 3.2.3.12.(1) adds new reference to Sentence 3.2.3.7.(8).

3.2.3.8. Protection of (W) Ontario **Exterior Building Face** • New Article 3.2.3.8. created with Sentences 3.2.3.7.(7) and 3.2.3.7.(8) of the 1997 building 3.2.3.4. (V) Ontario Reserved (OBC 2006) OBC 1997 3.2.3.4. Part; Wall (1) A party wall-hall be constructed as a firewall. **Ontario Outline** 3.1. Combustibility, Firestopping, Raceways, Firewalls and Exposing Building Face (3.2.3.) 3.2. Fire Alarm Systems, Sprinkler Systems and Emergency Lighting 3.2. Mezzanines and Interconnected Floor Spaces 3.3. Safety within Floor Areas 3.4. Exits 3.5. Elevators 3.6. Service Facilities 3.7. Health Requirements 3.8. Barrier-Free Design 3.16. Shelf and Rack Storage Systems

Outline • 3.2. Fire Alarm Systems, Sprinkler Systems and Emergency Lighting When a Fire Alarm System is required Installation and verification of Fire Alarm Systems Signals to fire department Alarm Signals Audibility levels Circuits Silencing Devices Voice Communication Sprinklers Emergency Lighting





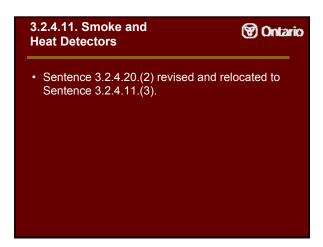


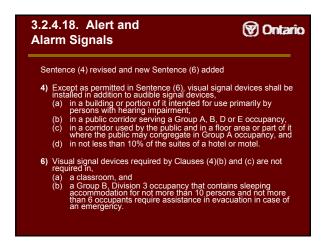
3.2.4.5.(2) Installation and Verification of Fire Alarm Systems Sentence 3.2.4.5.(2) requires that a fire alarm system be verified in conformance with CAN/ULC-S537, "Verification of Fire Alarm Systems" to ensure satisfactory operation.



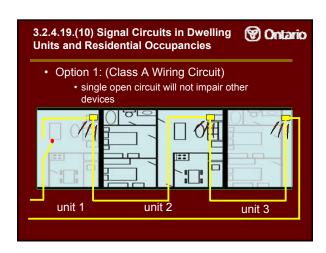
Signals to Fire Department Existing Sentence 3.2.4.7.(6) for single stage fire alarm systems has been revised and renumbered to 3.2.4.7.(5). Applies when the building is unsprinklered, and when Sentence 3.2.4.7.(1) does not apply

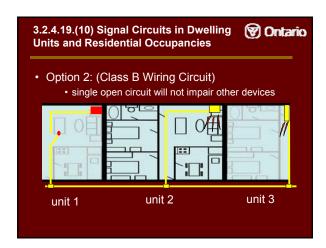


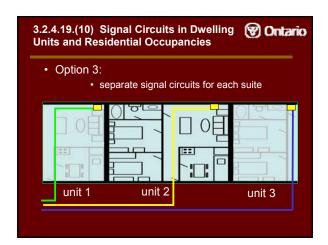


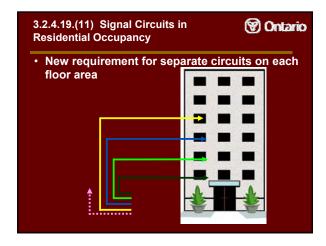


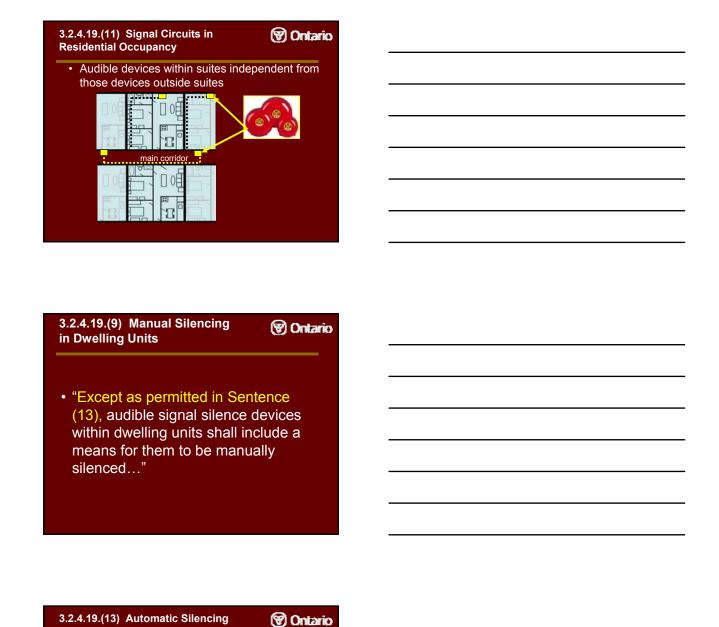


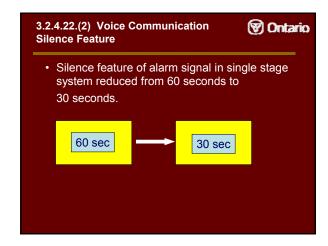




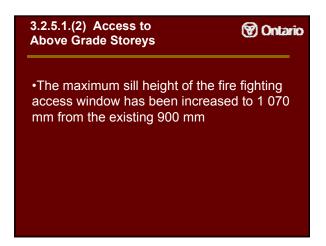












3.2.5.13.(6) Sprinklers in One and Two Family Dwellings Sprinkler systems designed to NFPA 13D sprinklers no longer required in small closets and bathrooms below roof assemblies even where roof rating waived due to the installation of sprinklers in accordance with Article 3.2.2.17.

3.2.5.14.(5) Combustible Sprinkler Piping Protection of combustible sprinkler piping not required if tested to ULC/ORD-C199P, "Combustible Piping for Sprinkler Systems"

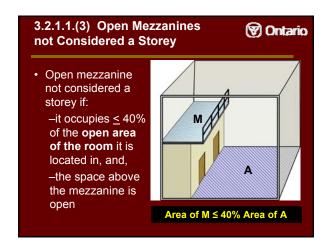
3.2.7.3.(1) Emergency Lighting New Requirement • Emergency lighting required in: • access to exits in open floor areas • service rooms • day care centres • food preparation areas in commercial kitchens

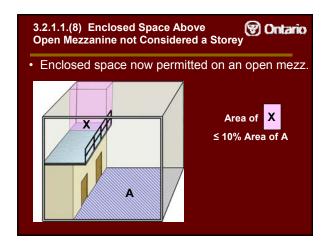
3.2.7.6. Emergency Power Supply (W) Ontario for Hospitals • Reference to CSA Z32, "Electrical Safety and Essential Electrical Systems in Health Care Facilities". 3.2.7.3.(4) Battery-Operated Emergency Lighting in Health Care Facilities (W) Ontario • New Sentence 3.2.7.3.(4) added • Reference to CSA Z32, "Electrical Safety and Essential Electrical Systems in Health Care Facilities" 3.2.7.10. (Ontario **Protection of Electrical Conductors** • Requirements of Article 3.2.6.14. have been amended and moved to a new Article 3.2.7.10. to clarify the application of the requirements.

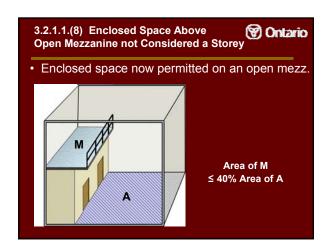
Outline * 3.1. Combustibility, Firestopping, Raceways, Firewalls and Exposing Building Face (3.2.3.) * 3.2. Fire Alarm Systems, Sprinkler Systems and Emergency Lighting * 3.2. Mezzanines and Interconnected Floor Spaces * 3.3. Safety within Floor Areas * 3.4. Exits * 3.5. Elevators * 3.6. Service Facilities * 3.7. Health Requirements * 3.8. Barrier-Free Design * 3.16. Shelf and Rack Storage Systems * O. Reg. 349/06

Outline • 3.2. Mezzanines and Interconnected Floor Spaces Mezzanines Interconnected Floor Spaces Mezzanine Egress

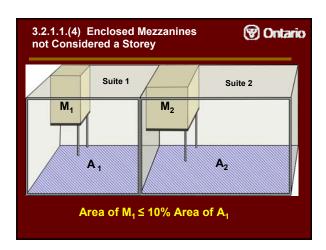














3.2.8.2.(6) Exceptions to Special Protection

- Change: Group F-2 occupancies now added to Group A, D, E and F-3 occupancies
- · Reason: Many similarities with Group E



Outline



- Combustibility, Firestopping, Raceways, Firewalls and Exposing Building Face (3.2.3.) Fire Alarm Systems, Sprinkler Systems and Emergency Lighting
 Mezzanines and Interconnected Floor Spaces
 Safety within Floor Areas
 Evite

- 3.3. 3.4. 3.5. 3.6. 3.7.

- 3.3. Salety Within Floor Areas
 3.4. Exits
 3.5. Elevators
 3.6. Service Facilities
 3.7. Health Requirements
 3.8. Barrier-Free Design
 3.16. Shelf and Rack Storage Systems

Outline



• 3.3 Safety within Floor Areas

Fire Separations of Public Corridors and other Corridors

Unobstructed width of Corridors

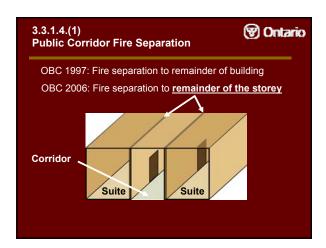
Aisles

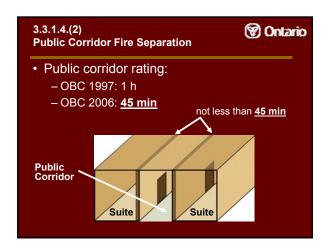
Ramps and Stairways that do not serve as Exits

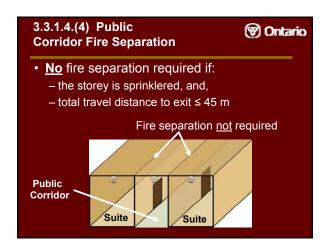
Bleachers

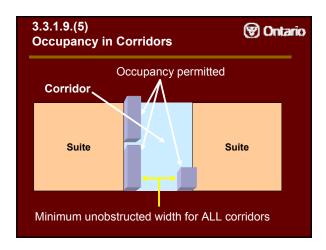
Sound Transmission Class Rating

3.3.1.3. Means of Egress Sentence 3.3.1.3.(10) now permits fixed ladders as a means of egress for personnel servicing roof top equipment.

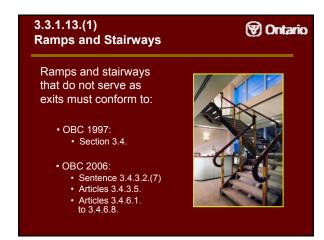








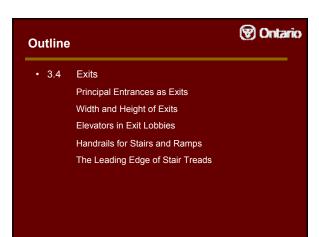


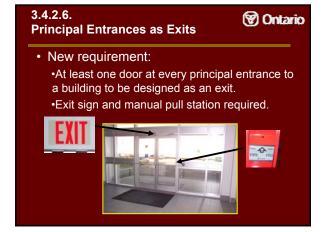






Outline * 3.1. Combustibility, Firestopping, Raceways, Firewalls and Exposing Building Face (3.2.3) * 3.2. Fire Alarm Systems, Sprinkler Systems and Emergency Lighting * 3.2. Mezzanines and Interconnected Floor Spaces * 3.3. Safety within Floor Areas * 3.4. Exits * 3.5. Elevators * 3.6. Service Facilities * 3.7. Health Requirements * 3.8. Barrier-Free Design * 3.16. Shelf and Rack Storage Systems * O. Reg. 349/06





3.4.3. Width and Height of Exits



- Restructured Logical format:
 - 3.4.3.1. Exit Width Based on Occupant Load
 - 3.4.3.2. Exit Width
 - 3.4.3.3 Exits from Interconnected space
 - 3.4.3.4. Exit Width Reduction
 - 3.4.3.5. Headroom Clearance



3.4.4.2.(2) Elevators in Exit Lobbies



- Explicitly Permitted in 2006 OBC:
 - passenger elevators entrances are explicitly permitted to open onto the lobby provided the elevator doors remain closed when the elevator is not in use

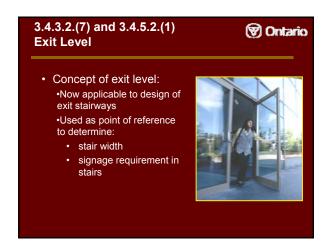


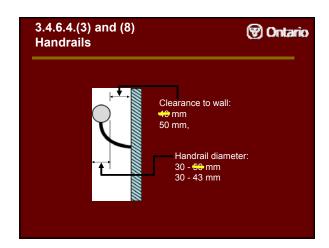
3.4.5.1.(1)(6) and (9) Exit Signage



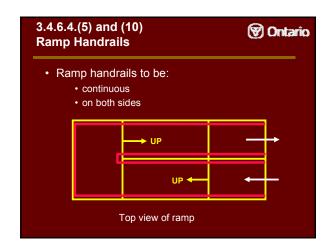
- •Exit signage no longer exempted at:
 - •Main entrance to a room or building, and,
 - •Main entrance to rooms serving certain types of assembly occupancies
- •Existing exit sign exception for certain small Group B, Division 3 occupancies remains.

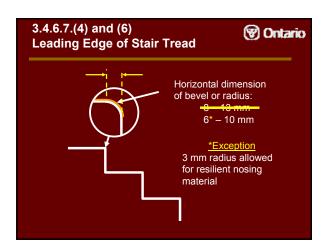


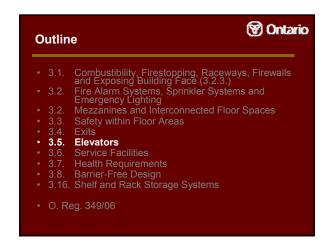




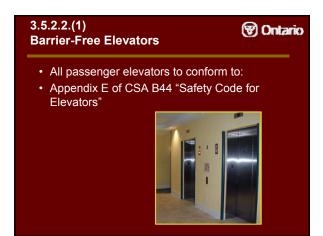




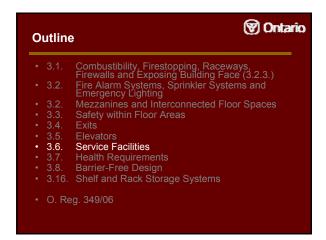


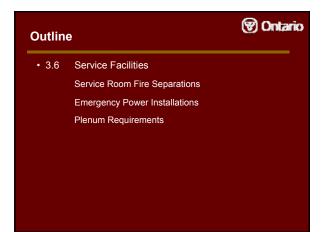


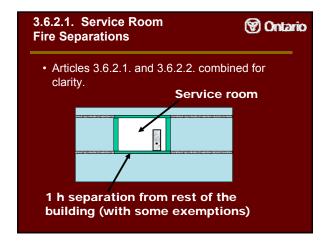
Outline - 3.5 Elevators Barrier-Free Elevators Unrated Elevator Shafts in Interconnected Floor Spaces or Atria











3.6.2.8. Emergency Power Installations



- · New Article applicable to generator rooms:
 - generator for emergency lighting, fire safety and life safety systems
 - 2 h fire rating for 3.2.6 buildings
 - 1 h for other buildings
 - room contains emergency equipment only

3.6.4.3. Plenum Requirements



- New Sub-clause 3.6.4.3.(1)(a)(iv)
- For totally enclosed nonmetallic raceways in plenums
- Tested to ULC/ORD-C2024, "Fire Tests for Optical Fibre Cable Raceway" (FT-6 Rating)

Outline



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- 3.2. Mezzanines and Interconnected F
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3.7.4.2. Plumbing Fixtures, General



- New Sentence added:
- Sentence 3.7.4.2.(8) allows both sexes to be served by a single water closet in certain occupancies if the occupant load is not more than 10 persons.



3.7.4.3. Plumbing Fixtures for **Assembly Occupancies**



- Requirement for employee washrooms in small restaurants has been clarified.
- · Inconsistencies in water closet requirements between small versus large restaurants have been removed.

3.7.4.12. **Surface Protection**



- · Scope broadened to include:
 - •protection of floor surface for water closets
- Protection of floor and wall surfaces at urinals remains



Outline

(W) Ontario

- Combustibility, Firestopping, Raceways, Firewalls and Exposing Building Face (3.2.3.)
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- Safety within Floor Areas Exits

- Elevators Service Facilities Health Requirements
- 3.8. Barrier-Free Design
 3.16. Shelf and Rack Storage Systems

Outline - 3.8 Barrier-Free Design Accessibility Signs Barrier-Free Paths of Travel Height of Controls Uniformity of Doorway Dimensions Power Door Operation Ramps Universal Toilet Rooms

3.8.1.3. Barrier-Free Path of Travel Sentence 3.8.1.3.(1) has been revised: Minimum unobstructed width of a barrier-free path of travel increased to 1 100 mm from 1 060 mm. Harmonize with the required public corridor width of 1 100 mm.



3.8.1.5.(2) Controls



- New Sentence added:
- "A signal intended for the public to indicate the operation of a building security system that controls access to a building shall consist of an audible and visual signal."

3.8.2.1.(4) Areas Requiring Barrier-Free Path of Travel



- Not less than 10% of residential suites in apartment buildings require a barrier-free path of travel:
 - To the doorway to at least one bedroom at the same level, and
 - To the doorway to at least one bathroom having an area not less than 4.5 m², and conforming to Sentence 9.6.3.3.(1).

3.8.2.4. Hotels



- Barrier-free path of travel for Hotel Suites
 - Required in at least 10% of suites in a hotel (not exceed 20)
 - Suites with barrier-free path of travel to be distributed among barrier-free storeys
 - The barrier-free path of travel within suites must extend to the inside of each room and to a balcony required by Sentence 3.3.1.7.(2)
 - These suites are required to have barrier-free bathrooms

3.8.3.1.(1) & (5) Accessibility Signs



- Accessibility Signs now required to indicate the location of:
 - Barrier-free entrance and ramps located in the barrier-free path of travel serving the entrance
 - If wall mounted, must be installed between
 - 1 200 mm 1 500 mm above floor

3.8.3.3.

(V) Ontario

Doorways and Doors

- (1) Every doorway that is located in a barrier-free path of travel shall have a clear width of not less than 850 mm when the door is in the open position.
- OBC 1997: 810 mm
- OBC 2006: **850 mm**



3.8.3.3.(5), 3.8.3.3.(16) & 3.8.3.3.(17) Power Door Operation



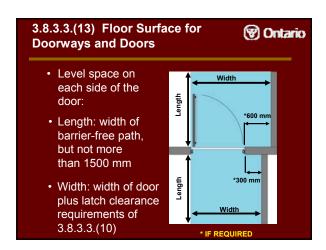
- · Clarification:
 - install on <u>all doors in series</u> (i.e., vestibules) when power door operation required

New provisions (16) and (17)

- · Operate from both side
- Minimum requirements for power door operator controls



3.8.3.3.(10) Clear Space at Doorway in a Barrier-Free Path of Travel • Scope broadened: • OBC 1997: only doors with a closer • OBC 2006: all doors except those with power operation Latch clearance dimensions remain unchanged.



3.8.3.4.(1) Ramps	⊗ Ontario
OBC 1997 - Minimum width of 870 mm between hand - Landings at least 1 500 mm x 1 500 mm	rails
OBC 2006 Minimum width of 900 mm between hand Landings at least 1 670 mm x 1 670 mm	rails

3.8.3.8.(1)(d)(i) Water Closet Stalls



- The height of both angular and L-shaped grab bars to be mounted 750 mm to 900 mm above the floor:
 - 50 mm in front of toilet bowl for angular grab bars
 - Vertical component of L-shaped grab bars to be 150 mm in front of toilet bowl



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(W) Ontario **Outline** • 3.16 Shelf and Rack Storage Systems New Section added to the building code 3.16. Shelf and Rack (W) Ontario **Storage Systems** • Section 3.16. applies to self contained structural systems within buildings, having one or more elevated platforms or walkway levels for personnel access. · Mezzanines are not part of a shelf and rack storage system. 3.16. Shelf and Rack **Ontario Storage Systems - Height** · Class I, II, III and IV Commodities - 18 m maximum · Class I, II, and III Commodities - 24 m maximum, if fire alarm upgraded per Sentence 3.16.2.2.(1) • Group A, B and C Plastics and Rubber Tires - 7 m maximum, and solid floors

3.16. Shelf and Rack (W) Ontario **Storage Systems** •3.16.1.7. Exits and Means of Egress • 3.16.1.3. Construction - Part 4 Design – Steel - Minimum 2 exits with • 3.16.1.4. Signs exceptions - Maximum loading - No Smoking • 3.16.1.5. Lighting - 50 lx - Emergency lighting • 3.16.1.6. Sprinklers - NFPA 13 or Appropriate Standard (W) Ontario **Outline** Combustibility, Firestopping, Raceways, Firewalls and Exposing Building Face (3.2.3.) Fire Alarm Systems, Sprinkler Systems and Emergency Lighting Mezzanines and Interconnected Floor Spaces Safety within Floor Areas Exits 3.4. Exits 3.5. Elevators 3.6. Service Facilities 3.7. Health Requirements 3.8. Barrier-Free Design 3.16. Shelf and Rack Storage Systems • O. Reg. 349/06 (W) Ontario **Outline** • O. Reg. 349/06 Clause 3.1.2.5.(1)(a) Sentence 3.1.8.8.(8) Sentence 3.2.5.13.(2) Sentence 3.3.3.3.(5)

3.1.2.5.(1) (W) Ontario **Group B Div. 3 Occupancies** • In Clause 3.1.2.5.(1)(a), dwelling unit has been replaced by suite. 3.1.8.8.(8) (V) Ontario **Fire Dampers Waived** • Waiver of fire dampers in a fire separation in certain small Group B, Division 3 occupancies where a fire alarm system and duct-type smoke detectors are provided to prevent smoke circulation. 3.2.5.13. (W) Ontario **Automatic Sprinkler Systems** • Sentence 3.2.5.13.(2) has been revised to allow the NFPA 13 R standard for certain small B-3 occupancies.

3.3.3.3. Corridors New Sentence 3.3.3.3.(5) Corridors in certain small Group B, Division 3 occupancies are exempted from the 1 650 mm width requirement. Further Information Further Information e-mail: codeinfo@mah.gov.on.ca www.obc.mah.gov.on.ca