



# Top 10 Tips for Accessible Building Fire Safety

a joint presentation by  
Thea Kurdi, DesignABLE Environments Inc.  
Martin Day, Safety Media Inc.



# Today's Agenda

UPDATE

1. Who we are?
2. Definition of accessible design
3. Our top 10 tips
4. Resources
5. Your Questions





# Safety Media

Fire & Life Safety Essentials



Martin Day  
President

- Fire code compliance products
- Workplace health & safety compliance products
- AODA compliant products
- Standard and custom signs
- 4,000 products



Fire & Safety Planning



Fire Protection Equipment



First Aid & Safety Products



Log Books, Training & Codes



All Signs



Custom Products





Thea Kurdi,  
Associate

## Services:

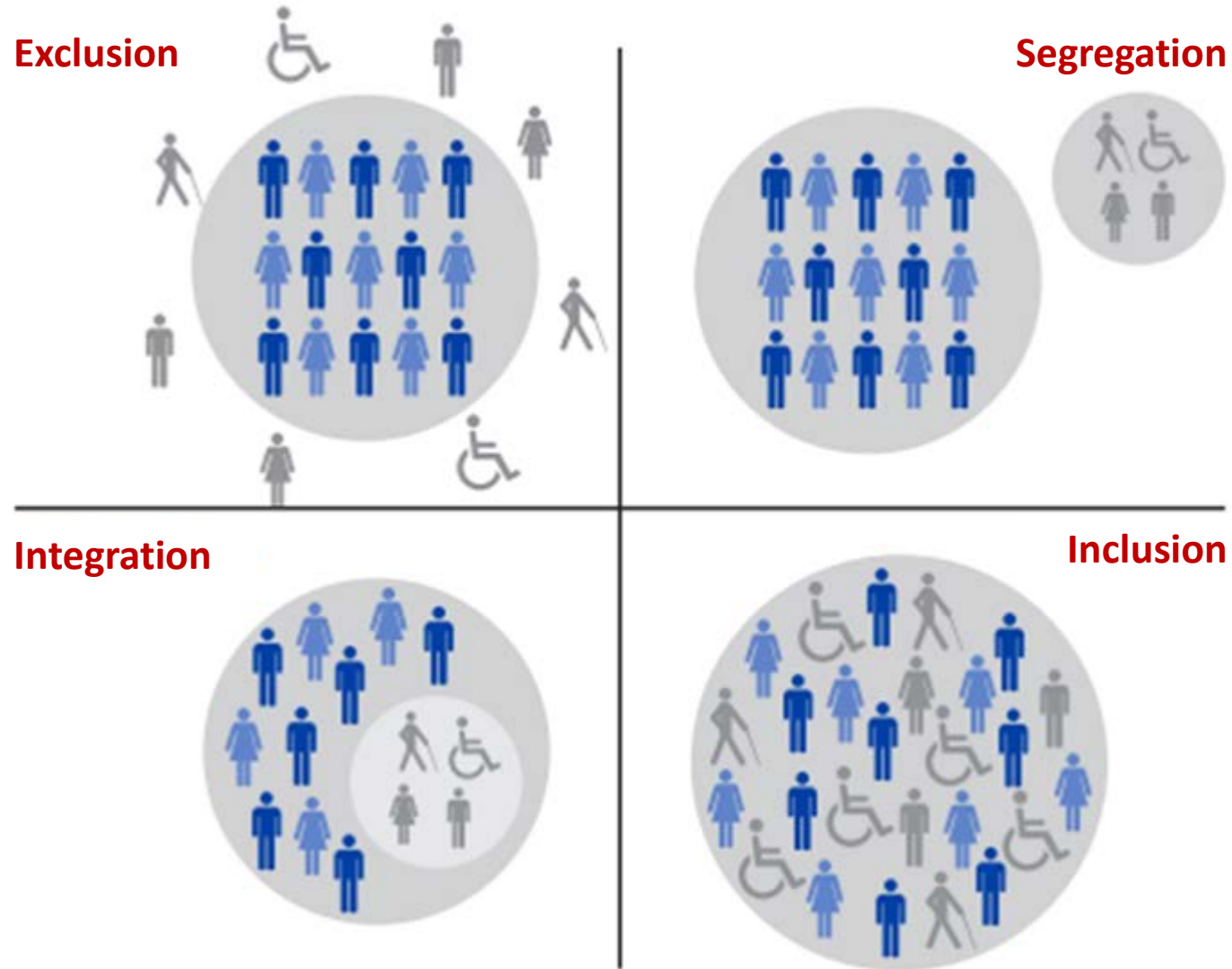
1. Architectural Consultation
2. Codes and Standards Development
3. Education and Training
4. Facility Auditing and Accessibility Planning



# Key Definition



# What is Accessible Design?



# Our Top 10 tips for Accessible Fire and Life Safety

1. Understand fire basics
2. Understand the legal context
3. Understand the building requirements for accessibility
4. Understand the market potential
5. Build a business case
6. Build an accessible fire safety plan
7. Engage in inclusive evacuation planning and drills
8. Develop accessible evacuation maps
9. Use appropriate signage .. with the right Braille
10. Go beyond the minimum – get help if needed

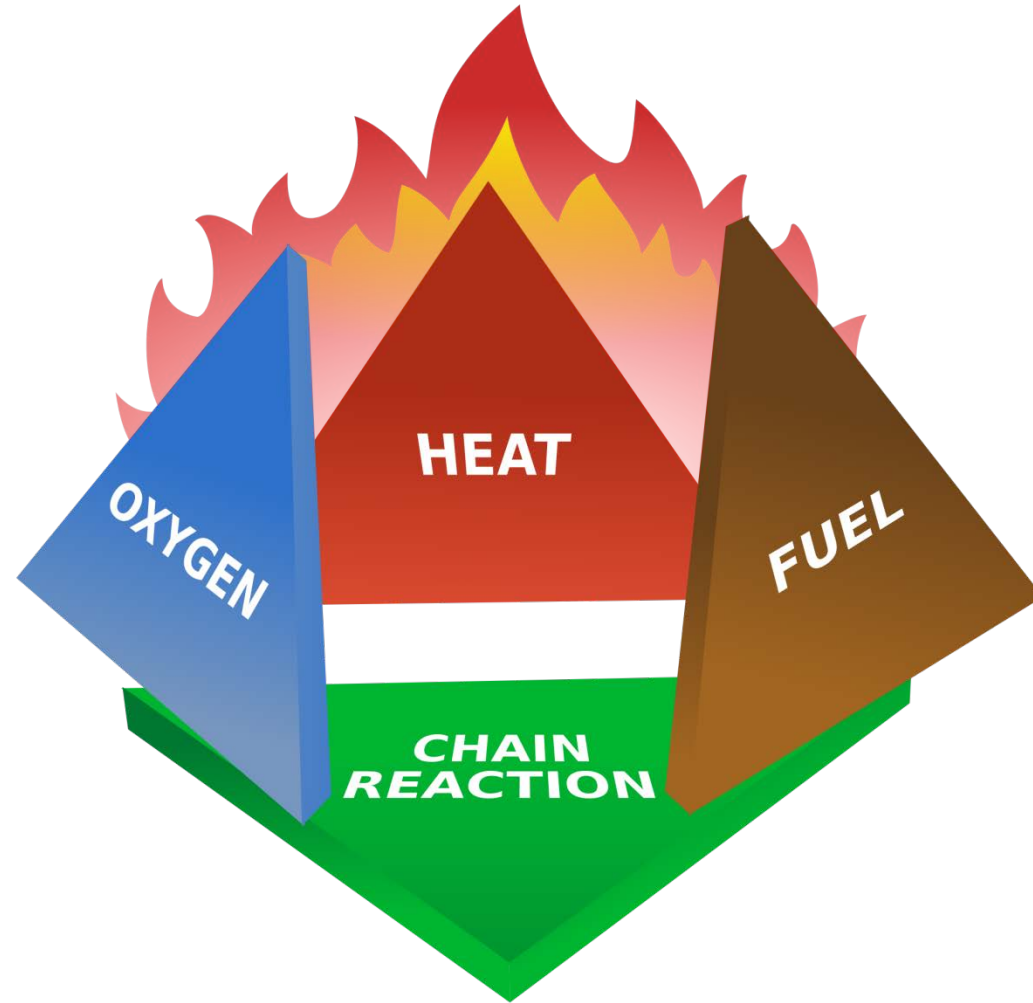


# 1. Understand Fire Basics





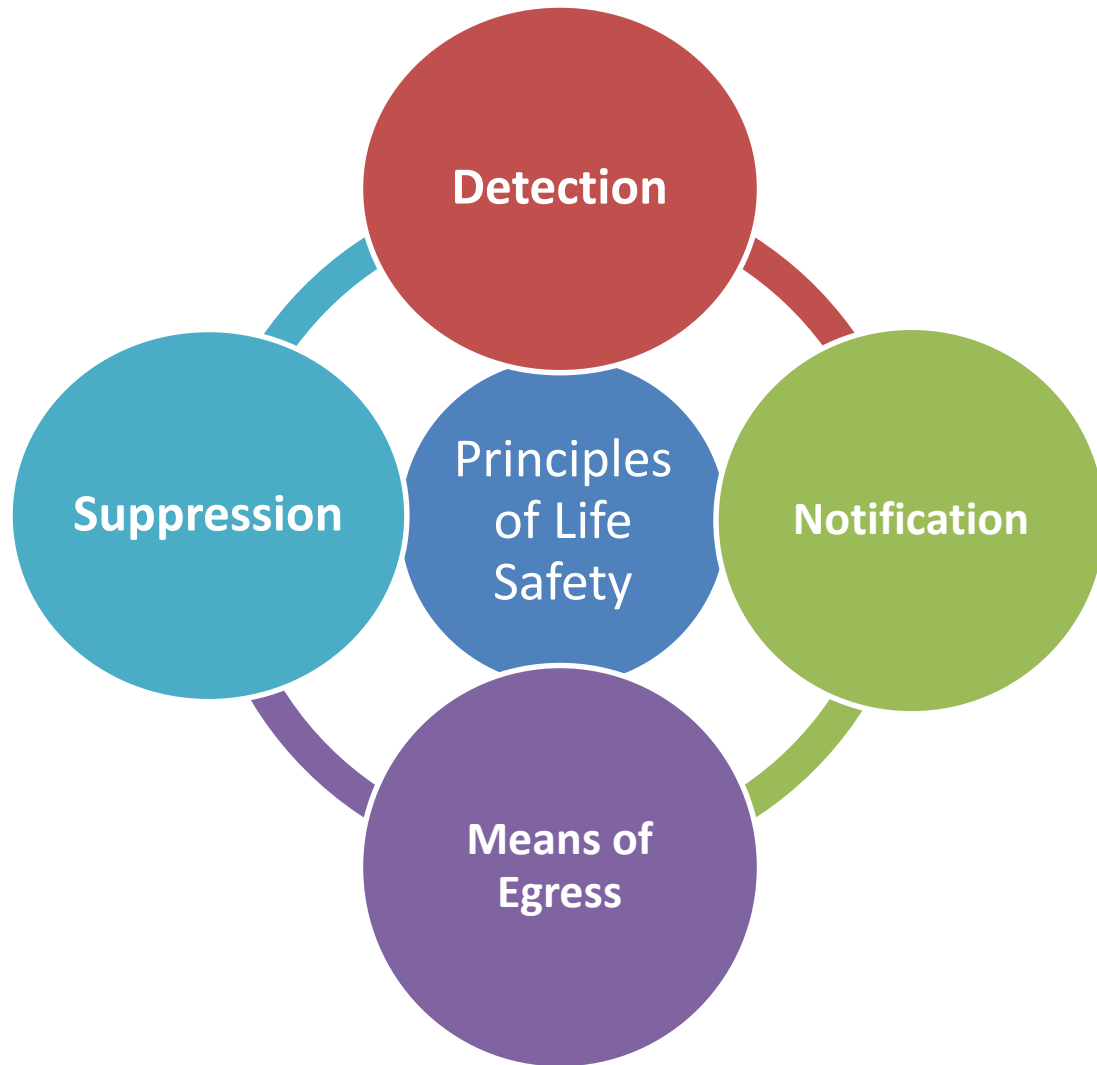
# Fire Tetrahedron



# How much time do you have in a fire?



# Principles of **Life** Safety



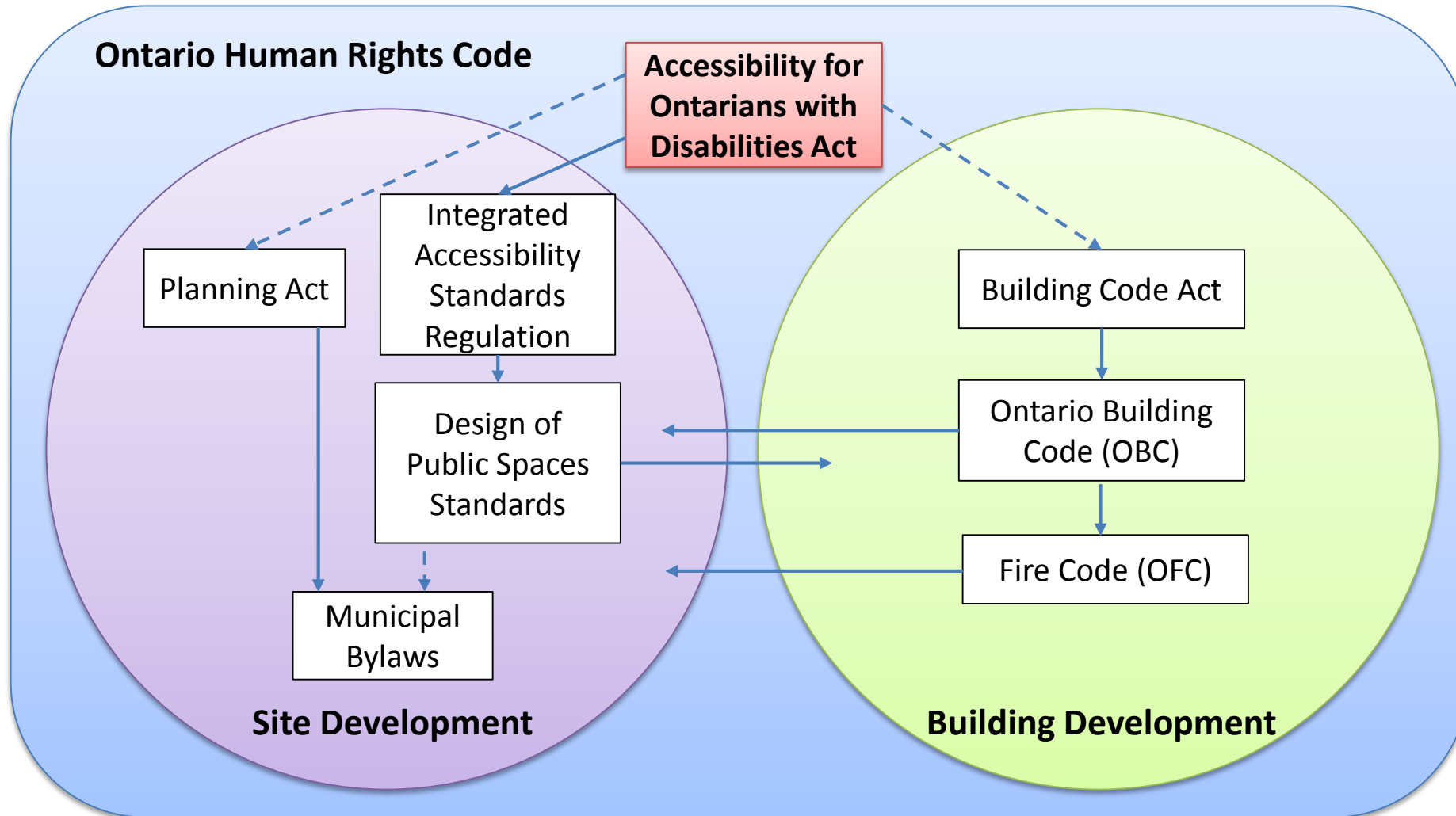
1. **Containment**
2. **Means of Egress**
3. **Interior Finishes**
4. **Building Services**
5. **Construction**
6. **Fire Protection Equipment**
7. **Alarm & Detection**



## 2. Understand the Legal Context



# Understanding the Law



# Human Rights / AODA Definition

- a) Any degree of physical disability, infirmity, malformation or disfigurement that is caused by bodily injury, birth defect or illness and, without limiting the generality of the foregoing, includes diabetes mellitus, epilepsy, a brain injury, any degree of paralysis, amputation, lack of physical co-ordination, blindness or visual impediment, muteness or speech impediment, or physical reliance on a guide dog or other animal or on a wheelchair or other remedial appliance or device.
- b) A condition of mental impairment or a developmental disability.



# Human Rights / AODA Definition ...

## Con't

- c) A learning disability, or a dysfunction in one or more of the processes in understanding or using symbols or spoken language.
- d) A mental disorder, or
- e) An injury or disability for which benefits were claimed or received under the insurance plan established under the Workplace Safety and Insurance Act 1997 (“handicap”)



# Accessibility Standards Under the AODA

**I. Information and Communications**

**II. Employment**

**III. Transportation**

**IV. Design of Public Spaces (aka Accessibility Standards for the Built Environment)**

**V. Customer Service**





# Information and Communications

Requires an organization to make their information and communications accessible for people with disabilities.

Core principles:

1. Dignity
2. Independence
3. Integration
4. Equal / Equitable Opportunity



# What you need to do

1. Develop accessibility policies and plans
2. Allow access to service animals
3. Allow access to support persons
4. Provide notice of temporary disruptions of service or facilities
5. Provide accessible formats and communication supports
6. Make public emergency information accessible
7. Establish a process for receiving and responding to feedback
8. Train Staff, contract workers and others.
9. Create accessible web content
10. On-line compliance reporting.



# 3. Understand the Building Requirements for Accessibility:

- a) Implement both visual and tactile Notifications
- b) Areas of refuge
- c) Emergency elevators
- d) Find / develop accessible means of Egress



# 3a. Implement both Visual & Tactile Notifications



Strobe smoke alarm



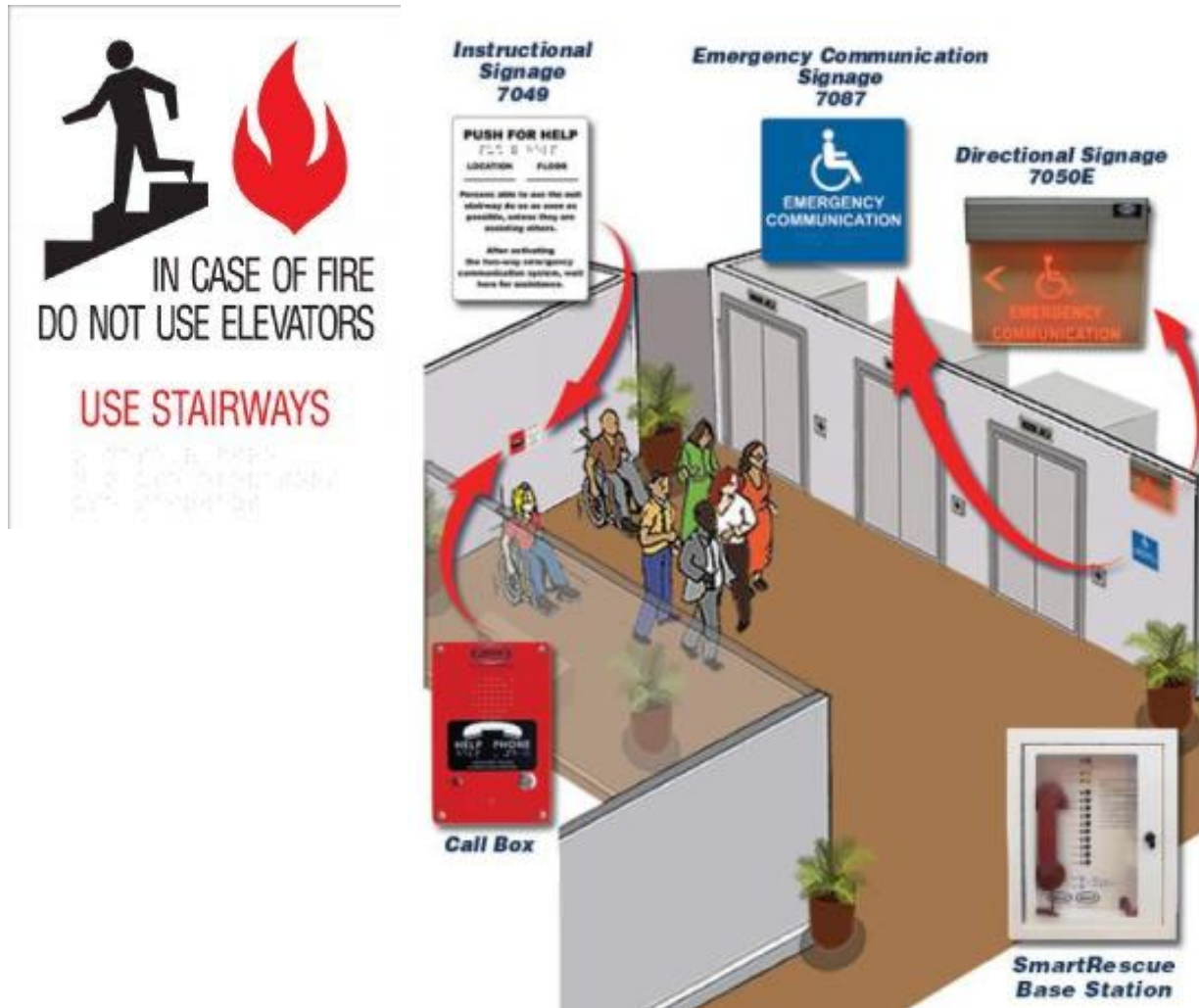
Bed shaker smoke alarm



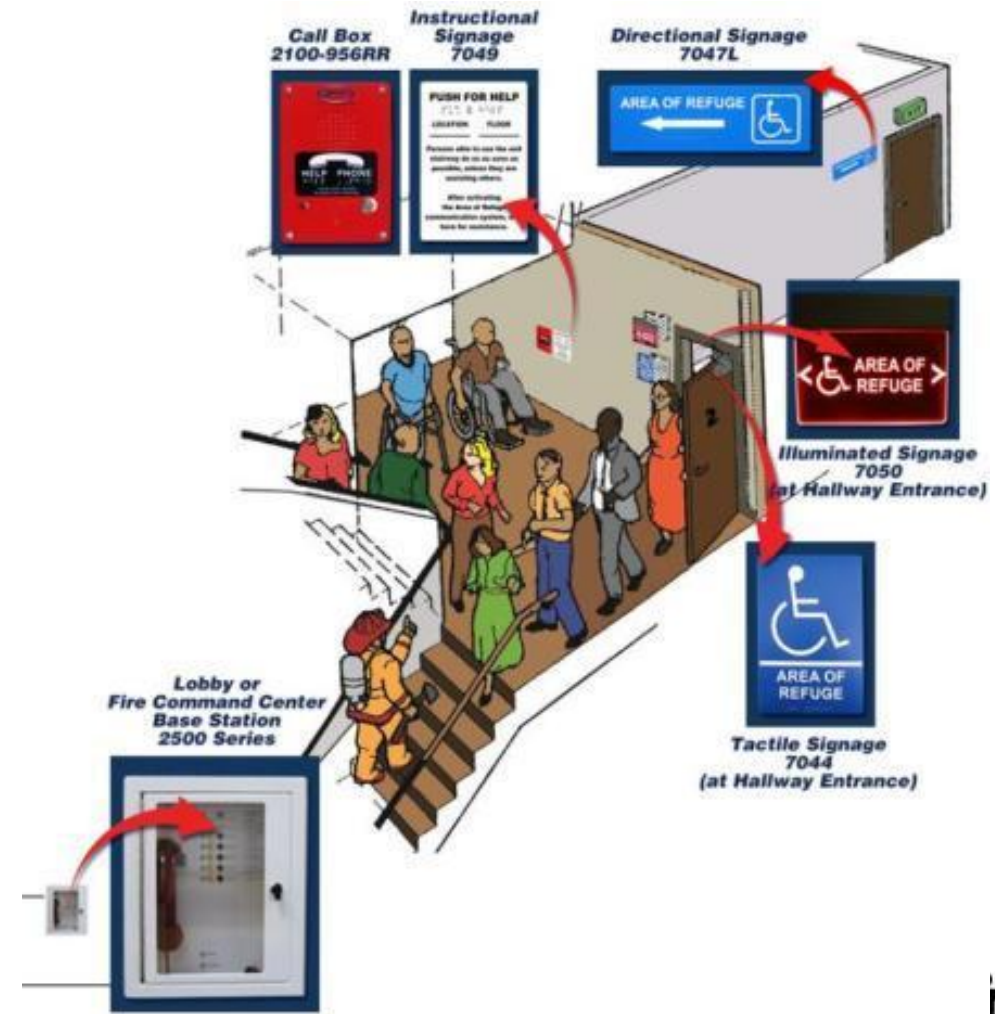
# 3b. Areas of Refuge



# 3b. Areas of Refuge



# 3b. Areas of Refuge



# 3c. Stairwells





# 3e. Emergency Elevators

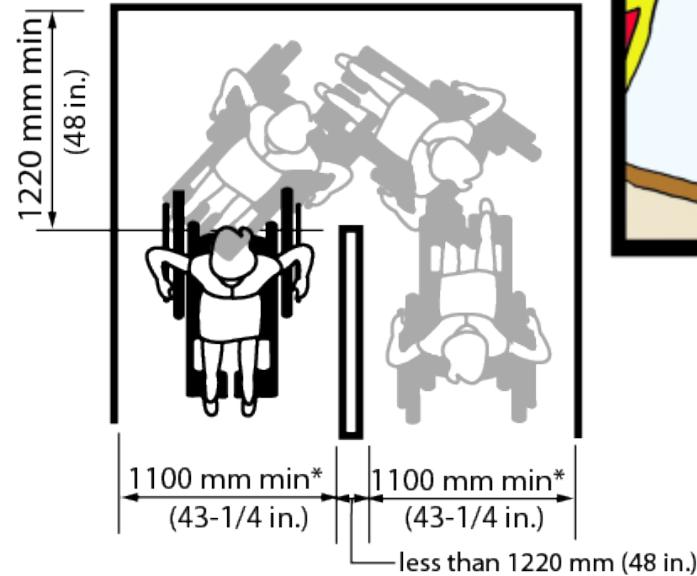


Emergency  
evacuation  
elevator



# 3d. Find / Develop Accessible Paths of Egress

- Built to accommodate wheelchair/devices
- Kept clear
- Appropriate signage
- Shelter in place



# 4. Understand the Market Potential



# Understanding the Demographics

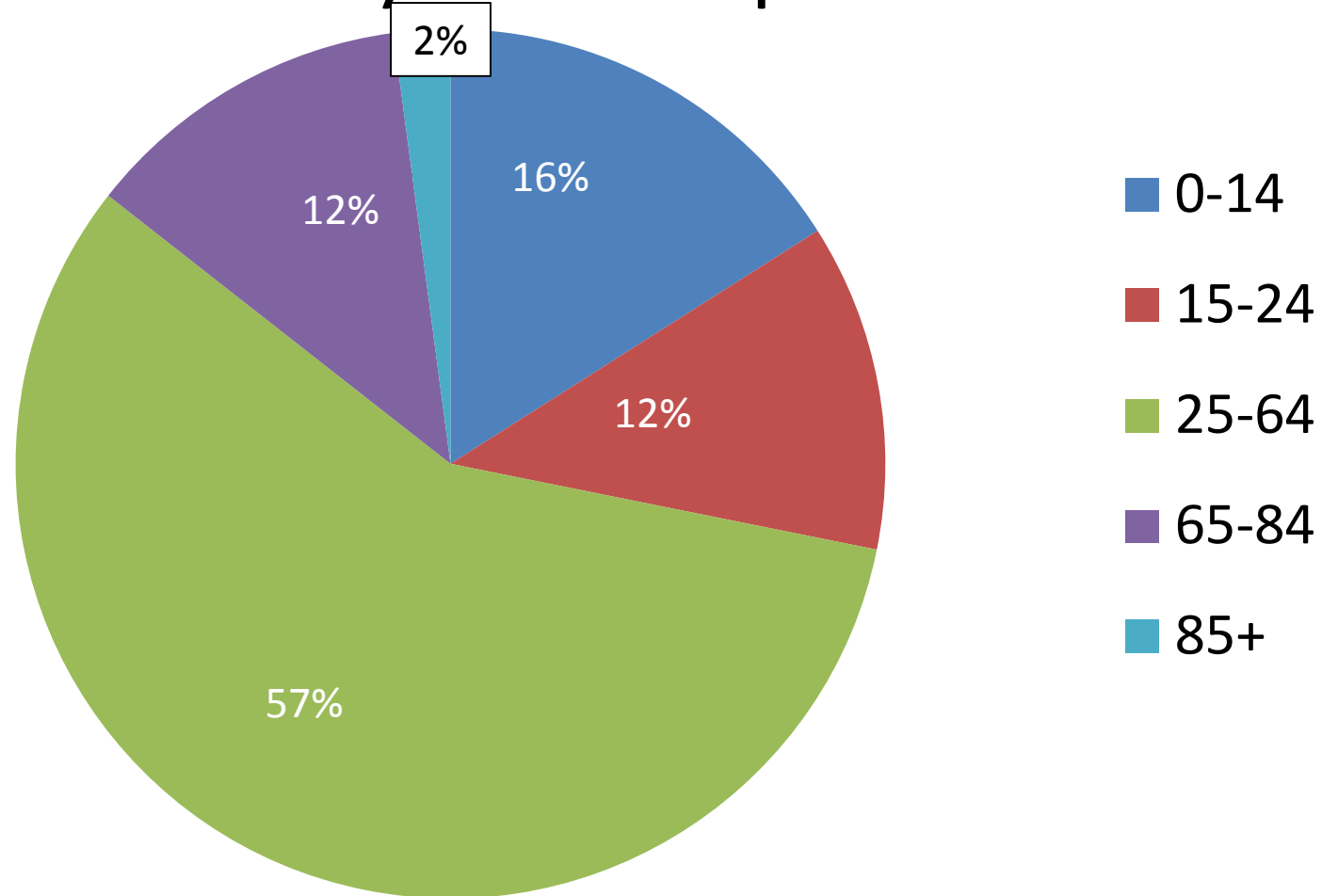


How others see you, is not important..  
How you see yourself means everything.



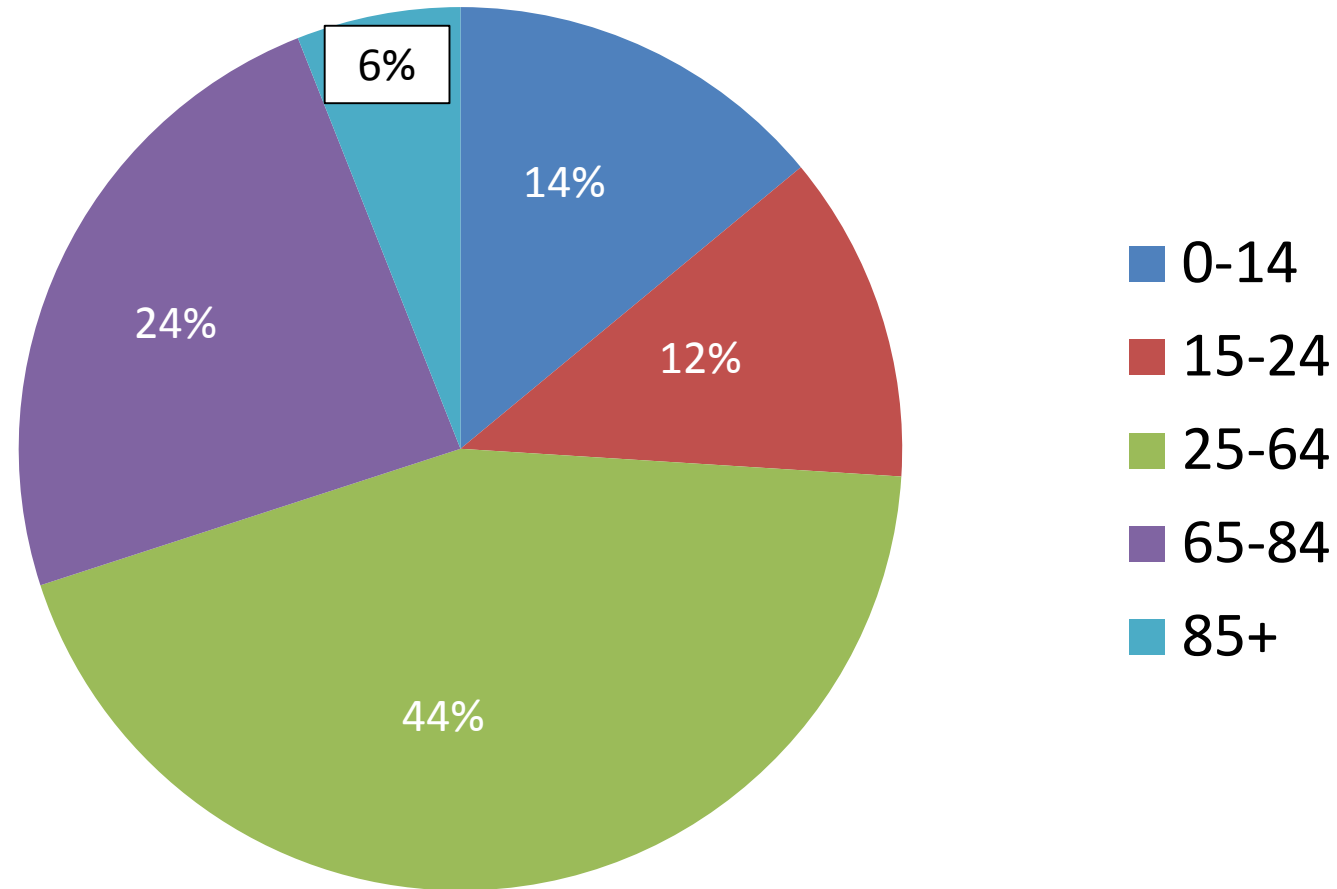
# Understanding the Demographics

2011 - City of Toronto Population



# Understanding the Demographics

2030 - City of Toronto Population



# Understanding the Demographics

- 1. Ontario:** Approx. 1.85 million people report having a disability, representing 15.5% of the population. 70% of disabilities are 'invisible'
- 2. Toronto:** Apply 15.5% to Toronto's population 2.79 million people = 432,450 people with disabilities
- 3. 2017,** Ontarians aged 65 + will account for a larger share of the population than kids 0-14



# Older Persons

Have the highest disability rate of any group

- **55-64:** 23%
- **65+:** 43.4%  
(1.76 M Canadians)
- **85+:** rate triples to 73%





# Human Diversity

Storey, Muller and Mace suggest that human abilities can be grouped into 7 categories:

1. **Cognition**
2. **Vision**
3. **Hearing and Speech**
4. **Body Function**
5. **Arm Function**
6. **Hand Function**
7. **Mobility**



# Changing Abilities Over a Lifetime



# 5. Develop the Business Case

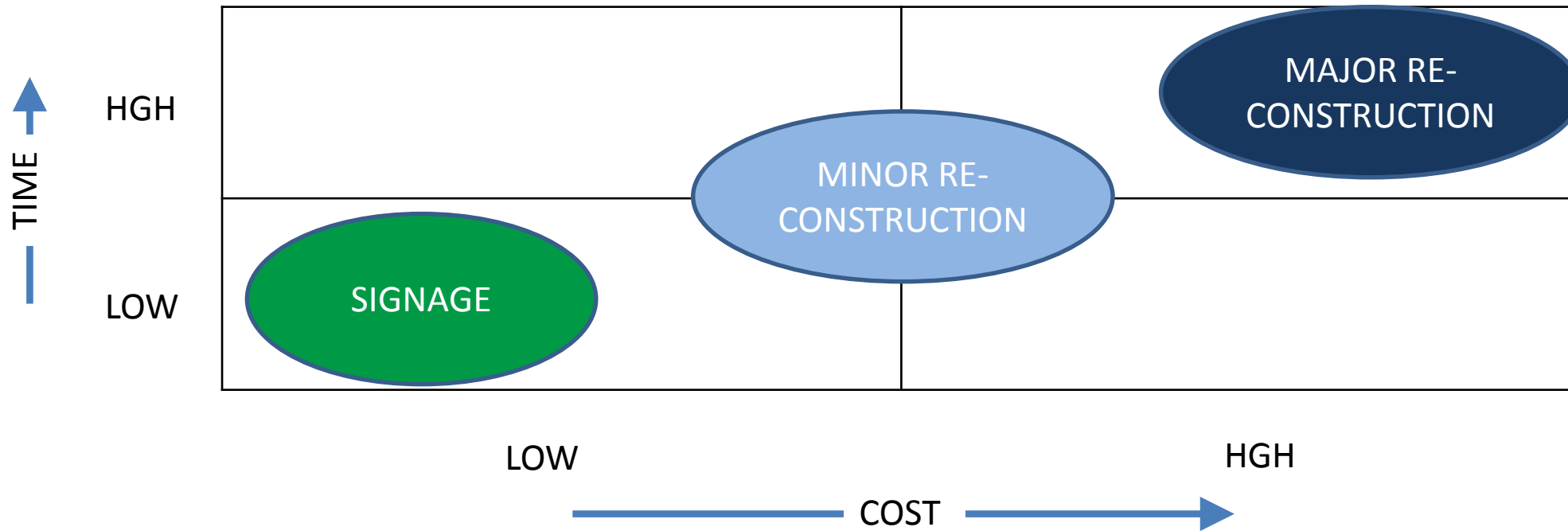


# Business Case Questions

- Quantitative benefits?
  - Return on investment?  
Increased revenues or decreased costs.
  - Greatest marginal return on my investment?
  - Minimize risk?
- Other qualitative benefits are there?



# Business Time / Cost Trade-offs



# Typical Benefits and Risks for the Property Manager

Benefits		Risks	
Quantitative	Qualitative	Quantitative	Qualitative
<p>↑ Occupancy</p> <p>↑ Listing Performance</p>	<p>↑ Tenant Safety</p> <p>↑ Tenant Satisfaction &amp; Engagement</p> <p>↑ Properties Won</p>	<p>↓ Legal Risk</p>	<p>↓ Reputational Risk</p>



# The business case

## Conclusion:

1. All buildings can take steps to improve the safety for their tenants, thereby reducing both legal and regulatory risk.
2. As a tenant, expectations are driven by Ontario Human Rights
3. Improved signage and accessibility has a great business case!



# 6. Build an Accessible Fire Safety Plan

- Building fire safety plan (Fire Code)
  - Persons Requiring Assistance list
- Individual fire safety plan
  - Accounts for specific disability
  - Noted in building evacuation plan
- What about visitors with disabilities?





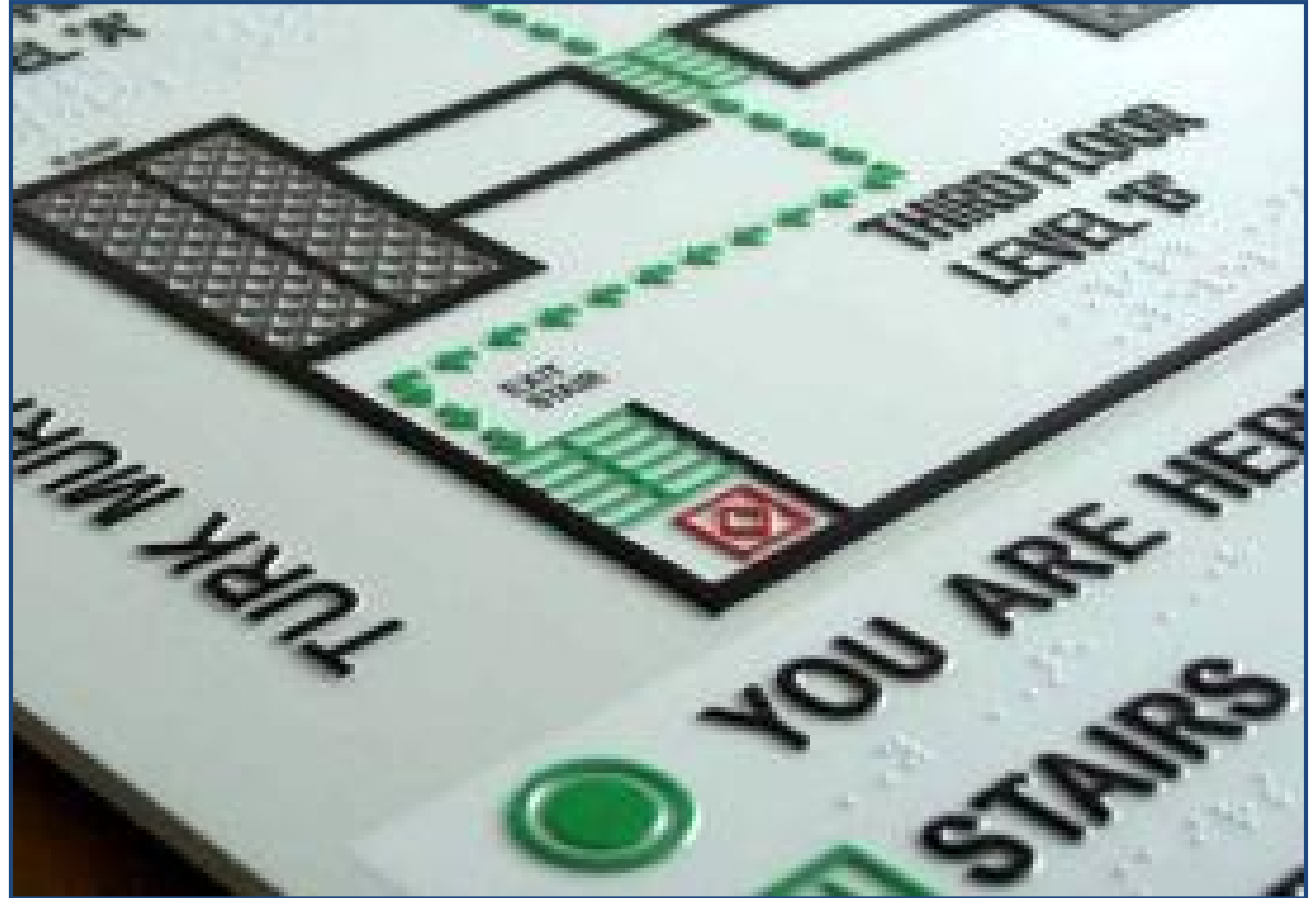
# 7. Engage in Inclusive Evac. Planning & Drills

- Invite persons requiring assistance to participate
- Use drills as an opportunity to update list of persons requiring assistance



# 8. Develop Accessible Evacuation Maps

- Tactile
- Canadian braille
- Large text
- High-traffic location
- Easy orientation
- Limited but important information

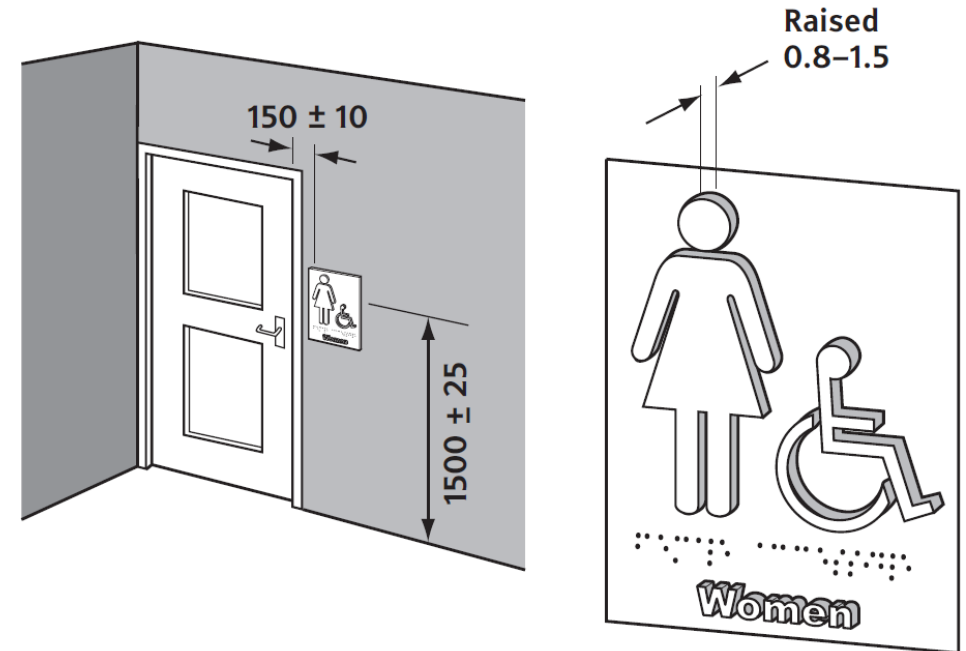


# 9. Use Appropriate Signage ... with the right Braille



# CSA B651 – Accessible Design for the Built Environment – Signage Best Practice

- Consistent style and location (overhead and wall mounted) throughout a building
- Avoid shadows and glare
- Characters sans serif, upper & lower case, high contrast, minimum 25 mm height
- 0.8 mm – 1.5 mm tactile text, braille and pictograms for regulatory, warning and identification signs
- Pictograms should have a 150 mm field height
- Wall-mounted tactile signs should have a centre-line 1,500 mm from the floor and a leading vertical edge 150 mm from the door jamb



# Key Principles

- Simple Text
- Pictograms
- Tactile
- Braille

While balancing an inevitable tension between various other laws, regulations and requirements



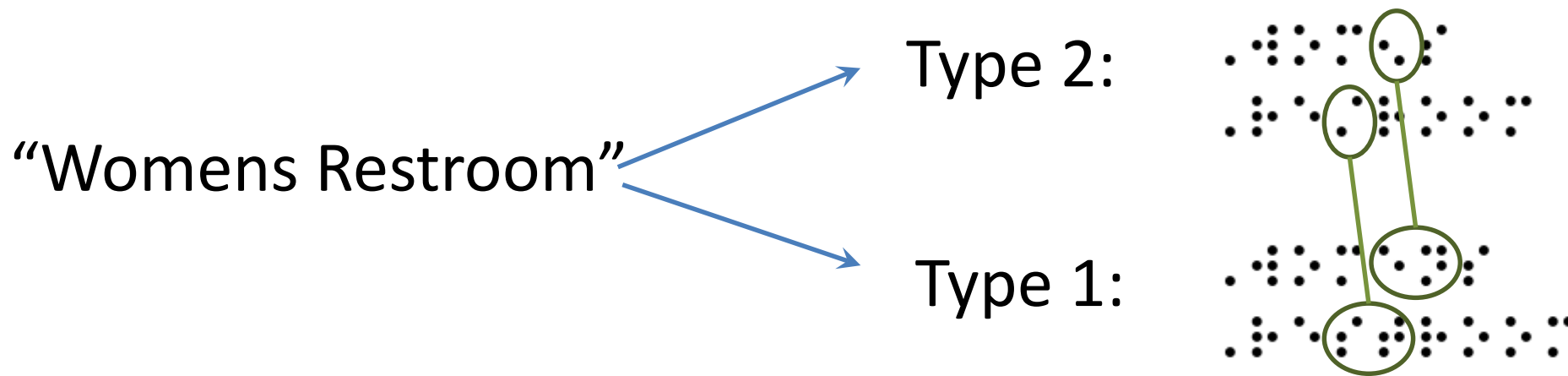
# 9.a Required Signage Examples

- Accessible exits clearly marked with tactile/braille
- Exits with areas of refuge differentiated
- Floor level as well as higher level to account for smoke
- Egress Paths clear with signage
- In case of fire / 911 signs



# 9. Use a supplier that supports Type 1 Braille

- The US Standard is Type 2, or contracted braille
- Canadian Standard, as set by the CNIB, is Type 1 braille.



# 10. Go Beyond the Minimum

- Codes change
- Many low-cost options to improve building safety for able-bodied and disabled
- Fire safety best practices are constantly evolving
- Accessible fire safety is a differentiator





## 10. Get Help, If Needed

# YOU CAN MAKE A DIFFERENCE



# Our Top 10 tips for Accessible Fire and Life Safety

1. Seconds matter for life safety
2. You are required to act, unless you can show undue hardship
3. Building codes and standards tell you what needs to be done
4. There is a large market requiring accessibility
5. A business case can be written for your particular situation
6. A fire safety plan is for everyone
7. Inclusive evacuation planning and drills helps save everyone lives
8. Accessible evacuation maps can save critical time
9. Signage is one of the cheapest ways to move the yardstick ... make sure you use the right Braille
10. Go beyond the minimum – get help where needed



# Selected Resources

1. CSA B651-12 (with 2015 updates)  
Accessible design for the built environment
2. Ontario Fire Code, Ontario Building code
3. Facility Accessibility Design Standards:
  1. Cities: London, Mississauga, Ottawa and Toronto
  2. Brock University
4. Best practices from  
Illustrated Guide to the AODA  
Design of Public Spaces  
([gaates.org/resources-build-environment](http://gaates.org/resources-build-environment))
5. CNIB Clearing Our Path



# Thank You



## Thea Kurdi

Accessibility & Universal Design Specialist

(905) 278-0665

[thea.kurdi@designable.net](mailto:thea.kurdi@designable.net)

[www.designable.net](http://www.designable.net)

Helping design create great architecture...  
which is also fully accessible



***Safety Media***

Fire & Life Safety Essentials

## Martin Day

President

(416) 675-6675

[martin@safetymedia.com](mailto:martin@safetymedia.com)

[www.safetymedia.com](http://www.safetymedia.com)

One-stop-shop for all your  
fire & life safety essentials

