

## **A-10. Building Upgrade.**

**Voluntary Building By-law Upgrades.** Where voluntary upgrade for fire alarm systems, sprinkler systems, exits, accessibility, seismic work or building envelope is performed, it is not the intent of this By-law to require the owner to further upgrade the building provided no other work is included in the project.

### **Building By-law Upgrades**

The Building By-law requires that when work is carried out to an existing building, the building must be upgraded to an “acceptable” level. Prior to April 20, 2004, this upgrade was primarily based on construction values. On April 20, 2004, Council approved a new upgrade mechanism.

Applicants may use either mechanism to determine the acceptable level of Building By-law upgrade for an existing building.

Please note that neither of the upgrade mechanisms are intended for existing one-and two-family dwelling buildings. For the upgrade requirements of this type of buildings applicants should refer to the City’s bulletin at the following URL:

<http://vancouver.ca/commsvcs/LICANDINSP/bulletins/index.htm>

### **Overall Conditions for the Upgrade Trigger Mechanisms**

When determining the “acceptable level” of upgrade for an existing building using the acceptable solutions #1 or #2, the following conditions apply:

1. All unsafe conditions must be corrected to the satisfaction of the Chief Building Official.
2. All new materials and construction work must comply with the Vancouver Building By-law.
3. An alteration shall not create non-conformity or substantially increase the level of non-conformity of the existing building with the Building By-law.
4. Any significant extension of the life of an existing building beyond its original design life shall require upgrading to an acceptable level.
5. An alteration involving reconstruction of an existing building should provide improvement of energy efficiency to an acceptable level.

## **Acceptable Solution #1 – Using Table A and the Following Trigger Mechanisms**

### **Alteration and Change of Use Within an Existing Major Occupancy Classification**

When an alteration or change of use within an existing major occupancy classification is made to an existing building

- a) the alteration shall comply with this By-law, and
- b) the existing building shall be upgraded to Table A.

Where the alteration or change of use within an existing major occupancy classification is limited to small suites intended for a Group A Division 2, D, E or F Division 2 (wholesale showroom) occupancy and where the occupant load for the entire suite does not exceed 60 persons

- a) the alteration shall conform to this By-law, and
- b) the suite area and its means of egress shall be upgraded to Table A, provided
  - i) materials approved for 1 h fire-resistive construction are installed on the suite side of the suite separation, or
  - ii) the building was, within the last 20 years, either constructed or fully upgraded to the Vancouver Building By-law.

### **Change of Major Occupancy**

When a change of major occupancy is limited to a small suite in a Group A Division 2, D, E or F Division 2 (wholesale showroom) occupancy and where the occupant load for the entire suite does not exceed 60 persons

- a) the alteration shall conform to this By-law, and
- b) the suite area and its means of egress shall be upgraded to Table A, provided
  - (i) materials approved for 1 h fire-resistive construction are installed on the suite side of the suite separation, or
  - (ii) the building was, within the last 20 years, either constructed or fully upgraded to the Vancouver Building Bu-law.

When a change of major occupancy within any 5 year period is limited to suites with an aggregate area not more than 50% of the floor area in a building of not more than one storey, or is limited to suites with an aggregate area not more than 100% of the building area in a building of more than one storey

- a) all alterations and the entire suite or area of occupancy change shall conform to this By-law, and
- b) the rest of the existing building shall be upgraded to Table A.

When there is a change in major occupancy in an existing building and the aggregate area of the change in major occupancy within any 5 year period is greater than 50% of the floor area in a building of not more than one storey, or the aggregate area of the change in major occupancy within any 5 year period is greater than 100% of the building area in a building of more than one storey, the entire building shall be upgraded to conform to this By-law unless otherwise determined by the Chief Building Official.

### **Minor Addition to Existing Buildings**

Where the alterations to an existing building include minor additions which

- a) add no more than 10 percent to the building area of the building,
- b) do not exceed 200 m<sup>2</sup> in floor area, and
- c) do not create a non-conformity or add further non-conformance to the building the additions shall comply with this By-law, and the rest of the building shall be upgraded to Table A.

### **Major Addition to Existing Buildings**

When the alteration to an existing building includes addition which does not qualify as a minor addition, the entire building shall be upgraded to comply with this By-law.

### **Relocated Buildings**

Where the whole or any part of an existing building is relocated either within or into the city, including relocation relative to property lines created by subdivision or consolidation, the building shall be upgraded to Table A.

### **Damaged Buildings**

When an existing building is damaged, this By-law and the appropriate regulations in the Vancouver Fire By-law shall apply to the work necessary to reconstruct damaged portions of the building and the remainder of the building shall be upgraded to Table A.

### **Details of Table A**

Table A illustrates the level of upgrading required for a non conforming building. The upgrading is based on the aggregate project value of all building permits issued over the previous 24 month period immediately preceding the date of application of a proposed building permit, including the value of the proposed project, to the actual value of the building, as determined by the Assessment Authority of B.C., expressed as a percentage.

When voluntary upgrades for fire alarm systems, sprinkler systems, exits, accessibility, seismic work and building envelope are performed along with other alterations, additions and changes of major occupancy in existing buildings, the applicant may deduct the value of this work from the aggregate value of the project costs.

Where the actual value of the building as determined by the Assessment Authority of B.C. is considered by the applicant as unrealistic, an alternative building valuation by a qualified Quantity Surveyor may be accepted, provided the valuation includes the appropriate depreciation, such as provided for in the "Marshall Valuation Service", from the current replacement value of the building as existing. Such depreciation shall take into account

- (a) the age of the building, its fabric and equipment and the normal wear and tear thereof, and
- (b) the cost of making good non-compliance with this By-law, including both use and occupancy and structural requirements, such that the calculated value reflects the current market value of the property less the value of the land.

**Table A**

Ratio of Project Costs to Assessed Value %	Item to be Upgraded	Location of Upgrading			Notes for Upgrading Work
		Project Area	Public Areas	Entire Bldg	
Up to 25%	Exits <sup>(1)</sup>	X			Number, capacity, and fire separations.
Over 25% and up to 50%	Including item above				
	Alarms/detectors	X	X		
	Emergency Lights	X	X		
	Exits			X	
	Exits Lights & Signs			X	
	Flame Spread Rating	X	X		
Over 50% and up to 100%	Including all items above				
	Access to exits	X	X		
	Alarms/detectors			X	
	Emergency Lights			X	
	Fire Fighting Access and Water Supply			X	
	Floor assemblies & supports	X			
	Spatial Separation	X			
Over 100% and up to 200%	Including all items above				Structural survey per 10.2.4.2.  or same floor level
	Access to Exits			X	
	Building structure			X	
	Flame Spread Rating			X	
	Occupancy Separation			X	
	Provisions for Section 3.8.	X			
	Standpipes & Sprinklers			X	
	Washrooms	X			

Over 200%	Including all items above				
	Building Structure			X	Structural Analysis per 10.2.4.1
	Emergency Power & Lights			X	
	Floor assemblies & supports			X	
	High Rise requirements			X	Except smoke venting and smoke classification of finishes.
	Lightning Levels			X	
	Provisions for Section 3.8.			X	
	Spatial Separation			X	
	STC requirements			X	
	Ventilation			X	
	Washrooms			X	Natural and/or mechanical.

<sup>(1)</sup> to public street

## **Acceptable Solution #2 - Using New Upgrade Mechanisms**

The intent of these new upgrade triggers for an existing building are to provide guidance for building owners and designers when determining the required level of Building By-law upgrade for an existing building.

### **Background**

On April 20, 2004 Council approved a new model for determining the “acceptable” level of Building By-law upgrade for existing buildings which are undergoing alterations under the City’s building permit process.

This new upgrade trigger mechanism model determines the required “acceptable” level of upgrade for an existing building using the concept of “Categories of Work” rather than the previous Table A, which was based primarily on monetary values.

### **Definitions for Categories of Work**

*(Where a project comprises more than one category of work, the category of work having the most restrictive upgrade level shall apply.)*

#### **REHABILITATION PROJECTS**

(See Flow Chart No. 1)

**Voluntary Building By-law Upgrades** – Voluntary Building By-law upgrades are limited to fire alarm, sprinkler, exit, accessibility, seismic and building envelope upgrades to an existing building.

**Repair** – Repair is the replacement of any part of an existing building with like or similar type materials for the repair or maintenance of the building. Repair work also includes repair to a building due to fire damage or the installation of a

new kitchen exhaust system. No change of use or reconfiguration of the interior space is permitted for a repair type project.

**Minor Renovation** – Minor renovations are limited to work within single tenant spaces. Minor renovations may include reconfiguration of the interior space as well as exterior renovations, however change of use or major occupancy classification is not permitted for a minor renovation type project. Where the renovation includes a new interconnected floor space or a new mezzanine, it shall not be considered as a minor renovation. (New mezzanines are considered to be vertical additions.)

**Major Renovation** – Major renovations are limited to work within multiple tenant spaces. Major renovations may include re-configuration of the interior space, interconnected floor spaces, and exterior alterations, however change of use, change of major occupancy classification or new mezzanines may not be considered as a major renovation. (New mezzanines are considered to be vertical additions.)

**Reconstruction** – Reconstruction means any project where extensive renovations are being carried throughout the building that involve substantial reconstruction of the interior floor space that exposes the building's structure. Reconstruction may include repair, renovation, alteration or combination thereof.

### **CHANGE OF USE WITHIN THE EXISTING MAJOR OCCUPANCY CLASSIFICATION PROJECTS** (See Flow Chart No. 2)

**Change in Use** – Change in use type projects are limited to change of use within a building or portion thereof such that the proposed use is within the existing major occupancy classification.

**Small Suite Change of Use** – Small suite change of use is limited to a suite in a Group A, Division 2, Group D, Group E, Group F, Division 2 (wholesale showroom), or Group F, Division 3 occupancy and where the occupant load for the entire suite does not exceed 60 persons.

### **CHANGE OF MAJOR OCCUPANCY CLASSIFICATION PROJECTS** (See Flow Chart No. 3)

**Change in Major Occupancy Classification** – Change in major occupancy classification type projects are limited to a change of use within a building or portion thereof such that the proposed use is outside of the existing major occupancy classification.

**Small Suite Change of Occupancy Classification** – Small suite change of use or occupancy classification is limited to a suite in a Group A, Division 2, Group D, Group E, Group F, Division 2 (wholesale showroom), or Group F, Division 3 occupancy where the occupant load for the entire suite does not exceed 60 persons.

### **ADDITION PROJECTS** (See Flow Chart No. 4)

**Horizontal Addition** – Horizontal additions include both “minor” and “major” horizontal additions. Minor horizontal additions are additions that add a total aggregate *floor area* of not more than 25% of the existing *building area* to the building up to a total maximum aggregate *floor area* of 500 m<sup>2</sup>. A Major horizontal addition is an addition which adds a total aggregate *floor area* of more than 25% of the existing *building area* to the building or a total aggregate *floor area* of more than 500 m<sup>2</sup>.

**Vertical Addition** – Vertical additions include both “minor” and “major” vertical additions. Minor vertical additions are additions that add an additional floor level (mezzanine or storey) to a building having a total maximum aggregate *floor area* of not more than 25% of the *building area* up to a total maximum aggregate *floor area* of 500 m<sup>2</sup>. Major vertical additions are additions that add an additional floor level (mezzanine or storey) to the building having a total aggregate *floor area* of more than 25% of the existing *building area* or a total aggregate *floor area* of more than 500 m<sup>2</sup>.

# Procedure for Using the New Upgrade Trigger Mechanism Model

The following steps outline a recommended procedure for using the new upgrade trigger mechanism model:

## STEP 1 – Determine the Appropriate Category of Work

This model is based on the following defined Categories of Work for each of the four Types of Projects:

<b>Rehabilitation Type Projects (<u>See Flow Chart No. 1</u>)</b>	<b>Change of Use Type Projects (<u>See Flow Chart No. 2</u>)</b>	<b>Change of Major Occupancy Type Projects (<u>See Flow Chart No. 3</u>)</b>	<b>Addition Type Projects (<u>See Flow Chart No. 4</u>)</b>
<u>Voluntary Building By-law Upgrades</u>	<u>Change of Use</u>	<u>Change of Major Occupancy Classification</u>	<u>Major &amp; Minor Horizontal Additions</u>
<u>Repair</u>	<u>Change of Use to a Small Suite</u>	<u>Change of Major Occupancy Classification to a Small Suite</u>	<u>Major &amp; Minor Vertical Additions</u>
<u>Minor Renovation</u>			
<u>Major Renovation</u>			
<u>Reconstruction</u>			

**NOTE:** When a project involves more than one Category of Work, the most restrictive upgrade level shall be applied to the existing building.

## STEP 2 – Determine the Required Upgrade Level Based on the Category of Work for the Project

The required upgrade levels for Fire, Life & Health Safety; Structural Safety; and Accessibility for Persons with Disabilities may be determined using the appropriate Project Type Flow Chart for the applicable category of work:

For Rehabilitation Type Projects use Flow Chart No. 1.

For Change of Use Type Projects use Flow Chart No. 2.

For Change of Major Occupancy Type Projects use Flow Chart No. 3.

For Addition Type Projects use Flow Chart No. 4.

## STEP 3 – Determine the Objective and Acceptable Solution for Each Fire, Life and Health Safety; Structural Safety; and Accessibility Upgrade Level

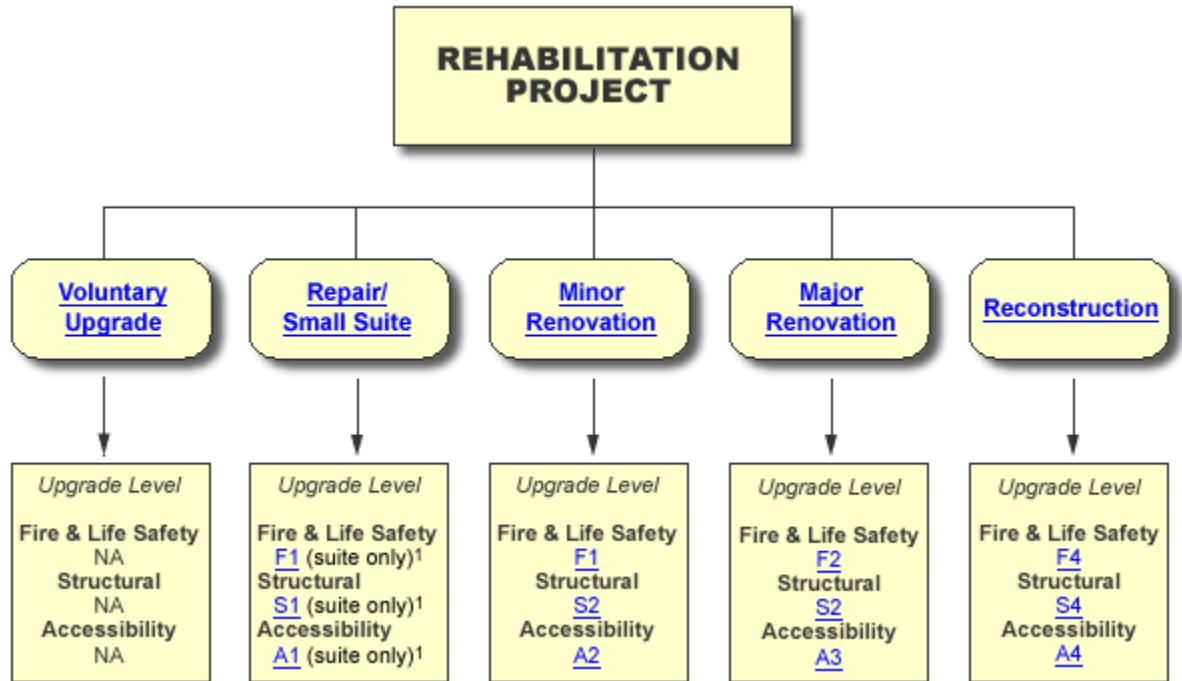
This model is based on four incremental upgrade levels for each of the Fire, life and health safety, Structural safety and Accessibility objectives. For each of the upgrade levels, the models states the objective of the upgrade level as well as the acceptable solution that is deemed to meet the intended objective of the applicable upgrade level. The objective statements and acceptable solution for each upgrade level are stated in the Table of Upgrade Levels.

## STEP 4 – Determine Any Other Requirements that may be Applicable

Other Building By-law requirements may be applicable to the existing building project. Review the Overall Conditions for the New Upgrade Trigger Model to determine if other requirements are applicable.

# Rehabilitation Type Projects

(Flow Chart #1)

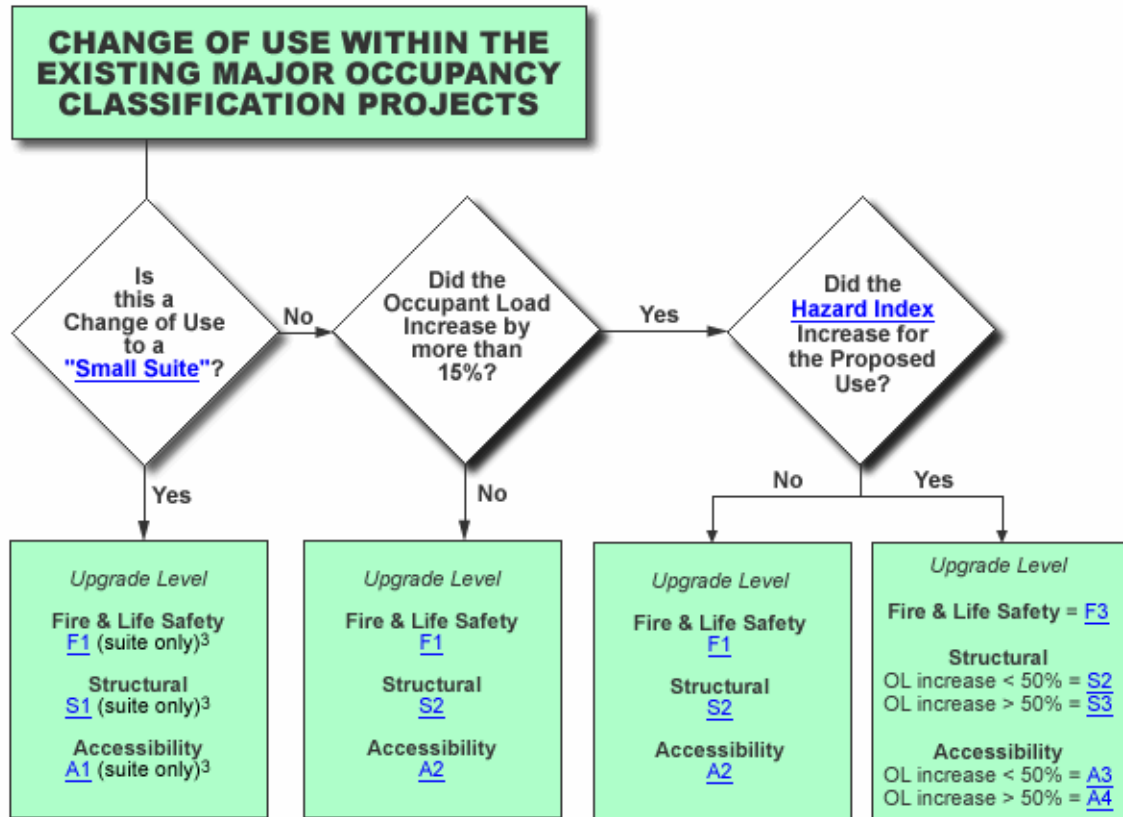


**NOTE:**

(1) For "small suite type" projects, the small suite must be separated on the suite side of the suite separation with a layer of gypsum wall board.

# Change of Use Projects

(Flow Chart #2)



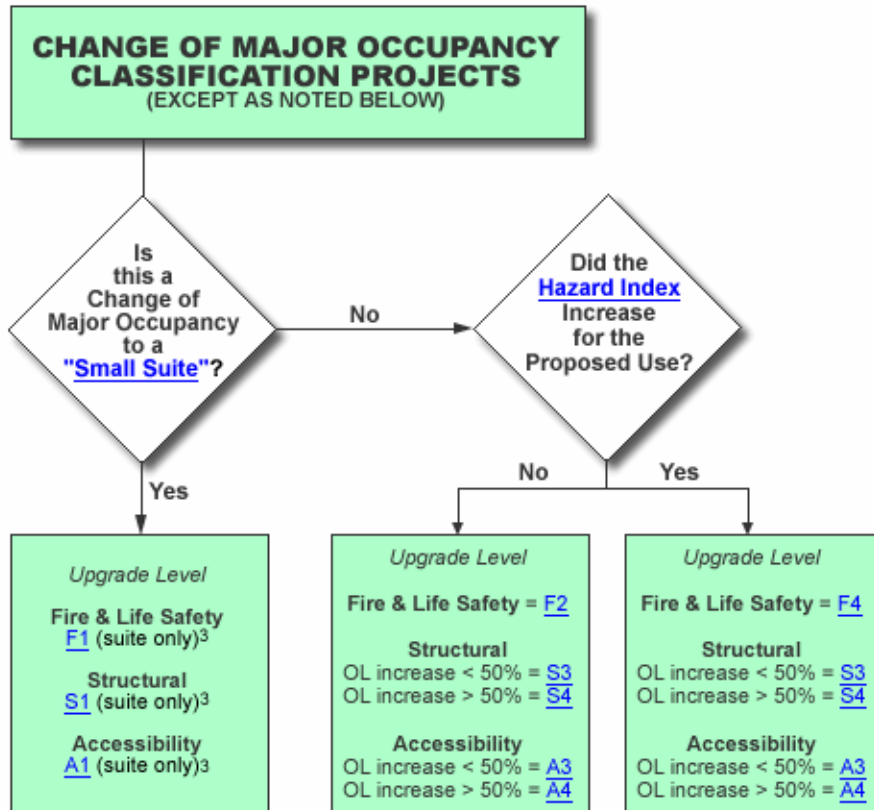
OL = Occupant Load

## NOTE:

- (1) Occupant load increases are based on an increase above the original occupant load at the time of construction for the entire building.
- (2) The Hazard Index may be determined using the 1997 edition of the Ontario Building Code.
- (3) For "small suite type" projects, the small suite must be separated on the suite side of the suite separation with a layer of gypsum wall board.

# Change of Major Occupancy Projects

(Flow Chart #3)



OL = Occupant Load

**NOTE:**

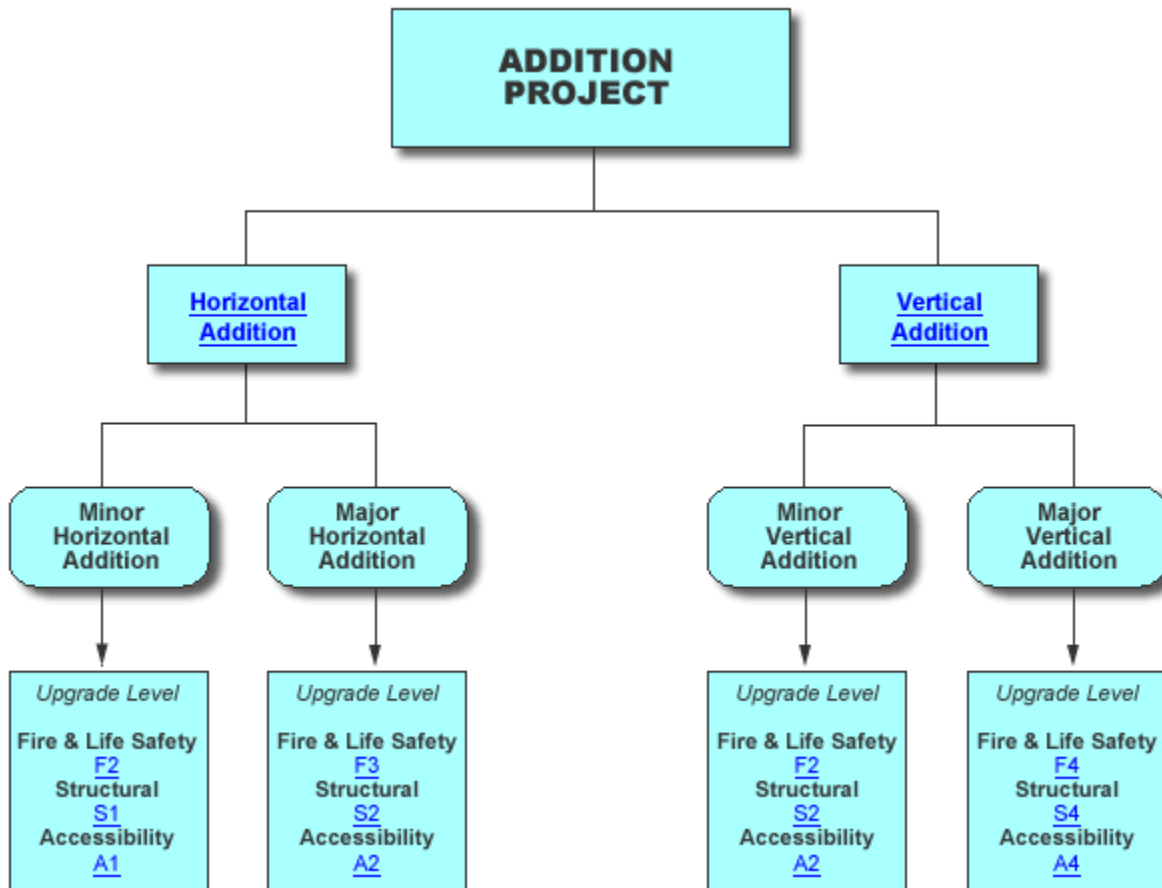
- (1) Occupant load increases are based on an increase above the original occupant load at the time of construction for the entire building.
- (2) The Hazard Index may be determined using the 1997 edition of the Ontario Building Code.
- (3) For “small suite type” projects, the small suite must be separated on the suite side of the suite separation with a layer of gypsum wall board.

EXCEPTION #1. When there is a change in major occupancy in an existing building and the aggregate area of the change in major occupancy within any 5 year period is greater than 50% of the floor area in a building of not more than one storey, or the aggregate area of the change in major occupancy within any 5 year period is greater than 100% of the building area in a building of more than one storey, the entire building shall be upgraded in according to the above flow chart "CHANGE OF MAJOR OCCUPANCY CLASSIFICATION PROJECTS" unless otherwise determined by the Chief Building Official.

EXCEPTION #2. When a change of major occupancy within any 5 year period is limited to suites with an aggregate area not more than 50% of the floor area in a building of not more than one storey, or is limited to suites with an aggregate area not more than 100% of the building area in a building of more than one storey, the project area shall be upgraded to the Upgrade Level for Fire & Life safety - F1(suite only), Structural - S1(suite only), and Accessibility - A1(suite only) and the building was, within the last 20 years, either constructed or fully upgraded to this By-law.

# Addition Type Project

(Flow Chart #4)



## Table of Upgrade Levels (Objectives & Acceptable Solutions)

### LEVEL ONE UPGRADE

Category	Objective Statement	Acceptable Solution
F1	Exiting to be reviewed to ensure that the exits do not present an unsafe condition.	<b>Project Area</b> - Exits to be upgraded with respect to number, capacity, and fire separations only.
S1	Proposed work must not have an adverse effect on the structural capacity of the existing structure.	<b>Entire Building</b> - Proposed work must not reduce the structural integrity of the existing building.
A1	The proposed work must not adversely affect the existing accessibility level of the building.	<b>Project Area</b> - Existing level of accessibility must be maintained throughout the project area. No additional accessibility enhancements are required.

#### Notes:

F1 = Level One Fire, Life and Health Safety upgrade.

S1 = Level One Structural upgrade.

A1 = Level One Accessibility upgrade.

### LEVEL TWO UPGRADE

Category	Objective Statement	Acceptable Solution
F2	Existing building to meet the fire & life safety requirements of the Building By-law within the project area and have conforming exits leading from the project area to an acceptable open space.	<b>Project Area</b> - Alarms and detectors (only where existing devices are provided), emergency lights, access to exit, exits, exit signs, and exit lights. <b>Public Area</b> (leading from project area to an acceptable open space) - emergency lights, exit signs, access to exit, exits, and flame spread ratings.
S2	Limited structural upgrade required in order to provide minimum protection to building occupants during a seismic event within the project area.	<b>Project Area</b> - Non-structural elements and falling hazards must be restrained to resist lateral loads due to earthquakes within the project area.
A2	A limited level of upgrade shall be provided within the project area to ensure access for persons with disabilities.	<b>Project Area</b> - door clearances, door hardware, and areas of refuge.

#### Notes:

F2 = Level Two Fire, Life and Health Safety upgrade.

S2 = Level Two Structural upgrade.

A2 = Level Two Accessibility upgrade.

### LEVEL THREE UPGRADE

Category	Objective Statement	Acceptable Solution
F3	Existing building to meet fire, life & health safety requirements of the Building By-law within the project area. Existing building to meet fire and life safety requirements of the Building By-law within the public areas.	<b>Project Area</b> - Alarms & detectors (only where existing devices are provided), emergency lighting, access to exit, exits, exit signs, exit lights, flame spread ratings, floor assemblies & supports, occupancy separation, standpipes and sprinklers, washrooms. <b>Public Area</b> - Alarms & detectors (only where existing devices are provided), emergency lighting, access to exit, exit, flame spread ratings, occupancy separation, exit signs, and exit lights. <b>Entire Building</b> - Fire fighting access.

S3	The building structure shall be upgraded to an acceptable level in order to provide a minimum level of property and life safety to unreinforced masonry or other buildings having less than 30 percent of the current required seismic resistance. Falling hazards over exits and sidewalks must be addressed.	<b>Entire Building</b> - Bolting floor and roof structure to bearing walls and strengthening of floor and roof diaphragms as required to safely distribute lateral forces to bearing walls (i.e., Bolts Plus) All falling hazards such as cornices, parapets and awnings located above exits and sidewalks must be restrained to resist forces due to a seismic event.
A3	The existing building shall be upgraded to an acceptable level in order to ensure complete access within the project area as well as access to the remainder of the building.	<b>Project Area</b> - Door clearances, door hardware, accessible washrooms, and areas of refuge. <b>Public Area</b> - Door clearances, door hardware, areas of refuge, washrooms, ramps, and elevators.

**Notes:**

F3 = Level Three Fire, Life and Health Safety upgrade.

S3 = Level Three Structural upgrade.

A3 = Level Three Accessibility upgrade.

**LEVEL FOUR UPGRADE**

Category	Objective Statement	Acceptable Solution
F4	Entire building to substantially meet the intent of health, fire and life safety requirements of the Building By-law as well as provide protection to adjacent property.	<b>Entire Building</b> - Alarms & detectors, emergency lighting, access to exit, exits, exit signs, exit lights, flame spread ratings, fire fighting access & water supply, floor assemblies & support, spatial separation, occupancy separation, standpipes & sprinklers, washrooms, high building requirements, lighting levels, sound transmission classifications, ventilation, and building envelope review.
S4	The entire building structure shall be brought up to an acceptable level in order to meet seismic requirements of the By-law.	<b>Entire Building</b> - Building to be upgraded to resist 75 percent of the current By-law specified lateral force levels, where the building is evaluated as having less than 60 percent of the current required seismic resistance.
A4	The existing building shall be upgraded in order to provide the minimum accessibility requirements of the Building By-law.	<b>Entire Building</b> - Building to meet accessibility provisions of the current Building By-law.

**Notes:**

F4 = Level Four Fire, Life and Health Safety upgrade.

S4 = Level Four Structural upgrade.

A4 = Level Four Accessibility upgrade.

## Hazard Index Tables

The required level of Building By-law upgrade for Change of Use and Change of Major Occupancy Type projects is dependent on whether or not the Hazard Index has increased for the proposed alteration.

Hazard Index ratings are intended to reflect the level of fire and life safety risk to occupants for various building uses. Hazard index ratings range from 1 to 6, such that a hazard index of rating of 6 represents the highest risk to occupants.

The hazard index for various building uses are indicated below.

- » [Group A, Division 1](#)
- » [Group A, Division 2](#)
- » [Group A, Division 3](#)
- » [Group A, Division 4](#)
- » [Group B, Division 1](#)
- » [Group B, Division 2](#)
- » [Group C](#)
- » [Group D](#)
- » [Group E](#)
- » [Group F, Division 1](#)
- » [Group F, Division 2](#)
- » [Group F, Division 3](#)

### Group A, Division 1

Building Use	Hazard Index
Dinner Theatres	5
Live Theatres	5
Motion Picture Theatres	5
Opera Houses	5
Television Studios (With Audience)	5

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### Group A, Division 2

Building Use	Hazard Index
Art Galleries	4
Auditoria	4
Billiard Halls, Amusement Arcades	4
Bowling Alleys	4
Churches	4
Clubs, Lodges (Non-Residential)	4
Community Halls	4
Concert Halls	4
Court Rooms	4
Dance Halls	4
Daycare Centres	4
Exhibition Halls (Without Sales)	4
Exhibition Halls (With Sales)	<a href="#">See Group E</a>
Gymnasias (Multi-Purpose)	4

Gymnasias (Athletic)	4
Lecture Halls	4
Libraries	4
Licensed Beverage Establishments	4
Licensed Clubs, Lodges	4
Museums	4
Passenger Stations/Depots	4
Recreational Piers	4
Restaurants (Seating Over 17)	4
Schools, Colleges	4
Undertaking Premises	4

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### Group A, Division 3

Building Use	Hazard Index
Arenas (No Occupancy On Activity Surface)	4
Armouries (No Occupancy On Activity Surface)	4
Enclosed Stadia or Grandstand	4
Ice Rinks (No Occupancy On Activity Surface)	4
Indoor Swimming Pools	4

### Group A, Division 4

Building Use	Hazard Index
Amusement Park Structures	3
Bleachers	3
Grandstands (Open)	3
Reviewing Stands	3
Stadia (Open)	3

### Group B, Division 1

Building Use	Hazard Index
Detention Facilities (Minimum Security)	5
Detention Facilities (All other types of security)	6
Police Station with Detention (not meeting Article 3.1.2.4.)	4

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### Group B, Division 2

Building Use	Hazard Index
Hospital, Nursing Home, Geriatric, Sanatorium (Immobile)	5
Hospital, Nursing Home, Geriatric, Sanatorium (Non-Ambulatory)	5
Psychiatric Hospitals (Maximum Confinement)	5
Psychiatric Hospitals (Minimum Confinement)	4
Police Station with Detention (Meeting Article 3.1.2.4.)	3

### Group C

Building Use	Hazard Index
Apartments	4
Clubs, Residential	4
Colleges Residential	4
Congregate Care Housing for Seniors	5
Convents	4
Dormitories/Hotels	4
Hotels	5
Single Family Dwellings	2
Live/work units	5
Monasteries	4
Retirement Homes	4
Schools, Residential	4

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### Group D

Building Use	Hazard Index
Advertising and Sales Offices	3
Automatic Bank Deposit	4
Barber/Hairdresser Shops	4
Beauty Parlours	4
Branch Banks	4
Car Rental Premises	3
Chiropractic Offices	4
Communications Offices (Telephone Exchange)	4
Communications Offices (Telex)	4
Communications Offices (Courier)	3
Computes Centres	4
Construction Offices	3
Costume Rental Premises	4
Dental Offices (Denture Clinic)	4
Dental Offices (General)	4
Dental Offices (Surgical/Anaesthesia)	5
Dry Cleaning Depots	4
Dry Cleaning Premises (Self-Serve)	4
Health/Fitness Clubs	4
Laundries (Self-Serve)	4
Massage Parlours	4
Medical Offices (Examination)	4
Medical Offices (Surgical Anaesthesia)	5

Offices (Business)	3
Offices (Charitable)	3
Offices (Legal/Accounting)	3
Offices (Design)	4
Pharmacy Offices	4
Photographic Studios	4
Physiotherapy Offices	4
Police Stations (No Detention)	4
Printing and Duplicating	5
Public Saunas	4
Radio Stations (No Audience)	4
Small Tool Rental Premises	4
Suntan Parlours	4
Veterinary Offices	4

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### Group E

Building Use	Hazard Index
Automotive/Hardware Department Store	5
China Shops	4
Department Stores	5
Electrical Stores (Fixtures)	3
Exhibition Halls (With Sales)	5
"Fast Food" Outlets	4
Feed and Seed Stores	5
Flea Markets	5
Flower Shops	4
"Food" and Vegetable Markets	4
Garden Shops	4
"Gas" Bars	5
Gift Shops	4
Home Improvement Stores	5
Kitchen/Bathroom Cupboards Stores	4
Plumbing Stores (Fixtures/Accessories)	3
"Pop" Shops	4
Restaurants (Not More Than 30 Persons)	4
Shopping Malls	5
Stationery/Office Supply Stores	4
Stores (Art)	4
Stores (Baked Goods)	4
Stores (Beer)	4

Stores (Book)	4
Stores (Camera)	4
Stores (Candy)	4
Stores (Clothing)	4
Stores (Drugs)	4
Stores (Electronic)	4
Stores (Floor Coverings)	5
Stores (Food)	3
Stores (Furniture/Appliances)	4
Stores (Hardware)	5
Stores (Health)	4
Stores (Hobby)	4
Stores (Jewellery)	3
Stores (Paint/Wallpaper)	5
Stores (Pet)	4
Stores (Records/Tapes)	4
Stores (Spirits)	5
Stores (Toys)	5
Stores (Variety)	4
Stores (Video Sales/Rental)	4
Supermarket	4

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#### Group F, Division 1

Building Use	Hazard Index
All Uses	6

#### Group F, Division 2

Building Use	Hazard Index
Aircraft Hangars	5
Abattoirs	4
Bakeries	5
Body Shop	5
Candy Plants	4
Cold Storage Plants with Flammable Refrigerant	5
Cold Storage Plants with Non-flammable Refrigerant and	4
Dry Cleaning Establishments (non-flammable or non-explosive)	4
Electrical Substations	4
Factories (High Fire Load)	5
Freight Depots (High Fire Load)	5
Laboratories (High Fire Load)	5
Laundries (not self-serve)	4

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Meat Packing Plants	4
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Plaining Mills	5
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