

MERCANTILE OCCUPANCIES



MERCANTILE OCCUPANCIES						
1.0	GENERAL REQUIREMENTS.	The requirements of this chapter shall apply to buildings or portions thereof used as mercantile occupancies.				
	Mercantile occupancies include stores, markets, and other rooms, buildings, or structures used for the display and sale of merchandise.					
	This occupancy classification includes, but is not limited to, the following:					
	Supermarkets Convenience stores Department stores Hardware stores	Sales/Rental Stores Pharmacies Rental Equipment Centers Automobile Sales Showrooms	Fle Markets and Craft Centers Building Materials/Supplies Centers Shopping Centers/Malls	Office Supply/Bookstores Computer and Electronics Stores Sporting Goods Stores Warehouse Club Stores		
1.1	GENERAL CONDITIONS AND BUILDING LIMITS					
	Sub-Classification (Class)	Building Height (m)	Aggregate Gross Area (m²)	Basement Levels		
1.1.1	TYPE A MERCANTILE Occupancies	> 3 Stories Stories not used for sales above or below sales floor are not counted in the height classification	> 2800 m² Sections of floors not used for sales purposes are not counted in the area classification	No Limit in Floor Area/Fire Area, Depth or Levels		
1.1.2	TYPE B MERCANTILE Occupancies	≤ 3 Stories Stories not used for sales above or below sales floor are not counted in the height classification	> 280 m² and ≤ 2800 m² Sections of floors not used for sales purposes are not counted in the area classification			
1.1.3	TYPE C MERCANTILE Occupancies	One (1) Story or G+M only A mezzanine less than or equal to one-third the area of the floor below is permitted	≤280 m² Sections of floors not used for sales purposes are not counted in the area classification	Not Permitted		
FIRE AND LIFE SAFETY (FLS) REQUIREMENT						
Item	Fire Safety Provisions	Minimum Requirements		Type A	Type B	Type C
1.2	CLASSIFICATION OF OCCUPANCIES	Mercantile occupancies shall include all buildings and structures or parts thereof with occupancy as defined in NFPA 101 6.1.10 and in item 1.0		Required	Required	Required



Item	Fire Safety Provisions	Minimum Requirements	Type A	Type B	Type C
1.2.1	SUBCLASSIFICATION OF OCCUPANCY.	Mercantile occupancies shall be subclassified as follows:			
1.2.1.1	Class A Mercantile Occupancies	All mercantile occupancies having an aggregate gross area of more than 2800 m ² or occupying more than three (3) stories for sales purposes.	Required	-	-
1.2.1.2	Class B Mercantile Occupancies				
1.2.1.2(1)	Class B	All mercantile occupancies of more than 280 m ² , but not more than 2800 m ² , aggregate gross area and occupying not more than three (3) stories for sales purposes.	-	Required	-
1.2.1.2(2)	Class B	All mercantile occupancies of not more than 280 m ² gross area and occupying two (2) or three (3) stories for sales purposes	-	Required	-
1.2.1.3	Class C Mercantile Occupancies	All mercantile occupancies of not more than 280 m ² gross area and used for sales purposes occupying one story only	-	-	Required
1.2.2	CLASSIFICATION REQUIREMENTS	The aggregate gross area shall be the total gross area of all floors used for mercantile purposes.	Required	Required	Required
1.2.2.1		Where a mercantile occupancy is divided into sections, regardless of fire separation, the aggregate gross area shall include the area of all sections used for sales purposes.	Required	Required	Required
1.2.2.2		Areas of floors not used for sales purposes, such as an area used only for storage and not open to the public, shall not be counted for the purposes of the classifications in 1.2.1.	Permitted	Permitted	Permitted
1.2.3	MEZZANINES	Mezzanines shall comply with NFPA 101 section 8.6.10 and in 1.2.3.1.	Required	Required	Required
1.2.3.1	Area Limitations	The aggregate area of mezzanines located within a room, other than normally unoccupied equipment platforms, shall not exceed one-third the open area of the room in which the mezzanines are located.	Required	Required	Required
1.2.3.1(1)		Enclosed space shall not be included in a determination of the size of the room in which the mezzanine is located.	Permitted	Permitted	Permitted



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1.2.3.1(2)		No limit on the number of mezzanines in a room shall be required.	Permitted	Permitted	Permitted
1.2.3.1(3)		For purposes of determining the allowable mezzanine area, the aggregate area of the mezzanines shall not be included in the area of the room.	Permitted	Permitted	Permitted
1.2.3.2	Openness.	All portions of a mezzanine, other than walls not more than 1065 mm high, columns, and posts, shall be open to and unobstructed from the room in which the mezzanine is located, unless the occupant load of the aggregate area of the enclosed space does not exceed 10.	Required	Required	Required
1.2.3.2(1)		A mezzanine having two or more means of egress shall not be required to open into the room in which it is located if not less than one of the means of egress provides direct access from the enclosed area to an exit at the mezzanine level.	Permitted	Permitted	Permitted
1.2.4	MULTI-TENANT Mercantile Occupancies	Where a number of tenant spaces under different management are located in the same building, the aggregate gross area for subclassification shall be one of the following:			
1.2.4.1	Tenant Spaces not Separated	Where tenant spaces are not separated, the aggregate gross floor area of all such tenant spaces shall be used in determining classification per 1.2.1.	Required	Required	Required
1.2.4.2	Tenants Spaces with 2-hours Separation	Where individual tenant spaces are separated by fire barriers with a 2-hour fire resistance rating, each tenant space shall be individually classified.	Permitted	Permitted	Permitted
1.2.4.3	Tenants Spaces with 1-hour Separation and Protected with Automatic Sprinkler System	Where tenant spaces are separated by fire barriers with a 1-hour fire resistance rating, and the building is protected throughout by an approved, supervised automatic sprinkler system, each tenant space shall be individually classified.	Permitted	Permitted	Permitted
1.2.4.4	Tenant Spaces in Malls	The tenant spaces in a mall structure shall be classified individually.	Permitted	Permitted	Permitted



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1.2.5	MULTIPLE OCCUPANCIES	All multiple occupancies shall be in accordance with NFPA 101 section 6.1.14 and as specified in 1.2.	Required	Required	Required
1.2.5.1	Combined Mercantile Occupancies and Parking Structures.	The fire barrier separating parking structures from a building classified as a mercantile occupancy shall be a fire barrier having a minimum 2-hour fire resistance rating.	Required	Required	Required
1.2.5.1(1)		Openings in the fire barrier shall not be required to be protected with fire protection-rated opening protectives in enclosed parking structures that are protected throughout by an automatic sprinkler system, or	Permitted	Permitted	Permitted
1.2.5.2(2)		In open parking structures, provided that all of the following conditions are met:			
1.2.5.2 (2) (a)	Area of Openings	The openings do not exceed 25 percent of the area of the fire barrier in which they are located.	Required	Required	Required
1.2.5.2 (2) (b)	Use of the Openings	The openings are used as a public entrance and for associated sidelight functions.	Required	Required	Required
1.2.5.2 (2) (c)	Extinguishing System	The building containing the mercantile occupancy is protected throughout by an approved, supervised automatic sprinkler system.	Required	Required	Required
1.2.5.2 (2) (d)	Fuel Spill Protection	Means are provided to prevent spilled fuel from accumulating adjacent to the openings and entering the building.	Required	Required	Required
1.2.5.2 (2) (e)	Barriers	Physical means are provided to prevent vehicles from being parked or driven within 3050 mm of the openings.	Required	Required	Required
1.2.5.2 (2) (f)	Smoke Partition	The openings are protected as a smoke partition in accordance with NFPA 101 section 8.4, with no minimum fire protection rating required.	Required	Required	Required
1.3	OCCUPANT LOAD (OL)	Determined on the basis of the occupant load factors (OLF) in NFPA 101 Table 7.3.1.2 and as specified in item 1.3.	Required	Required	Required
1.3.1	Sales area on street floor	Occupant load shall not exceed one person per 2.8 m ² in gross area	Required	Required	Required



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1.3.2	Sales area on two or more street floors	Occupant load shall not exceed one person per 3.7 m ² in gross area	Required	Required	Required
1.3.3	Sales area on floor below street floor	Occupant load shall not exceed one person per 2.8 m ² in gross area	Required	Required	Required
1.3.4	Sales area on floors above street floor	Occupant load shall not exceed one person per 5.6 m ² in gross area	Required	Required	Required
1.3.5	Floors or portions of floors used only for offices	Occupant load shall not exceed one person per 9.3 m ² in gross area	Required	Required	Required
1.3.6	Storage, Receiving, and Shipping, and not open to general public.	Occupant load shall not exceed one person per 27.9 m ² in gross area	Required	Required	Required
1.3.7	Mall structures	Per factors applicable to use of space	Required	Required	Required
1.4	CLASSIFICATION OF HAZARD OF CONTENTS	Hazard of contents shall be classified in accordance with NFPA 101 6.3.2.	Required	Required	Required
1.4.1	HIGH HAZARD Mercantile Occupancies	Mercantile occupancies classified as high hazard in accordance with NFPA section 6.2 shall meet all of the following additional requirements:	Required	Required	Required
1.4.1.1		Exits shall be located so that not more than 23 m of travel from any point is needed to reach the nearest exit.	Required	Required	Required
1.4.1.2		From every point, there shall be not less than two exits accessible by travel in different directions (no common path of travel).	Required	Required	Required
1.4.1.3		All vertical openings shall be enclosed.	Required	Required	Required
1.5	MINIMUM CONSTRUCTION REQUIREMENTS.	Construction shall be in accordance with NFPA 5000 Chapters 7-8, 13-14, 31, and 35- 40.	Required	Required	Required
1.6	ACCESSIBILITY.	Accessibility shall be in accordance with NFPA 5000 Chapter 12.	Required	Required	Required
1.7	(Reserved).				
2.0	MEANS of EGRESS REQUIREMENTS	Means of egress shall comply with NFPA 101 Chapter 7, and as modified in item 2.0 of this FLS Occupancy Chapter.			



Item	Fire Safety Provisions	Minimum Requirements	Type A	Type B	Type C
2.1	GENERAL	No inside open stairway or inside open ramp shall be permitted to serve as a component of the required means of egress system for more than one floor.	Required	Required	Required
2.1.1		Where there are two or more floors below the street floor, the same stairway or other exit shall be permitted to serve all floors, but all required exits from such areas shall be independent of any open stairways between the street floor and the floor below it.	Permitted	Permitted	Permitted
2.1.2		Where exits from the upper floor also serve as an entrance from a principal street, the upper floor shall be classified as a street floor in accordance with NFPA 101 3.3.281 and shall be subject to the requirements of this FLS chapter for street floors.	Required	Required	Required
2.1.3		High hazard mercantile occupancies shall be arranged in accordance with item 1.4.1	Required	Required	Required
2.2	MEANS OF EGRESS COMPONENTS	Means of egress components shall be limited to the types described in 2.2.1 through 2.2.7.	Required	Required	Required
2.2.1	DOORS	Doors shall be in accordance with NFPA 101 section 7.2.1, and the requirements in items 2.2.1.	Required	Required	Required
2.2.1.2	Locks	Locks complying with NFPA 101 section 7.2.1.5.5 shall be permitted only on principal entrance/exit doors.	Permitted	Permitted	Permitted
2.2.1.3	Elevator Lobby Exit Access Door Assemblies Locking	Electrically locked door assemblies separating the elevator lobby from the exit access, in accordance with NFPA 101 section 7.2.1.6.3.	Permitted	Permitted	Permitted
2.2.1.4	Delayed-Egress Electrical Locking Systems	Delayed-egress electrical locking systems complying with NFPA 101 7.2.1.6.1.	Permitted	Permitted	Permitted
2.2.1.5	Sensor-Release of Electrical Locking Systems	Sensor-release of electrical locking systems complying with NFPA 101 7.2.1.6.2 in buildings protected throughout by an approved automatic sprinkler system.	Permitted	Permitted	Permitted



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2.2.1.6	Horizontal or Vertical Security Grilles or Doors	Horizontal or vertical security grilles or doors complying with NFPA 101 7.2.1.4.1(3), used as a part of the required means of egress from a tenant space.	Permitted	Permitted	Permitted
2.2.1.7		All doors at the foot of stairs from upper floors or at the head of stairs leading to floors below the street floor shall swing in the direction of egress travel.	Permitted	Permitted	Permitted
2.2.1.8	Revolving Doors	Revolving doors complying with NFPA 101 section 7.2.1.10.	Permitted	Permitted	Permitted
2.2.2	STAIRS	Stairs complying with NFPA 101 section 7.2.2.	Permitted	Permitted	Permitted
2.2.2.1	Spiral Stairs	Spiral stairs complying with NFPA 101 section 7.2.2.2.3.	Permitted	Permitted	Permitted
2.2.3	SMOKEPROOF ENCLOSURES	Smokeproof enclosures complying with NFPA 101 section 7.2.3.	Permitted	Permitted	Permitted
2.2.4	HORIZONTAL EXITS	Horizontal exit complying with NFPA 101 section 7.2.4.	Permitted	Permitted	Permitted
2.2.5	RAMPS	Ramps complying with NFPA 101 section 7.2.5.	Permitted	Permitted	Permitted
2.2.6	EXIT PASSAGEWAY	Exit passageways complying with NFPA 101 section 7.2.6.	Permitted	Permitted	Permitted
2.2.6.1		Exit passageways in a mall structure shall be permitted to accommodate the following occupant loads independently:	Permitted	Permitted	Permitted
2.2.6.1(1)		Portion of the occupant load assigned to the exit passageway from only the mall/pedestrian way	Required	Required	Required
2.2.6.1(2)		Largest occupant load assigned to the exit passageway from a single tenant space	Required	Required	Required
2.2.7	AREA OF REFUGE	Areas of refuge complying with NFPA 101 section 7.2.12.	Required	Required	Required
2.3	CAPACITY OF MEANS OF EGRESS	The capacity of means of egress shall be in accordance with NFPA 101 section 7.3 and as modified in 2.3.1.	Required	Required	Required
2.3.1	CORRIDOR OR PASSAGEWAY	Corridors or passageways, shall be of sufficient width to accommodate the required occupant load but shall have a width of not less than 1200 mm.	Required	Required	Required
2.3.2	STREET FLOOR EGRESS CAPACITY	In Class A and Class B mercantile occupancies street floor exits shall be sufficient for the occupant load of the street floor plus the required capacity of open stairs and ramps discharging through the street floor.	Required	Required	Not Required



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2.4	NUMBER OF MEANS OF EGRESS	The number of means of egress shall be in accordance with NFPA 101 7.4.	Required	Required	Required
2.4.1	GENERAL	Means of egress shall comply with all of the following, except as otherwise permitted by 2.4.3	Required	Required	Required
2.4.1.1		Not less than two separate exits shall be provided on every story.	Required	Required	Required
2.4.1.2		Not less than two separate exits shall be accessible from every part of every story.	Required	Required	Required
2.4.2	SINGLE EXIT ACCESS PATH	Exit access, as required by 2.4.1.2, shall be permitted to include a single exit access path for the distances permitted as common paths of travel.	Permitted	Permitted	Permitted
2.4.3	SINGLE EXIT PROVISION				
2.4.3.1	Class C Mercantile Occupancies	A single means of egress shall be permitted in a Class C mercantile occupancy subject to the following conditions:	Permitted	Permitted	Permitted
2.4.3.1(1)		Travel distance to the exit or to a mall pedestrian way does not exceed 23 m.	Required	Required	Required
2.4.3.1(2)		Travel distance to the exit or to a mall concourse does not exceed 30 m, and the story on which the occupancy is located, and all communicating levels that are traversed to reach the exit or mall concourse, are protected throughout by an automatic sprinkler system.	Required	Required	Required
2.4.3.2	Class A, Class B, or Class C Mercantile Occupancy	A single means of egress to an exit or to a mall concourse shall be permitted from a mezzanine, subject to conditions in 2.4.3.2(1).	Permitted	Permitted	Permitted
2.4.3.2(1)		The common path of travel does not exceed 23 m, or does not exceed 30 m if protected throughout by an automatic sprinkler system.	Required	Required	Required



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2.5	ARRANGEMENT OF MEANS OF EGRESS	Means of egress shall be arranged in accordance with NFPA 101 7.5.	Required	Required	Required
2.5.1	TRAVEL DISTANCE				
2.5.1.1	Ordinary Hazard Mercantile Occupancies	Travel distance shall not exceed 46 m.	Required	Required	Required
2.5.1.2		Travel distance shall not exceed 76 m (sprinkler protected throughout).	Required	Required	Required
2.5.1.3	High Hazard Mercantile Occupancies	Travel distance shall not exceed 23 m.	Required	Required	Required
2.5.2	DEAD-END				
2.5.2.1		Dead-end corridors in buildings shall not exceed 6 m.	Required	Required	Required
2.5.2.2		Dead-end shall not exceed 15 m (sprinkler protected throughout).	Required	Required	Required
2.5.3	COMMON PATH				
2.5.3.1	Low/Ordinary Hazard Mercantile Occupancies	Common paths of travel shall not exceed 23 m.	Required	Required	Required
2.5.3.2		Common paths shall not exceed 30 m (sprinkler protected throughout).	Required	Required	Required
2.5.3.3	High Hazard Mercantile Occupancies	Common paths of travel shall not be permitted.	NP	NP	NP
2.5.4	AISLES	Aisles leading to each exit shall be required, and the aggregate width of such aisles shall be not less than the required width of the exit.	Required	Required	Required
2.5.4.1		Required aisles shall be not less than 915 mm in clear width.	Required	Required	Required
2.5.4.2	Class A Mercantile Occupancies,	Not less than one aisle of a 1525 mm minimum clear width shall lead directly to an exit.	Required	Required	Required
2.5.5	Mercantile Occupancies other than Bulk Merchandising Retail Buildings	If the only means of customer entrance is through one exterior wall of the building, one-half of the required egress width from the street floor shall be located in such wall.	Required	Required	Required



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2.5.5.1		Means of egress from floors above or below the street floor shall be arranged in accordance with NFPA 101 section 7.5.	Required	Required	Required
2.5.6		Not less than one-half of the required exits shall be located so as to be reached without passing through checkout stands.	Required	Required	Required
2.5.7	CHECKOUT STANDS	Checkout stands or associated railings or barriers shall not obstruct exits, required aisles, or approaches thereto.	Required	Required	Required
2.5.8	WHEELED CART AND BUGGIES	Adequate provision shall be made for the transit and parking of such carts to minimize the possibility that they might obstruct means of egress.	Required	Required	Required
2.5.9	EXIT ACCESS				
2.5.9.1	Class A and Class B Mercantile Occupancies (Sprinkler Protected Throughout) Class C Mercantile Occupancies,	Exit access shall be permitted to pass through storerooms, provided that all of the following conditions are met:	Permitted	Permitted	Permitted
2.5.9.1(1)		Not more than 50 percent of exit access shall be provided through the storeroom.	Required	Required	Required
2.5.9.1(2)		The storeroom shall not be subject to locking.	Required	Required	Required
2.5.9.1(3)		The main aisle through the storeroom shall be not less than 1200 mm wide.	Required	Required	Required
2.5.9.1(4)		The path of travel through the storeroom shall be defined, direct, and continuously maintained in an unobstructed condition.	Required	Required	Required
2.6	DISCHARGE FROM EXITS	Exit discharge shall comply with NFPA 101 section 7.7 and item 2.6.1.	Required	Required	Required
2.6.1	Building Protected Throughout (Automatic Sprinkler System)	Fifty percent of the exits shall be permitted to discharge through the level of exit discharge in accordance with NFPA 101 7.7.2.	Permitted	Permitted	Permitted



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2.7	ILLUMINATION OF MEANS OF EGRESS	Means of egress shall be illuminated in accordance with NFPA 101 7.8.	Required	Required	Required
2.8	EMERGENCY LIGHTING	Class A and Class B mercantile occupancies and mall structures shall have emergency lighting facilities in accordance with NFPA 101 section 7.9.	Required	Required	Required
2.8.1		Emergency lighting shall be provided in any building where any one of the conditions in 2.8.1.1 through 2.8.1.3 exists:	Required	Required	Required
2.8.1.1	Number of Stories	The building is three (3) or more stories in height.	Required	Required	Required
2.8.1.2	Number of Occupants	The occupancy is subject to 50 or more occupants above or below the level of exit discharge.	Required	Required	Required
2.8.1.3	Total Number of Occupants	The occupancy is subject to 300 or more total occupants.	Required	Required	Required
2.8.2	Additional Locations	Any areas accessible to the public.	Required	Required	Required
2.8.3		Emergency lighting shall not be required in Shops with glass façade fronting the streets.	NR-Not Required	NR	NR
2.9	MARKINGS OF MEANS OF EGRESS	Where an exit is not immediately apparent from all portions of the sales area, means of egress shall have signs in accordance with NFPA 101 7.10.	Required	Required	Required
2.10	SPECIAL MEANS OF EGRESS FEATURES				
2.10.1	HAZARDOUS MATERIALS	Where hazardous materials are present, the provisions of 2.10.1.1 and 2.10.1.2 shall apply.	Required	Required	Required
2.10.1.1	Hazardous materials classified as high-hazard contents	Hazardous materials that are stored, used, or handled, and that are also classified as high-hazard contents shall comply with the Special Provisions for Occupancies with High Hazard Contents in NFPA 101 section 7.12.2.	Required	Required	Required
2.10.1.2	Hazardous Materials	Hazardous materials shall comply with both 2.10.1.2(1) and 2.10.1.2(2)	Required	Required	Required
2.10.1.2(1)		Means of egress requirements of this Code	Required	Required	Required



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2.10.1.2(2)		Applicable means of egress requirements of NFPA 30, NFPA 45, NFPA 55, NFPA 58, NFPA 400, and NFPA 495 that are stricter than NFPA 101 Chapter 7 requirements for Means of Egress and this FLS occupancy chapter.	Required	Required	Required
2.11	(Reserved).				
3.0	PROTECTION	Protection shall comply with the applicable NFPA codes and standards, QCD FLS Annex and as modified in item 3.0 of this FLS Occupancy Chapter.			
3.1	PROTECTION OF VERTICAL OPENINGS	Vertical openings shall be enclosed or protected in accordance with NFPA 101 section 8.6, except under any of the following conditions:	Required	Required	Required
3.1.1	CLASS A and CLASS B Mercantile Occupancies (Sprinkler Protected Throughout)	Unprotected vertical openings shall be permitted at one of the following locations:			
3.1.1.1		Between any two floors.	Permitted	Permitted	Permitted
3.1.1.2		Among the street floor, the first adjacent floor below, and the adjacent floor (or mezzanine) above.	Permitted	Permitted	Permitted
3.1.2	CLASS C Mercantile Occupancies	Unprotected openings between the street floor and the mezzanine.	Permitted	Permitted	Permitted
3.1.3	CONVENIENCE STAIRWAYS	Unenclosed vertical openings created by convenience stairways complying with the conditions in NFPA 101 section 8.6.9.2 (1) through (4).	Permitted	Permitted	Permitted
3.1.4	ESCALATORS AND MOVING WALKS not constituting an exit	Unenclosed vertical openings in accordance with NFPA 101 section 8.6.9.7, shall be permitted and the number of contiguous stories shall not be limited.	Permitted	Permitted	Permitted
3.2	PROTECTION FROM HAZARDS	Hazardous areas including, but not limited to, areas used for general storage, boiler rooms, and maintenance shops that include woodworking and painting areas shall be protected in accordance with NFPA 101 section 8.7.	Required	Required	Required



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3.2.1	GENERAL STORAGE/STOCK AREAS (Sprinkler Protected Throughout)	An enclosure shall be exempt from the provisions of NFPA 101 section 8.7.1.2.	NR- Not required	NR	NR
3.2.2	HIGH HAZARD CONTENTS AREAS	High hazard contents areas, shall meet all of the following criteria:	Required	Required	Required
3.2.2.1	Enclosures/Separation from Other Areas	The area shall be separated from other parts of the building by fire barriers having a min. 1-hour FR rating, with all openings therein protected by self-closing fire door assemblies having a min. 3/4-hour fire protection rating.	Required	Required	Required
3.2.2.2	Extinguishing Requirements	The area shall be protected by an automatic extinguishing system.	Required	Required	Required
3.2.2.3		In high hazard areas, all vertical openings shall be enclosed.	Required	Required	Required
3.2.3	HAZARDOUS MATERIALS	Mercantile occupancies with storage, use, handling of hazardous materials and in areas where hazardous materials are present in excess of the maximum allowable quantities shall comply with the following codes: NFPA 30, NFPA 54, NFPA 55, NFPA 58, NFPA 400, and NFPA 495.	Required	Required	Required
3.2.4	COMMERCIAL COOKING OPERATIONS	Commercial cooking operations shall be protected in accordance with NFPA 96, unless the cooking equipment in 3.2.5.1 and 3.2.5.2 are permitted.	Required	Required	Required
3.2.4.1	Types of Cooking Equipment	Outdoor equipment	Permitted	Permitted	Permitted
3.2.4.2		Equipment used only for food warming	Permitted	Permitted	Permitted
3.3	INTERIOR FINISH	Interior finish shall be in accordance with NFPA 101 section 10.2.	Required	Required	Required
3.3.1	INTERIOR WALL AND CEILING FINISH	Interior wall and ceiling finish materials shall be Class A, Class B, or Class C.	Required	Required	Required
3.3.2	INTERIOR FLOOR FINISH	Interior floor finish in exit enclosures shall be Class I or Class II.	Required	Required	Required
3.3.2.1		Interior floor finish shall comply with NFPA 101 10.2.7.1 or 10.2.7.2, as applicable.	Required	Required	Required



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3.4	DETECTION, ALARM & COMMUNICATION REQUIREMENTS				
3.4.1	GENERAL	Complete coverage of Fire Detection and Alarm System.	Required	Required	Required
3.4.2	INITIATION	Complete coverage of an Automatic Detection and Manual Initiating Devices.	Required	Required	Required
3.4.3	OCCUPANT NOTIFICATION	Complete Coverage of an Occupant Notification (audible & visible).	Required	Required	Required
3.4.3.1	Emergency Voice Evacuation System	Mass Notification System	Required	Required	NR
3.4.4	SUPPLEMENTARY				
3.4.4.1	Fire Telephone	In every required provisions of a fire command center (FCC) or emergency control center (ECC).	Required	NR-Not Required	NR
3.4.4.2	Graphic Annunciator (PC Panel) or Mimic Panel	In every required provisions of a fire command center (FCC) or emergency control center (ECC).	Required	Required	NR
3.5	EXTINGUISHMENT REQUIREMENTS				
3.5.1	AUTOMATIC SPRINKLER (AS) SYSTEM	Mercantile occupancies shall be protected by an approved automatic sprinkler system in any of the following specified locations:			
3.5.1.1	Number of Stories	Throughout all mercantile occupancies three or more stories in height.	Required	Required	NR
3.5.1.2	Gross Floor Area	Throughout all mercantile occupancies exceeding 1115 m ² in gross area.	Required	Required	NR
3.5.1.3	Basement used for the sale, storage or handling of combustible goods and merchandise	Throughout stories below the level of exit discharge where such stories have an area exceeding 232 m ² .	Required	Required	NR
3.5.1.4	Mixed Occupancies	Throughout multiple occupancies (mixed occupancies) where the conditions of 3.5.1.1 through 3.5.1.3 apply to the mercantile occupancy.	Required	Required	NR
3.5.2	Fire Hose Reel	Fire hose reels are required in buildings protected by an approved supervised automatic sprinkler system.	Required	Required	Required



Item	Fire Safety Provisions	Minimum Requirements	Type A	Type B	Type C
3.5.3	Portable Fire Extinguisher	Applicable Portable Fire Extinguishers required in all buildings.	Required	Required	Required
3.5.4	Rising Main (Dry or Wet Standpipe)	Refer to Annex Fire Fighting System Annex_FFS_G1 Revisions 2021	Required	Required	Required
3.6	SMOKE CONTROL / VENTILATION REQUIREMENTS	Legend: NR-Not Required; NA-Not Applicable; NP-Not Permitted			
3.6.1	STAIRWELL/LOBBY PROTECTION	Design conditions per Annex ACMV_N1 Revisions 2021.	<15m	≥15m - <28m	≥28m
3.6.1.1	Less than 9 m habitable height		No Reqmt	No Reqmt	No Reqmt
3.6.1.2	9 m to 15 m habitable height	Vent at top of stairwell	Required	NA	NA
		Stair ventilation openings at every floor level (stairs along external walls)	Permitted	NA	NA
		Stairwell Pressurization	NR	NA	NA
	STAIRWELL/LOBBY PROTECTION	Design conditions per Annex ACMV_N1 Revisions 2021.	<15m	≥15m - <28m	≥28m
3.6.1.3	>15 m to < 28 m habitable height	Vent at top of stairwell	NA	NP	NA
		Stair ventilation openings at every floor level (stairs along external walls)	NA	Required	NA
		Stairwell Pressurization	NA	Permitted	NA
3.6.1.4	≥28 m habitable height	Vent at top of stairwell	NA	NA	NP
		Stair ventilation openings at every floor level (for stairs along external walls)	NA	NA	NP
		Stairwell pressurization, smoke stop/fire fighting lobby pressurization	NA	NA	Required



Item	Fire Safety Provisions	Minimum Requirements	Type A	Type B	Type C
	Connecting Basement Levels				
3.6.1.5	Two basement levels or ≤ 6 m deep, ≤ 2000 m ² floor area	Vent at top of stairwell : * Permitted up to five (5) connecting above floors (2B+G+4 or less) or 12 m habitable height ; whichever is less; otherwise next below provisions shall apply.	*Required	NP	NP
		Stair ventilation openings at every floor level (for stairs along external walls)	Permitted	Required	NP
		Stairwell pressurization, smoke stop/fire fighting lobby pressurization	Permitted	Permitted	Required
3.6.1.6	Three basement levels or ≤ 9.1 m deep, ≤ 2000 m ² floor area	Vent at top of stairwell : * Permitted up to three (3) connecting above floors only (3B+G+2 or less) or 6m habitable height, whichever is less; otherwise next below provisions shall apply	*Required	NP	NP
		Stair ventilation openings at every floor level (for stairs along external walls)	NA	NA	NA
		Stairwell pressurization, smoke stop/fire fighting lobby pressurization	Permitted	Permitted	Permitted
3.6.1.7	Two basement levels or ≤ 6 m deep, > 2000 m ² floor area	Vent at top of stairwell: * Permitted up to four (4) connecting floors (2B+G+3 or less) or 9 m habitable height ; whichever is less; otherwise next below provisions shall apply.	*Required	NP	NP
		Stair ventilation openings at every floor level (for stairs along external walls)	Required	NP	NP
		Stairwell pressurization, smoke stop/fire fighting lobby pressurization	Permitted	Required	Required
	STAIRWELL/LOBBY PROTECTION	Design conditions per Annex ACMV_N1 Revisions 2021.	<15m	≥ 15 m - <28m	≥ 28 m



Item	Fire Safety Provisions	Minimum Requirements	Type A	Type B	Type C
3.6.1.8	Three basement levels or ≤ 9.1 m deep, $>2000 \text{ m}^2$ floor area, connecting one floor above only	Vent at top of stairwell : * Permitted up to two connecting above floors or 3 m habitable height only (3B+G+1 or less); whichever is less, otherwise next below provisions shall apply	*Required	NP	NP
		Stair ventilation openings at every floor level (for stairs along external walls)	NA	NA	NA
		Stairwell pressurization, smoke stop/fire fighting lobby pressurization.	Permitted	Required	Required
3.6.1.9	Lowest basement level >9.1 m below ground level, regardless of floor area	Vent at top of stairwell	NP	NP	NP
		Stair ventilation openings at every floor level (stairs along external walls)	NP	NP	NP
		Stairwell pressurization, smoke stop/fire fighting lobby pressurization	Required	Required	Required
3.6.2	ESCAPE CORRIDOR PROTECTION	Design conditions per Annex ACMV_N1 Revisions 2021.	Type A	Type B	Type C
3.6.2.1	Interior Corridors	Vents (Fixed or Automatic Opening)	Required in specific type of Occupancy: Healthcare Occupancies and in Detention and Correctional Occupancies		
		Mechanical Ventilation of Corridor			
		Pressurization of Corridor			
3.6.2.2	Corridor with side/s located along exterior walls	Vents (Fixed or Automatic Opening)			
		Mechanical Ventilation of Corridor			
		Pressurization of Corridor			
3.6.3	ATRIUM and OTHER FLOOR OPENINGS	Design conditions per Annex ACMV_N1 Revisions 2021.	$<15\text{m}$	$\geq 15\text{m} - <28\text{m}$	$\geq 28\text{m}$
3.6.3.1	Malls (with floor openings connecting >2 floors)	Smoke Vents (Fixed or Automatic Opening)	Required	NP	NP
		Mechanical Smoke Exhaust Ventilation System/Engineered	Permitted	Required	Required
3.6.3.2	Other Occupancies (connecting >3 floor levels)	Smoke Vents (Fixed or Automatic Opening)	Required	Permitted	NP
		Mechanical Smoke Exhaust Ventilation System/Engineered	Permitted	Permitted	Required
3.6.4	CAR PARKS/PARKING STRUCTURES	Design conditions per Annex ACMV_N1 Revisions 2021.			



Item	Fire Safety Provisions	Minimum Requirements	Type A	Type B	Type C
3.6.4.1	Open Parking Structures	The open parking structure shall justify that no smoke stagnation will occur such as from a fire located somewhere in the middle of the car park; otherwise mechanical equipment that will aid in effective dispersal of smoke shall be provided	Required	Required	Required
3.6.4.2	Aboveground Enclosed Car Parks		<15m	≥15m - <28m	≥28m
3.6.4.2.1	Aggregate floor area of ≤2000 m ²	Smoke Vents (Fixed or Automatic)	Required	Required	Permitted
		Mechanical Smoke Purging/Clearance	Permitted	Permitted	Required
		Engineered Smoke Control System	Permitted	Permitted	Permitted
3.6.4.2.2	Aggregate floor area of >2000 m ²	Smoke Vents (Fixed or Automatic)	Required	NP	NP
		Mechanical Smoke Purging/Clearance	Permitted	Required	NP
		Engineered Smoke Control System	Required	Permitted	Required
3.6.4.3	Belowground Car Parks		≤6m Deep	>6m - ≤9.1 m Deep	>9.1 m Deep
3.6.4.3.1	Aggregate floor area of ≤2000 m ²	Smoke Vents (Fixed or Automatic)	Required	NP	NP
		Mechanical Smoke Purging/Clearance	Permitted	Required	Required
		Engineered Smoke Control System	Permitted	Permitted	Permitted
3.6.4.3.2	Aggregate floor area of >2000 m ²	Smoke Vents (Fixed or Automatic)	NP	NP	NP
		Mechanical Smoke Purging/Clearance	Required	NP	NP
		Engineered Smoke Control System	Permitted	Required	Required
3.6.5	COMPARTMENT SMOKE CONTROL		Type A	Type B	Type C
3.6.5.1	CLASS A Mercantile Occupancies Single Fire Compartment ≤ 2800 m ²	Mercantile occupancies with a single fire compartment on a floor of an area >2800 m ² , shall have provisions for smoke management system.	Required	NA	NA
3.7	CORRIDORS				



Item	Fire Safety Provisions	Minimum Requirements	Type A	Type B	Type C
3.7.1	EXIT ACCESS CORRIDORS	Exit access corridors shall be separated from use areas by fire barriers in accordance with NFPA 101 section 8.3 having a minimum 1-hour fire resistance rating, except under any of the following conditions:	Required	Required	NA
3.7.1.1		Where exits are available from an open floor area.	Permitted	Permitted	NA
3.7.1.2		Within a space occupied by a single tenant.	Permitted	Permitted	NA
3.7.1.3		Within buildings protected throughout by an automatic sprinkler system.	Permitted	Permitted	NA
3.7.2	OPENINGS	Openings in corridor walls required to be protected in 3.7.1, shall have not less than 30 minutes a fire resistance rating.	Required	Required	Required
3.8	SUBDIVISION OF BUILDING SPACES	Buildings shall be subdivided in accordance with 3.8.1.	Required	Required	Required
3.8.1	TENANTS SEPARATION	Each tenant space shall be separated from other tenant spaces by partitions having a fire resistance rating of not less than 1 hour.	Required	Required	Required
3.8.1.1		The partition wall shall extend to the underside of the roof or floor above.	Required	Required	Required
3.8.1.2		No separation shall be required between the tenant space and the common areas fronting the tenant space or the concourse.	Required	Required	Required
3.9	(Reserved).				
4.0	SPECIAL PROVISIONS.	Special Provisions for Firefighting and Rescue shall comply with QCD FLS Annex and as modified in item 4.0 of this FLS Occupancy Chapter.			
4.1	FIRE (EMERGENCY) COMMAND CENTER (FCC)	QCD FLS Annex_A5 – Revisions_2021.	Required	Required	NA
4.1.1		A Fire Command Center shall be provided in buildings that requires Emergency Voice Communication System and/or Smoke Control System.	Required	Required	NA
4.2	FIREMAN'S ACCESS PANELS/ OPENINGS	QCD FLS Annex_A3 – Revisions_2021	Required	Required	NA



Item	Fire Safety Provisions	Minimum Requirements	Type A	Type B	Type C
4.3	FIRE LIFTS (FIRE SERVICE ACCESS ELEVATORS)	QCD FLS Annex_A4 – Revisions_2021	Required	Required	NA
4.3.1		In any building where the basements is more than nine (9) meters below the average ground level.	Required	Required	NA
4.3.2	FIREFIGHTING LOBBY	QCD FLS Annex_A2 – Revisions_2021	Required	Required	NA
4.3.3	SMOKE-STOP LOBBY	QCD FLS Annex_A2 – Revisions_2021	Required	Required	NA
4.4	AMBULANCE STRETCHER ACCOMMODATION	QCD FLS Annex_A4 – Revisions_2021	Required	NA	NA
4.6	EXTERNAL ACCESS TO SITE AND BUILDINGS	QCD FLS Annex_A3 – Revisions_2021	Required	Required	Required
4.6.1	SITE ACCESS/ACCESS ROAD	For gated facility development a 4.0 m wide access road and 4.5 m clear height vertical clearance entry gate or site access shall be provided.	Required	Required	Required
4.6.2	FIRE ENGINE HARDSTANDING	Fire engine hardstandings with longer side parallel to the façade of the building shall be provided in buildings with habitable height exceeding 10 m.	Required	Required	NA
4.7	(Reserved).				
5.0	BUILDING SERVICES and FIRE PROTECTION EQUIPMENT	Building Services and Fire Protection Equipment shall comply with the applicable NFPA codes and standards and QCD FLS Annex.			
5..1	ELECTRICAL SYSTEM	Electrical wiring and equipment shall be in accordance with NFPA 70.	Required	Required	Required
5.1.1	ELECTRICAL EQUIPMENT/PANEL ROOMS AND SIMILAR ROOMS/ SPACES	QCD FLS Annex _A7 – Revisions_2021	Required	Required	Required
5.1.2	EMERGENCY GENERATORS AND STANDBY POWER SYSTEMS.	Emergency generators and standby power systems shall be installed, tested, and maintained in accordance with NFPA 110.	Required	Required	Required
5.1.3	STORED ELECTRICAL ENERGY SYSTEMS	Stored electrical energy systems shall be installed, tested, and maintained in accordance with NFPA 111.	Required	Required	Required



Item	Fire Safety Provisions	Minimum Requirements	Type A	Type B	Type C
5.2	COMMERCIAL COOKING OPERATIONS	Where permitted, commercial cooking operations shall be protected in accordance with NFPA 96.	Required	Required	Required
5.3	ELEVATORS, ESCALATORS, and CONVEYORS	An elevator, shall not be considered a component in a required means of egress and shall be in accordance with NFPA 101 section 9.4.	Required	Required	Required
5.3.1	NUMBER OF CARS	The number of elevator cars permitted in a hoistway shall be not more than three (3).	Required	Required	Required
5.3.2	OPENINGS TO EXIT ENCLOSURES	Conveyors, elevators, dumbwaiters, and pneumatic conveyors serving various stories of a building shall not open to an exit enclosure.	Required	Required	Required
5.4	WASTE HANDLING SYSTEM	Waste chutes and its associated trash collection storage rooms and service opening rooms, when provided shall comply with NFPA 101 section 9.5.	Required	Required	Required
5.4.1		Approved waste chutes and transport systems, including gravity waste chutes, full pneumatic waste conveying systems, and gravity pneumatic waste conveying systems, shall comply with the provisions of NFPA 82.	Required	Required	Required
5.4.1.1	Construction	Waste chutes, shall be separately enclosed by walls or partitions of not less than 2-hrs fire resistance rating and chute intake openings protection of 1.5-hour fire protection rating.	Required	Required	Required
5.4.1.2	Trash Collection Storage Rooms	Waste chutes, shall have its associated trash collection, service opening rooms separately enclosed by walls of not less than 1-hr fire resistance rating and openings protection of 3/4-hour fire protection rating.	Required	Required	Required
5.4.1.3		The doors of chutes shall open only to a trash collection, service opening room, laundry storage room or to a room that is designed and used exclusively for accessing the chute opening.	Required	Required	Required



Item	Fire Safety Provisions	Minimum Requirements	Type A	Type B	Type C
5.4.2	GRAVITY CHUTES	A waste chute shall extend (full size) at least 0.92 m. above the roof of a building.	Required	Required	Required
5.4.2.1	Chute Venting	The chute shall be open to the atmosphere, with the opening being the same cross-sectional area as the chute.	Required	Required	Required
5.5	FIRE PUMPS				
5.5.1	FIRE PUMPS ROOM	QCD FLS Annex _A6 – Revisions_2021	Required	Required	Required
5.6	SUBSTATION and SWITCHGEARS	QCD FLS Annex _A8 – Revisions_2021	Required	Required	Required

