

MEMORANDUM

TO: Board of Building Appeals (BOBA) Members
FROM: Perry Johnson, Fire Marshal
DATE: August 5, 2020
SUBJECT: 2018 International Fire Code (IFC) Overview of Changes & Local Amendment Changes

The Village of Lombard is currently following the provisions of the 2012 International Fire Code (IFC). As part of our overall goal of updating our respective fire codes, Fire is bringing forward amendments to adopt the 2018 IFC by reference and offer a few local amendments to our code provisions.

The IFC establishes regulations affecting or relating to structures, processes, premises and safeguards regarding:

- The hazard of fire and explosion arising from the storage, handling or use of structures, materials or devices;
- Conditions hazardous to life, property or public welfare in the occupancy of structures or premises;
- Fire hazards in the structure or on premises from occupancy or operation;
- Matters related to the construction, extension, repair, alteration or removal of fire suppression or alarm systems.

IFC Provisions

Attached is a summation of the material changes between the 2012 and 2018 versions of the IFC. Fire Marshal Johnson will provide a summary of these changes at the meeting itself.

Local Amendments

In addition to the code change to reference the 2018 IFC document, staff offers the following amendment to the local code, (changes are in blue bold)

ACTION REQUESTED

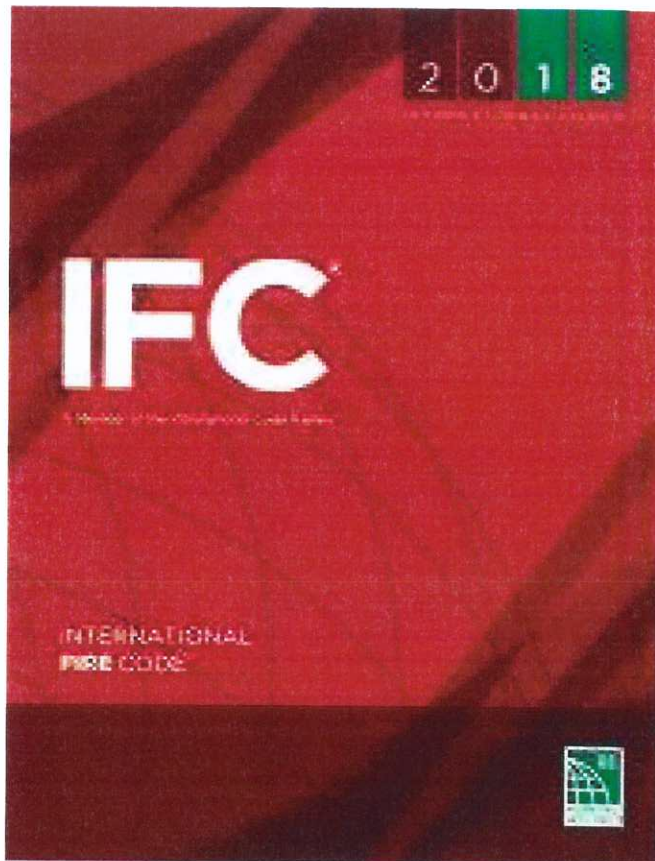
Fire Prevention is placing this item on a future Village Board agenda for consideration and approval. Fire recommends approval of amendment to provide for the adoption of the 2018 International Fire Code and the companion local amendments thereto.

THE VILLAGE OF LOMBARD 2018 INTERNATIONAL FIRE CODE

Amendment Highlights

The Bureau of Fire Prevention

8/5/2020



This document is designed to be an overview of the changes made to the Village of Lombard Code or Ordinances. The primary reason for the code amendments is update our Fire Code from 2012 edition to the 2018 Edition as published by the International Code Council.

Proposed IFC Changes

2012 – 2015

Below is a listing of the substantive changes between 2012 & 2015 versions of the International Fire Codes.

312.3 Other barriers. (Addition)

Barriers other than posts specified in Section 312.2 that are designed to resist, deflect or visually deter vehicular impact commensurate with an anticipated impact scenario shall be permitted where approved.

The code official now has the ability to approve a barrier based on its ability to resist, deflect or visually deter vehicular impact.



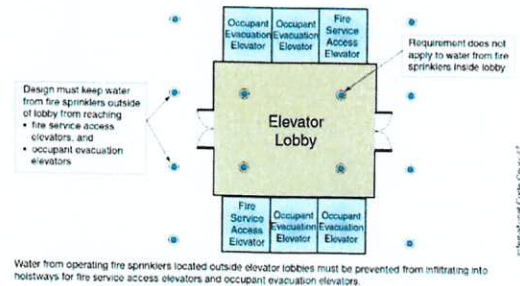
605.12 Abandoned wiring in Plenums. (Addition) Accessible portions of abandoned cables in air-handling plenums shall be removed. Cables that are unused and have not been tagged for future use shall be considered abandoned.

The proposal requires only the “accessible portions” of abandoned cables be removed, because there is no intent to cause potential damage to the building or facility by attempting to remove cables or circuits that are strung through walls, floors or other building elements. Conversely, Unused cables that are tagged for future use are allowed to remain.

607.6 Water protection of hoistway enclosures. (Addition)

Methods to prevent water from infiltrating into a hoistway enclosure required by Section 3007.4 and Section 3008.4 of the *International Building Code* shall be maintained.

This is a new requirement to ensure that devices designed to prevent water from infiltrating into fire service access elevator hoistways and occupant evacuation elevator hoistways are properly maintained.



901.8.2 Removal of Existing Occupant-Use Hose (Addition)

Lines. The fire code official is authorized to permit the removal of existing occupant-use hose lines where all of the following conditions exist:

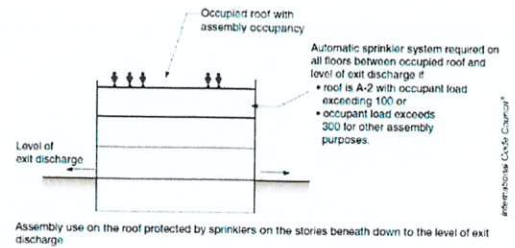
1. Installation is not required by this code or the *International Building Code*.
2. The hose line will not be utilized by trained personnel or the fire department.
3. The remaining outlets are compatible with local fire department fittings.



Existing 1½-inch hose lines can be removed under certain circumstances.

903.2.1.6 Assembly Occupancies on Roofs. (Addition)

Where an occupied roof has an assembly occupancy with an occupant load exceeding 100 for Group A-2, and 300 for other Group A occupancies, all floors between the occupied roof and the *level of exit discharge* shall be equipped with an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2.



Fire sprinklers are now required on all floors between the occupied roof and the level of exit discharge when assembly uses occur on the rooftop of buildings and the occupant load exceeds 100 for Group A-2 or 300 for other Group A occupancies.

903.3.1.1.2 Bathrooms. (Addition) In Group R occupancies, other than Group R-4 occupancies, sprinklers shall not be required in bathrooms that do not exceed 55 square feet (5 m²) in area and are located within individual dwelling units or sleeping units, provided that walls and ceilings, including the walls and ceilings behind a shower enclosure or tub, are of noncombustible or limited-combustible materials with a 15-minute thermal barrier rating.

This new section provides criteria for not installing sprinklers in bathrooms of specific Group R occupancies.

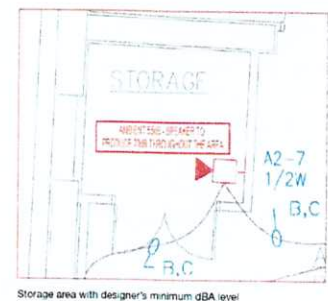
903.3.1.2.2 Open-Ended corridors. (Addition) Sprinkler protection shall be provided in open-ended corridors and associated exterior stairways and ramps as specified in Section 1027.6, Exception 3.

The intent of Section 903.3.1.2.2 is to clarify that when an NFPA 13R sprinkler system is used, additional heads are required in the open-ended corridor (breezeway).



907.1.2 Fire Alarm Shop Drawings. (Addition) Shop drawings for fire alarm systems shall be submitted for review and approval prior to system installation, and shall include, but not be limited to, all of the following where applicable to the system being installed:

The fire alarm designer is now required to provide the design minimum audibility level for occupant notification, and the phrase “where applicable” has been added to the charging statement to clarify that not all items shown in the list may be applicable for every installation.



907.2.11.3 Installation Near Cooking Appliances. (Addition) Smoke alarms shall not be installed in the following locations unless this would prevent placement of a smoke alarm in a location required by Sections 907.2.11.1 or 907.2.11.2.

1. Ionization smoke alarms shall not be installed less than 20 feet (6096 mm) horizontally from a permanently installed cooking appliance.

2. Ionization smoke alarms with an alarm-silencing switch shall not be installed less than 10 feet (3048 mm) horizontally from a permanently installed cooking appliance.
3. Photoelectric smoke alarms shall not be installed less than 6 feet (1829 mm) horizontally from a permanently installed cooking appliance.

This new section provides designers, plan examiners and field inspectors with criteria for locating smoke alarms in relation to cooking appliances and bathrooms. By properly locating smoke alarms, the number of nuisance alarms may be reduced.

907.2.11.7 Smoke Detection System. (Addition) Smoke detectors listed in accordance with UL 268 and provided as part of the building's fire alarm system shall be an acceptable alternative to single- and multiple-station smoke alarms and shall comply with the following:

1. The fire alarm system shall comply with all applicable requirements in Section 907.
2. Activation of a smoke detector in a dwelling unit or sleeping unit shall initiate alarm notification in the dwelling unit or sleeping unit in accordance with Section 907.5.2.
3. Activation of a smoke detector in a dwelling unit or sleeping unit shall not activate alarm notification appliances outside of the dwelling unit or sleeping unit, provided that a supervisory signal is generated and monitored in accordance with Section 907.6.6.



This new section provides an option for using a smoke detection system in lieu of single-station and multiple-station alarms in Groups R-2, R-3, R-4 and I-1.

909.4.7 Smoke control system interaction. (Addition) The design shall consider the interaction effects of the operation of multiple smoke control systems for all design scenarios.

Buildings using smoke control systems may have more than one type of smoke control system, and the interactions of these systems must be evaluated in the design.

3306.2 Cleaning with Flammable Gas. (Addition) Flammable gases shall not be used to clean or remove debris from piping open to the atmosphere.

Safety requirements for the purging and cleaning of flammable gas piping systems have been added to the 2015 IFC.

3504.1.7 Precautions in Hot Work. (Addition) Hot work shall not be performed on containers or equipment that contain or have contained flammable liquids, gases or solids until the containers and equipment have been thoroughly cleaned, inerted or purged; except that "hot tapping" shall be allowed on tanks and pipe lines when such work is to be conducted by approved personnel. Hot work on flammable and combustible liquid storage tanks shall be conducted in accordance with Section 3510.

Requirements for hot work on tanks containing flammable and combustible liquids is now included in the 2015 IFC.

CARBON DIOXIDE (CO₂) SYSTEMS USED IN BEVERAGE DISPENSING APPLICATIONS (Addition)

5307.1 General. Carbon dioxide systems with more than 100 pounds (45.4 kg) of carbon dioxide used in beverage dispensing applications shall comply with Sections 5307.2 through 5307.5.2.

Large refrigerated carbon dioxide systems create a life safety hazard. Regulation of these systems is now included in the 2015 IFC.



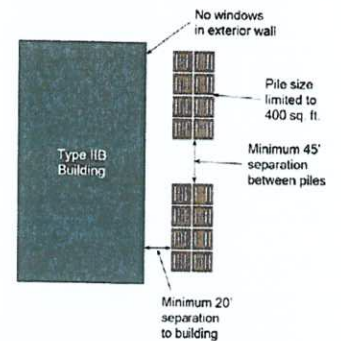
Proposed IFC Changes

2015 – 2018

Below is a listing of the substantive changes between 2015 & 2018 versions of the International Fire Codes.

315.1 General. (Outdoor Pallet Storage) (Addition) Storage shall be in accordance with Sections 315.2 through 315.6. Outdoor pallet storage shall be in accordance with Sections 315.2 and 315.7.

Requirements are added to the code for height limitation and separation to buildings and property lines for the outdoor storage of idle pallets constructed of wood or plastic.



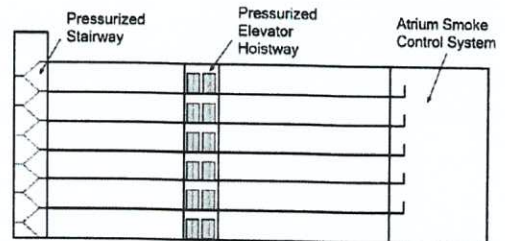
901.4.6.1 Access. Fire Pump and Sprinkler Riser Rooms (Addition)

Automatic sprinkler system risers, fire pumps and controllers shall be provided with ready access. Where located in a fire pump room or automatic sprinkler system riser room, the door shall be permitted to be locked provided the key is available at all times.



Additional requirements have been added for automatic sprinkler system riser rooms and fire pump rooms.

901.6.2 Integrated testing. (Addition) Where two or more fire protection or life safety systems are interconnected, the intended response of subordinate fire protection and life safety systems shall be verified when required testing of the initiating system is conducted. In addition, integrated testing shall be performed in accordance with Sections 901.6.2.1 and 901.6.2.2.



Smoke detectors in the elevator lobbies are connected to the elevator controls. Smoke detection in the atrium activates the smoke control system and closes the fire doors separating the atrium from the remainder of the building. The ventilation system for pressurized stairways and pressurized hoistways is activated by smoke detection, fire alarm, or waterflow on the sprinkler system. These various systems must be integrated to function together properly.

Test criteria has been added to the code with a reference to NFPA 4 to ensure that where multiple fire protection systems or life safety systems are integrated, that the acceptance process and subsequent testing must evaluate all of the integrated systems as a whole.

903.3.1.2.3 Attics. (Addition)

Attic protection shall be provided as follows:
1. Attics that are used or intended for living purposes or storage shall be protected by an automatic sprinkler system.

2. Where fuel-fired equipment is installed in an unsprinklered attic, not fewer than one quick-response intermediate temperature sprinkler shall be installed above the equipment.
3. Where located in a building of Type III, Type IV or Type V construction designed in accordance with Section 510.2 or 510.4 of the International Building Code, attics not required by Item 1 to have sprinklers shall comply with one of the following if the roof assembly is located more than 55 feet (16 764 mm) above the lowest level of required fire department vehicle access:
 - 3.1. Provide automatic sprinkler system protection.
 - 3.2. Construct the attic using noncombustible materials.
 - 3.3. Construct the attic using fire-retardant-treated wood complying with Section 2303.2 of the International Building Code.
 - 3.4. Fill the attic with noncombustible insulation.

Sprinkler protection of acceptable alternative methods for the protection of attics are now addressed for mid-rise buildings housing multifamily occupancies and equipped with an NFPA 13R sprinkler system.

904.14 Aerosol fire-extinguishing systems. (Addition) Aerosol fire extinguishing systems shall be installed, periodically inspected, tested and maintained in accordance with Sections 901 and 904.4, NFPA 2010, and in accordance with their listing. Such devices and appurtenances shall be listed and installed in conformance with manufacturer's instructions.



Requires automatic fire suppression in domestic cooking systems in care facilities.

1006.2.2.6 Groups R-3 and R-4. (Addition) Where Group R-3 occupancies are permitted by Section 903.2.8 to be protected by an automatic sprinkler system installed in accordance with Section 903.3.1.3, the exit access travel distance for Group R-3 shall be not more than 125 feet (38 100 mm). Where Group R-4 occupancies are permitted by Section 903.2.8 to be protected by an automatic sprinkler system installed in accordance with Section 903.3.1.3, the exit access travel distance for Group R-4 shall be not more than 75 feet (22 860 mm).

Exit access travel distances are provided for Groups R-3 and R-4 when sprinklered with NFPA 13D sprinkler systems.

1010.1.4.4 Locking arrangements in educational occupancies. (Addition)

In Group E and Group B educational occupancies, egress doors from classrooms, offices and other occupied rooms shall be permitted to be provided with locking arrangements designed to keep intruders from entering the room, where all of the following conditions are met:

1. The door shall be capable of being unlocked from outside the room with a key or other approved means.
2. The door shall be openable from within the room in accordance with Section 1010.1.9.
3. Modifications shall not be made to listed panic hardware, fire door hardware or door closers.



1010.1.4.4.1 Remote operation of locks. Remote operation of locks complying with Section 1010.1.4.4 shall be permitted.

Guidance is provided to allow enhanced security measures yet still meet egress requirements for classroom doors.

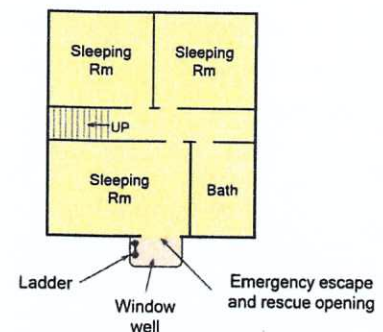
1010.3 Turnstiles and similar devices. (Addition) Turnstiles or similar devices that restrict travel to one direction shall not be placed so as to obstruct any required means of egress, except where permitted in accordance with Sections 1010.3.1, 1010.3.2 and 1010.3.3.

This new section allows security turnstiles, or similar barriers, in the means of egress path.

1030.1 General. (Emergency Escape and Rescue Openings)

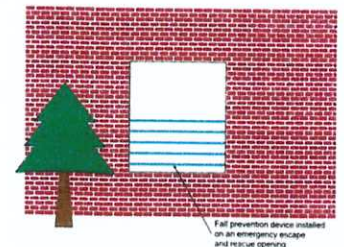
(Modification) In addition to the means of egress required by this chapter, emergency escape and rescue openings shall be provided in the following occupancies:

Emergency escape and rescue openings are required in Groups R-3 and R-4, and Group R-2 provided with only one means of egress from a story. Also, it is possible to eliminate some, or all, emergency escape and rescue openings from a sprinklered basement.



1030.1.1 Operational constraints and opening control devices. (Addition)

Emergency escape and rescue openings shall be operational from inside the room without the use of keys or tools. Window-opening control devices complying with ASTM F 2090 shall be permitted for use on windows serving as a required emergency escape and rescue opening.



Fall prevention devices are allowed on emergency escape and rescue openings provided that they comply with ASTM F2090.

1031.2.2 Locking arrangements in educational occupancies. (Addition)

In Group E occupancies, Group B educational occupancies and Group I-4 occupancies, egress doors from classrooms, offices and other occupied rooms shall be permitted to be provided with locking arrangements designed to keep intruders from entering the room where all of the following conditions are met:

1. The door shall be capable of being unlocked from outside the room with a key or other approved means.
2. The door shall be openable from within the room in accordance with Section 1010.1.9.
3. Modifications shall not be made to existing listed panic hardware, fire door hardware or door closers.
4. Modifications to fire door assemblies shall be in accordance with NFPA 80.



Guidance is provided to allow enhanced security measures yet still meet egress requirements on classroom doors.

1103.5.1 Fire Sprinklers in Existing Group A-2. (Addition) Where alcoholic beverages are consumed in a Group A-2 occupancy having an occupant load of 300 or more, the fire area containing the Group A-2 occupancy shall be equipped with an *automatic sprinkler system* in accordance with Section 903.3.1.1.



A section has been added to Chapter 11 which requires the retrofit installation of a fire sprinkler system in existing Group A-2 occupancies where alcoholic beverages are consumed if the occupant load is 300 or more.

1105.6.2 Group I-2 occupancies. (Addition) In Group I-2, where a door serves as an opening protective in a fire barrier, smoke barrier or fire wall and where the door is equipped with a hold-open device, such door shall automatically close upon any of the following conditions:

1. Actuation of smoke detectors initiating the hold-open device.
2. Activation of the fire alarm system within the zone.
3. Activation of an automatic sprinkler system within the zone.



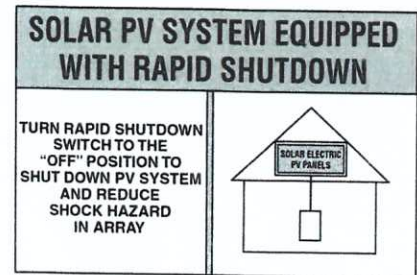
Fire-protection-rated doors in existing Group I-2 occupancies have three options for automatic closing operations.

1204.5 Buildings with rapid shutdown. (Addition) Buildings with rapid shutdown solar photovoltaic systems shall have permanent labels in accordance with Sections 1204.5.1 through 1204.5.3.

1204.5.1 Rapid shutdown type. The type of solar photovoltaic system rapid shutdown shall be labeled with one of the following:

1. For solar photovoltaic systems that shut down the array and the conductors leaving the array, a label shall be provided. The first two lines of the label shall be uppercase characters with a minimum height of $\frac{3}{8}$ inch (10 mm) in black on a yellow background. The remaining characters shall be uppercase with a minimum height of $\frac{3}{16}$ inch (5 mm) in black on a white background. The label shall be in accordance with Figure 1204.5.1(1) and state the following:

SOLAR PV SYSTEM EQUIPPED WITH RAPID SHUTDOWN.
TURN RAPID SHUTDOWN SWITCH TO THE "OFF" POSITION TO SHUT DOWN PV SYSTEM AND REDUCE SHOCK HAZARD IN ARRAY.



Rapid shutdown is required on solar photovoltaic systems to reduce the shock hazard to emergency responders.

2303.2.1 Height. Emergency Disconnect Switch. (Addition) The height of the emergency disconnect switch shall be not less than 42 inches (1067 mm) and not more than 48 inches (1372 mm) measured vertically, from the floor level to the activating button.

This new section provides specific height limitations for emergency disconnect switches for fuel dispensing operations.

2306.7.3.1 Additional impact protection. (Addition) The *fire code official* is authorized to require additional impact protection in accordance with Section 312 where dispensing devices are located in areas near parking areas, multiple dispensing devices, highway on- and off-ramps, and other areas where there is a higher potential for vehicle impacts.

The fire code official has the authority to require additional vehicle impact protection at fuel dispensing facilities.

2311.6 Vehicles powered by liquefied natural gas (LNG) and compressed natural gas (CNG). (Addition) LNG vehicles and CNG vehicles shall comply with Sections 2311.6.1 and 2311.6.2, as applicable.

2311.6.1 Liquefied natural gas (LNG). The LNG vehicle fuel system pressure shall be measured and recorded prior to entering the repair facility. The maximum allowable system pressure shall be not more than 170 psig (1172 kPa). Pressure above 170 psig (1172 kPa) shall be reduced by operating the vehicle or limited venting outdoors, as required.

2311.6.2 Compressed natural gas (CNG). CNG vehicle fuel system pressure and the ambient temperature shall be measured and recorded prior to entering the repair facility. Pressure greater than the indicated maximum pressure in accordance with Table 2311.6.2 shall be reduced by defueling the vehicle.

The requirements for repairing vehicles fueled by compressed or liquefied natural gas have been updated to address current technologies and processes.

OUTDOOR STORAGE OF PALLETS AT PALLET MANUFACTURING AND RECYCLING FACILITIES

2810.1 General. (Addition) The outside storage of wood pallets and wood composite pallets on the same site as a pallet manufacturing or recycling facility shall comply with Sections 2810.2 through 2810.11.

This new section adds criteria for outdoor pallet storage at pallet manufacturing facilities and pallet recycling facilities. It provides specific height limits and separation to property lines and buildings, but also allows for the distances to be modified based on providing additional fire protection features.



3103.3.1 Special amusement building. (Addition) Tents and other membrane structures erected as a special amusement building shall be equipped with an *automatic sprinkler system* in accordance with Section 411.3 of the *International Building Code*.



Special amusement buildings located in temporary tents are required to be equipped with an automatic sprinkler system.

3105.4 Use period. Temporary special event structures (Addition) erected in accordance with ANSI E1.21 shall not be erected for a period of more than six consecutive weeks.

The requirements for temporary stage structures are expanded to include all temporary structures greater than 400 square feet when used at special events.

5103.2.2 Aerosol cooking spray products. (Addition) Cartons or outer packaging containing aerosol cooking spray products in metal containers shall be clearly marked as follows:

AEROSOL COOKING SPRAY

Specific fire protection requirements are added to address aerosol cooking spray products.



5307.4 Carbon dioxide enrichment systems. (Addition) The design, installation and maintenance of carbon dioxide enrichment systems with more than 100 pounds (45.4 kg) of carbon dioxide, and carbon dioxide enrichment systems with any quantity of carbon dioxide having a remote fill connection, shall comply with Sections 5307.4.1 through 5307.4.7.

Carbon dioxide enrichment systems are now regulated by the International Fire Code when the system contains more than 100 pounds of CO₂, or when the refill connection is remote from the tank or vessel.



APPENDIX N

INDOOR TRADE SHOWS AND EXHIBITIONS (Addition)

Due to the extent of the code text, an outline of the appendix is shown below. For the complete text, see the 2018 *International Fire Code*.

This new chapter provides specific regulation to address the hazards associated with large trade shows and exhibitions. Many of the regulations can be found elsewhere in the IFC, but this appendix provides a single location with the regulations dealing with these events.



LOCAL AMENDMENT CHANGES

ARTICLE XVI. - INTERNATIONAL FIRE CODE—~~2012~~ 2018 EDITION

§ 150.104 - Bureau of fire prevention.

- (A) There is hereby established a Bureau of Fire Prevention designated as a Division of the fire Department and operated under the direction and supervision of the Fire Chief or his designee. The Fire Chief shall be appointed by the Village Manager on the basis of examination to determine his qualifications and will be governed by appropriate state statutes.
- (B) Any reference to the Fire Code Official in the ~~2012~~ 2018 edition of the International Fire Code shall be read as meaning the Fire Chief or other designated authority.
- (C) The Fire Chief or his designee may detail such members of the Bureau of Fire Prevention as inspectors as shall from time to time be necessary.
- (D) A change of occupancy or use of any commercial structure or space shall require a Certificate of Compliance from the Bureau of Fire Prevention before any occupancy whatsoever shall be permitted whether whole or in part.

(Ord. No. 7061, Exh. A, passed 4-2-15)

§ 150.105 - Adoption by reference; amendments.

- (A) There is hereby adopted by the village a certain code known as "The International Fire Code", ~~2012~~ 2018 edition, including Appendix Chapters D, ~~E~~, F and H and ~~J~~, as published by the International Code Council for the purpose of regulating and governing the safeguarding of life and property from fires and explosion hazards arising from the storage, handling, and use of hazardous substances, materials, and devices, and from conditions hazardous to life or property in the occupancy of buildings and premises. The terms and conditions of the ~~2012~~ 2018 edition are hereby to be in full force and effect as adopted by the village in its entirety and subject to any amendments made thereto.
- (B) Not less than three copies of the code hereby adopted in subsection (A) above, in book form, have been filed in the office of the Village Clerk for use and examination by the public at least 30 days prior to the adoption of this Chapter, and that not less than three copies of said code are now filed in the office of the Village Clerk.
- (C) "The International Fire Code, ~~2012~~ 2018 edition", adopted pursuant to subsection (A) above, is amended as follows:

Sec. 101.1 Insert Village of Lombard

Sec. 102.4 shall read as follows: The design and construction of new structures to provide egress facilities, fire prevention and built in protection equipment shall, in part, comply...

Section 102.7.1 Change: to read as follows: Where differences occur between the provisions of this code and the referenced standards, the NFPA 101, Life Safety Code, the most restrictive shall apply.

Section 104.1 shall read as follows: The Fire Code Official acting as the authority having jurisdiction, shall have the authority to adopt and promulgate rules and regulations, to interpret and complement the provisions of this code and other applicable Ordinances, Codes and Standards, and to secure the intent thereof, and to designate requirements applicable because of local and climatic, and other conditions. Such rules shall not have the effect of waiving any fire and life safety requirements specifically provided in this Code or in any other applicable Ordinance, Code or Standard or of violating accepted engineering practice involving public safety.

Section 104.9 Add the following to the end of the last sentence...and approved in writing by an appropriate registered state licensed design professional.

Section 105.1.2 Types of Permits. Change (1) to read as follows; Operational Permit. An operational permit allows an applicant to conduct an operation(s) for which a permit is required by Section 105.6 in accordance with the schedule as outlined in the fee ordinances. A permit fee shall be charged annually for each type of operational permit in accordance with the schedule as outlined in the fee ordinances. A permit shall constitute permission to maintain, store or handle materials; or to conduct processes which produce conditions hazardous to life or property.

DESCRIPTION	PERMIT REQUIRED (yes or no)	PERMIT FEE	IFC CODE REFERENCE
An operational permit is required to manufacture, store or handle an aggregate quantity of Level 2 or Level 3 aerosol products in excess of 500 pounds (227 kg) net weight.	Yes	\$75	2801.2 105.6.1
A permit is required to install stationary lead-acid battery systems having a liquid capacity of more than 50 gallons (189 L).	Yes	\$75	107.2 105.7.2 1206.2
An operational permit is required to store, handle or use cellulose nitrate film in a Group A occupancy	Yes	\$75	301.2 105.6.5
An operational permit is required to operate a grain elevator, flour starch mill, feed mill, or a plant pulverizing aluminum, coal, cocoa, magnesium, spices or sugar, or other operations producing dusts as defined in Chapter 2	Yes	\$75	1301.2 105.6.6
An operational permit is required for the storage and handling of combustible fibers in quantities greater than 100 cubic feet (2.8 m3). <i>Exception: A permit is not required for agricultural storage.</i>	Yes	\$75	2901.3 105.6.7
An operational permit is required for the storage, use or handling at normal temperature and pressure (NTP) of compressed gases in excess of the amounts listed below. Exception: Vehicles equipped for and using compressed gas as a fuel for propelling the vehicle.	Yes	\$75	3001.2 105.6.8
PERMIT AMOUNTS FOR COMPRESSED GASES			
TYPE OF GAS	AMOUNT (cubic feet at NTP)		

Corrosive	200			
Flammable (except cryogenic fluids & liquefied petroleum gases)	200			
Highly toxic	Any Amount			
Inert & simple asphyxiate	6,000			
Oxidizing (including oxygen)	504			
Toxic	Any Amount			
<p>An operation permit is required to produce, store, transport on site, use, handle or dispense cryogenic fluids in excess of the amounts listed below: <i>Exception: Permits are not required for vehicles equipped for an using cryogenic fluids as a fuel for propelling the vehicle or for refrigerating the lading.</i></p>		Yes	\$75	<p>3201.2 105.6.10</p>
TYPE OF CRYOGENIC FLUID				
	Inside Building (gals)	Outside Building (gals)		
Flammable	More than 1	60		
Inert	60	500		
Oxidizing (includes oxygen)	10	50		
Physical or health hazard not indicated above—	Any Amount			
<p>An operational permit is required to engage in the business of dry cleaning or to change to a more hazardous cleaning solvent used in existing dry cleaning equipment</p>		Yes	\$75	<p>1201.2 105.6.12</p>

An operational permit is required for the manufacture, storage, handling, sale or use of any quantity of explosive, explosive material.	Yes	\$75	3301.2 105.6.14
An operational permit is required for floor finishing or surfacing operations exceeding 350 square feet (33 m ²) using Class I or Class II liquids	Yes	\$75	1501.2 105.6.17
An operational permit is required to operate a fruit-or crop-ripening facility or conduct a fruit-ripening process using ethylene gas.	Yes	\$75	1601.2 105.6.18
An operational permit is required to operate a business of fumigation or thermal insecticidal fogging and to maintain a room, vault or chamber in which a toxic or flammable fumigant is used.	Yes	\$75	1701.2 105.6.19
<p>1. To operate use or operate a pipeline for the transportation within facilities of flammable or combustible liquids. This requirement shall not apply to the off-site transportation in pipelines regulated by the Department of Transportation (DOTn) (see Section 3501.1.2) nor does it apply to piping systems (see Section 3503.6).</p> <p>2. To store, handle or use Class I liquids in excess of 5 gallons (19 L) in a building or in excess of 10 gallons (37.9 L) outside of a building, except that a permit is not required for the following:</p> <p>2.1 The storage or use of Class I liquids in the fuel tank of a motor vehicle, aircraft, motorboat, mobile power plant or mobile heating plant, unless such storage, in the opinion of the code official would cause an unsafe conditions.</p> <p>2.2 The storage or use of paints, oils, varnishes or similar flammable mixtures when such liquids are stored for maintenance, painting or similar purposes for a period of not more than 30 days.</p> <p>3. To store, handle or use Class II or Class IIIA liquids in excess of 25 gallons (95 L) in a building or in excess of 60 gallons (227 L) outside a building, except for fuel oil used in connection with oil-burning equipment.</p> <p>4. To remove Class I or Class II liquids from an underground storage tank used for fueling motor vehicles by any means other than the approved, stationary on-site pumps normally used for dispensing purposes.</p> <p>5. To operate tank vehicles, equipment, tanks, plants, terminals, wells, fuel-dispensing stations, refineries, distilleries and similar facilities where flammable and combustible liquids are produced,</p>	Yes	\$75	3401.4 105.6.16

<p>processed, transported, stored, dispensed or used.</p> <p>6. To install, alter, remove, abandon, place temporarily out of service (for more than 90 days) or otherwise dispose of an underground, protected above-ground or above-ground flammable or combustible liquid tank</p> <p>7. To change the type of contents stored in a flammable or combustible liquid tank to a material which poses a greater hazard than that for which the tank was designed and constructed.</p> <p>8. To manufacture, process, blend or refine flammable or combustible liquids.</p>				
<p>An operational permit is required to store, transport on site, dispense, use or handle hazardous materials in excess of the amounts listed below.</p>		Yes	\$150	<p>2701.5</p> <p>105.6.20</p>
<p>PERMIT AMOUNTS FOR HAZARDOUS MATERIALS</p>				
<p>TYPE OF MATERIAL</p>		<p>AMOUNT</p>		
<p>Combustible liquids</p>		<p>See flammable and Combustible materials</p>		
<p>Corrosive Materials</p>				
<p>Gases</p>		<p>see compressed gases</p>		
<p>Liquids</p>		<p>55 gallons</p>		
<p>Solids</p>		<p>1000 pounds</p>		
<p>See Section 105.6.10</p>				
<p>55 gallons</p>				
<p>1000 pounds</p>				
<p>Flammable solid materials</p>		<p>100 pounds</p>		
<p>Unstable (reactive) Material</p>				

	Liquids				
Class 4		any amount			
Class 3		any amount			
Class 2		5 gallons			
Class 1		10 gallons			
	Solids				
Class 4		any amount			
Class 3		any amount			
Class 2		50 pounds			
Class 1		100 pounds			
Water-Reactive Material					
	Liquids				
Class 3		any amount			
Class 2		any amount			
Class 1		10 gallons			
	Solids				
Class 3		any amount			
Class 2		50 pounds			
Class 1		500 pounds			
An operational permit is required for: 1. Storage and use of LP-gas.			Yes 0—499	0	3801.2 105.6.27

<p><i>Exception: A permit is not required for individual containers with a 500-gallon (1893 L) water capacity or less serving occupancies in Group R-3.</i></p> <p>2. Operation of cargo tankers that transport LP-gas.</p>	gals 500 or more gals	\$75	
An operational permit is required to melt, cast, heat treat or grind more than 10 pounds (4.54 kg) of magnesium.	Yes	\$75	3601.2 105.6.28
An operational permit is required to store in any building or upon any premises in excess of 2,500 cubic feet (71 m3) gross volume of combustible empty packing cases, boxes, barrels or similar containers, rubber tires, rubber, cork or similar combustible material.	Yes	\$75	315.1 105.6.29
An operational permit is required for any organic-coating manufacturing operation producing more than 1 gallon (4 L) of an organic coating in one day.	Yes	\$75	1501.2 105.6.35
An operational permit is required for storage or handling of more than 25 pounds (11 kg) of cellulose nitrate (pyroxylin) plastics and for the assembly or manufacture of articles involving pyroxylin plastics.	Yes	\$75	4201.2 105.6.35
An operational permit is required to establish, conduct or maintain storage of scrap tires and tire byproducts that exceed 2,500 cubic feet (71 m3) of total volume of scrap tires and for indoor storage of tires and tire byproducts.	Yes	\$75	2501.2 105.6.46
An operation permit is required to store chips, hogged material, lumber or plywood in excess of 200 cubic feet (6 m3).	Yes	\$75	107.2 105.6.50

Section 105.1.2; Delete 1.1 and 1.2

Sec. 105.2.4 Change to read as follows: Action on Application: Permit criteria as format shall be developed by the Fire Code Official or his/her designee based on an analysis of the specific application or use, applicable provisions of the code and/or available technical data. The Fire Code Official or his/her designee shall cause to be made necessary inspections and tests to assure the use and activities meet the permit criteria. Costs for such inspections, research and tests are the responsibility of the applicant.

Section 105.6 Change to read as follows: Required Operational Permits. The Fire Code Official is authorized and may issue permits and charge fees for the operations set forth in Sections 105.6.1 through ~~105.6.46~~ 105.6.50. A fee for each permit shall be paid as required, in accordance with the schedule as outlined in the fee ordinances.

Sec. ~~406.2~~ **107.2** the first line shall read as follows: The Fire Code Official shall endeavor to make all of the required inspections, or the Fire Code Official shall accept reports of inspections by approved agencies or individuals. Approval of agencies or individuals is granted by the authority having jurisdiction.

Section ~~408~~ **109** Board of Appeals. Delete in its entirety.

Section ~~409.4~~ **110.4** Insert the following: misdemeanor, \$750.00, 0 days.

Section ~~410.1.4~~ **111.1.1** Insert the following after "required by Section 311"...and other applicable Ordinances, Codes and Standards.

~~Section 110.2 Evacuation: Delete entire Section and insert: Unsafe Structures; Dangerous or Abandoned Buildings shall meet the requirements as enumerated in §150.200 through §150.207 hereof.~~

Section ~~413.2~~ **106.2** Change to read as follows: A fee for each permit shall be paid as required, in accordance with the schedule as outlined in the fee ordinances.

Add Section 315.2.5 Removal of Packing and Waste Materials. No persons shall store in any building excess amounts of combustible empty packing cases, wooden or plastic pallets, barrels, boxes, rubber tires, shavings, excelsior, rubbish, paper bags, litter, hay, straw and similar combustibles. Aisleways and storage of the above-mentioned combustibles necessary for the performance of business shall be kept in an orderly and neat manner. Combustible materials shall be removed daily or more often as is necessary to suitable vaults, bins, dumpsters, compactors or separate buildings. Such practices shall be as approved by the Fire Chief or his/her designee.

Add Section 503.7 Fire Apparatus Access Roads

Public Access and Fire Lanes on Private Property, Devoted to Public Use, shall be provided so that:

- (1) Public or private access for motor fire apparatus shall be provided around the building so that there may be proper operation of ladders and mechanically elevated mechanisms. Minimum width of the fire lanes shall be (20) feet with greater widths to accommodate vehicles when turning and laddering buildings.
- (2) Fire lanes on private property shall be approved by the Fire Chief or his/her designee and parking of motor vehicles otherwise obstructing such fire lanes or access routes shall be prohibited at all times. Permanent all-weather signs identifying fire lanes and access routes shall be posted as per Appendix Chapter D of the International Fire Code.
- (3) Public or private fire department access roads and ways shall be all weather, properly maintained and accessible at all times. All fire lanes shall be approved by the Fire Chief or his/her designee and shall meet the detailed engineering and construction specifications for public improvements as enumerated in the Village of Lombard Specifications Manual. See Section 154.402 for additional requirements.
- (4) Access roads shall be not less than fifteen (15) feet from the building and further if the height of the building requires a greater set back to ladder the building.
- (5) Access routes shall be continuous around the building.
 - (a) This requirement may be modified by the Fire Chief or his/her designee where adequate building access openings and a complete fire suppression system are provided.
 - (b) Where cul-de-sacs are permitted, paved turnaround diameters shall be not less than 94 feet in non-residential areas and 90 feet in residential areas. The maximum length of cul-de-sacs shall not exceed the lengths specified in Section 5 of Lombard's Subdivision and Development Ordinance.

506.1 Where Required. Change to read as follows: The Fire Chief or his/her designee shall require all new construction and existing buildings that are required to be equipped with an approved fire alarm

system that consists of smoke and/or heat detection and all buildings or structures required to be equipped with automatic fire sprinkler or automatic fire extinguishing systems to have an approved key box system. The key box **or boxes** shall be of an approved type and shall contain keys necessary to allow the fire department to gain immediate access to a building in emergency situations without forcible entry.

Add Section 506.3 Location. The installation of the approved key box **or boxes** shall be approved by the Fire Code Official or his/her designee.

Section 510.1 Change to read as follows: Public Safety; Radio Amplification Systems in buildings shall meet the requirements as enumerated in § 150.350 through § 150.362 hereof.

Add Section 511 to read: Miscellaneous Provisions

Add Section 511.1 Hazardous Areas. Rooms used for storage, boiler or furnace rooms, fuel storage, janitors closets, maintenance shops and laundry equipment without automatic sprinkler protection shall be separated from other building areas by assemblies having a fire resistance rating of not less than one hour with appropriate protection of openings into the rooms.

Section 901.6.2 is deleted in its entirety and replaced with the following: Records. Records of all fire protection and life safety systems and equipment inspections, tests, and maintenance required by this Code, State law and/or the standards referenced in Table 901.6.1, shall be maintained on the premises for a minimum of three (3) years, and shall be provided to the Fire Code Official by the property owner or the property owner's agent electronically filing the inspection report through the Village's fire inspection records management system. Once an inspection report is electronically filed as required by this Section and an administrative fee in the amount ~~\$12.00~~ **\$30.00** is paid by the property owner or the property owner's agent to the Village's third-party inspection records management vendor, the inspection report shall be reviewed by the Fire Code Official. Upon confirmation by the Fire Code Official that a property subject to inspection is in compliance with this Code, the Fire Code Official shall issue a certificate of compliance to the property owner or the property owner's agent. **The purpose of the administrative fee charged pursuant to this Section is to cover the Village's internal and external administrative costs related to processing, reviewing and maintaining the filings required by this Section.** Fire protection and life safety systems and equipment are identified as follows:

- (a) Fire Alarm;
- (b) Fire Sprinkler (wet, dry, or pre-action);
- (c) Engineered and Pre-Engineered Suppression Systems;
- (d) Fire Pump;
- (e) Commercial Kitchen Hood Suppression System; and
- (f) Active Smoke Control System

Add to end of the first paragraph at Section 901.7 Systems out of service. Automatic fire protection systems shall not be out of service for more than eight (8) hours for additions, alterations, maintenance or repairs without the approval of the Fire Code Official or his/her designated representative.

Section 903.2 Where required: Shall be changed to read as follows: An approved automatic fire sprinkler system shall be installed and maintained in full operating condition in all parts of all buildings with the following exceptions:

- 8. Residential Dwellings and Townhouses defined and constructed under the scope of the International Residential Code. ~~2012~~ **2018** Edition.
- 9. Auxiliary structure (i.e.; detached garages, sheds) used in conjunction with residential occupancies, (use).

10. One (1) Story Buildings, without basements, having a total area of less than one thousand (1,000) square feet. This requirement shall not be reduced by fire wall separation.
11. Buildings or portions of buildings that comply with Section 406.5 Open Parking Garages.
12. Existing buildings: For the purpose of this section, occupancy shall be defined as the purpose for which a building or portion thereof is used or intended to be used in accordance with the International Fire Code, 2012 2018 Edition.
 - a. When an addition or additions of 500 square feet or more in aggregate are added, increasing the total area to 2,500 square feet or more, an automatic sprinkler system shall be installed in the entire building.

Note: A fire alarm system installed in the complete building, to include smoke and or heat detection in accordance with NFPA 72 can be approved in place of a sprinkler system where the addition is less than 1,000 square feet (except for occupancy types A, F, H, I and R) as approved by the Fire Code Official.

(Ord. 6832, passed 5/16/13)
 - b. When the occupancy (use) of a building of 2,000 square feet or more is changed to any of the following uses: assembly, educational, health care, child care, industrial, storage or residential, other than as exempted in Item (1) of this section, an automatic sprinkler system shall be installed in the entire building or in that portion of the building in which the change of occupancy occurred. Note: A fire alarm system installed in the complete building, to include smoke and or heat detection in accordance with NFPA 72 can be approved in place of a sprinkler system where the addition is less than 1,000 square feet (except for occupancy types A, F, H, I and R) as approved by the Fire Code Official.
 - c. When the cost of remodeling would be greater than 50% of the market value of a building of 2,000 square feet or more, an automatic sprinkler system shall be installed. Market value of the structure shall be as established by the Township Assessor or by the average of two or more independent appraisals.
13. One-story self-service storage facilities of minimum Type IIB construction; no interior corridors, with a one-hour fire barrier separation wall installed between every storage compartment.

Delete Sections 903.2.1 through 903.2.10.1

Section 903.2.11.3 delete Exception #3 2

Add Section 903.3.5.3 Safety Factor: Provide a minimum 10% or 5 psi minimum safety factor in the fire protection system hydraulic calculation. The system demand shall be 5 psi minimum below the seasonal low water flow test supply.

Add Section 903.4.2.1 Visual: Provide a weather resistant visual alarm device installed on the exterior wall of the building above the Fire Department connection (FDC) to activate upon fire sprinkler system water flow only.

Section 903.4.3 change to read as follows: Approved supervised indicating control valves shall be required at the point of connection on each floor of all buildings containing a Type I standpipe connection.

Add Section 907.1.3.1 Equipment: All fire alarm control panels or full function annunciator panels shall be of the addressable type and shall be installed within ten (10) feet of the main entrance or with in a location approved by the Fire Code official.

Section 907.4.2.4 Delete in its entirety.

Section 907.6.5 907.6.6 change to read as follows: Fire Protection System Supervision: All required fire protection systems shall be supervised by and terminate with the Village of Lombard Communications

Center (DUCOMM), or such other central station monitoring service in accordance with NFPA 72 and approved by the Fire Code Official.

Exceptions: Supervisory Service is not required for:

- (1) Single and multiple station smoke alarms required by ~~907.2.11~~ **907.2.10** of the International Building Code, ~~2012~~ **2018** Edition.
- (2) Automatic sprinkler systems protecting one and two family dwellings.
- (3) Smoke detectors in GROUP I-3 occupancies.

Section 907.8.5 is amended by deleting the last sentence of said Section and adding the following to the end of said Section: Records. Records of all fire protection and life safety systems and equipment inspections, tests, and maintenance required by this Code, State law and/or the standards referenced in Table 901.6.1, shall be maintained on the premises for a minimum of three (3) years, and shall be provided to the Fire Code Official by the property owner or the property owner's agent electronically filing the inspection report through the Village's fire inspection records management system. Once an inspection report is electronically filed as required by this Section and an administrative fee in the amount ~~\$12.00~~ **\$30.00** is paid by the property owner or the property owner's agent to the Village's third-party inspection records management vendor, the inspection report shall be reviewed by the Fire Code Official. Upon confirmation by the Fire Code Official that a property subject to inspection is in compliance with this Code, the Fire Code Official shall issue a certificate of compliance to the property owner or the property owner's agent. **The purpose of the administrative fee charged pursuant to this Section is to cover the Village's internal and external administrative costs related to processing, reviewing and maintaining the filings required by this Section.** Fire protection and life safety systems and equipment are identified as follows:

- (a) Fire Alarm;
- (b) Fire Sprinkler (wet, dry, or pre-action);
- (c) Engineered and Pre-Engineered Suppression Systems;
- (d) Fire Pump;
- (e) Commercial Kitchen Hood Suppression System; and
- (g) Active Smoke Control System

Add Section 2301.7. Removal of Pumps: Upon the cessation of business of any automotive service station, the pumps used to dispense fuel shall be removed within 14 days of the cessation of business. Said requirements shall be abandonment or removal of underground tanks contained herein in Section 5704.2.13.

Section 202 Definitions. Add to the Fireworks definition: the term fireworks shall mean and include any explosive composition or any substance or combination of substances, or article prepared for the purpose of producing a visible or audible effect of a temporary exhibitional nature by explosion, combustion, deflagration or detonation, and shall include blank cartridges, toy cannons in which explosives are used, the type of balloons which require fire underneath to propel the same, firecrackers, torpedoes, sky rockets, Roman candles, bombs or other fireworks of like construction and any fireworks containing any explosive compound; or any tablets or other device containing any explosive substance, or containing combustible substances producing visual effects. The term "fireworks" shall not include snake or glow worm known as "party poppers", "booby traps", or "snappers", "trick matches", "cigarette loads" and "auto burglar alarms", toy pistols, toy canes, toy guns, or other devices in which paper or plastic caps containing twenty-five hundredths grains or less of explosive compound are used, provided they are so constructed that the hand cannot come in contact with the cap when in place for the explosion; and toy pistol paper or plastic caps which contain less than twenty-five hundredths grains of explosive mixture; the sale and use of which shall be permitted at all times.

Section 5704.2.13 is deleted with the following added: Underground tanks taken out of service shall be safeguarded or disposed of by any one of the three following methods:

- (a) Placed in a "temporarily out of service" condition. Tank shall be rendered "temporarily out of service" only when it is planned that they will be returned to active service within time limits established by the Chief of Fire Department, or pending removal or abandonment within 45 days. Said 45 day limit may be extended by the Board of Trustees upon showing of good cause of such extension.
- (b) Abandoned in place with proper safeguarding.
- (c) Removed. Any such abandonment or removal of underground tanks shall occur within 45 days of the cessation of business.

~~4603.4.2 Delete this section in its entirety Refer to § 150.030, Section 903.2.~~

(Ord. 5481, passed 5/6/04; Ord. 6602, passed 4/7/11) (Ord. 6709, passed 4/19/12; Ord. 6795, passed 2/7/13; Ord. No. 7061, Exh. A, passed 4-2-15; Ord. No. 7343, §§ 1, 2, passed 4-6-17)

§ 150.106 - Reserved.

§ 150.107 - Definitions.

For the purpose of this subchapter the following definitions shall apply unless the context clearly indicates or requires a different meaning.

Legal counsel. As used in the International Fire Code shall be held to mean the Attorney for the Village of Lombard.

Municipality or jurisdiction. As used in the International Fire Code shall be held to mean the Village of Lombard.

(Ord. 2561, passed 10-28-82; Ord. 6602, passed 4/7/11)

§ 150.108 - Explosives and blasting agents.

The storage of explosives and blasting agents is prohibited. The limits referred to in Section 3301 of the International Fire Code, in which storage of explosives and blasting agents is prohibited, are hereby established as follows:

- (A) All conservation and residential districts CR, RO, R1, R2, R3, R4, R5, and R6 as defined by Chapter 155, zoning code.
- (B) All business and office districts O, B1, B2, B3, B4, B4A, B5 and B5A as defined by Chapter 155, zoning code.
- (C) Limited manufacturing districts—I as defined by Chapter 155, zoning code.

(Ord. 2561, passed 10-28-82)

Cross reference— Penalty, see § 150.999

§ 150.109 - Motor vehicle routes for transporting explosives, etc.

(A) Routes for vehicles transporting explosives and blasting agents are hereby established as follows:

(1) Routes approved by the State or Federal Governments.
§ 150.110 - Flammable liquids.

- (1) The storage of flammable liquids in outside above ground tanks is prohibited in the following districts:
 - (a) All conservation and residential districts CR, RO, R1, R2, R3, R4, R5, R6 as defined by Chapter 155, zoning code.
 - (b) All business and office districts O, B1, B2, B3, B4, B4A, B5, B5A as defined by Chapter 155, zoning code.
- (2) The installation of new bulk plants is prohibited in the following districts:
 - (a) All conservation and residential districts CR, RO, R1, R2, R3, R4, R5, and R6 as defined by Chapter 155, zoning code.
 - (b) All business and office districts O, B1, B2, B3, B4, B4A, B5 and B5A as defined by Chapter 155, zoning code.

(Ord. 2561, passed 10-28-82, Ord. 6709, passed 4/19/12) Penalty, see § 150.99

§ 150.111 - Bulk storage.

Add Section ~~3801.4~~ 4001.4 to the International Fire Code: to read as follows:

Storage Restrictions: The bulk storage of liquefied petroleum gas is restricted to the following districts:

- (a) Limited manufacturing districts—I, so defined, should be by Chapter 155, zoning code.

(Ord. 2561, passed 10-28-82; Ord. 6602, passed 4/7/11)

Cross reference— Penalty, see § 150.999

§ 150.112 - Motor vehicle routes for transporting hazardous chemicals and other dangerous articles including liquefied petroleum gases and combustible and flammable liquids.

- (1) Routes for vehicles transporting hazardous chemicals and other dangerous articles including combustible and flammable liquids are hereby established as follows:
 - (a) Routes approved by the State or Federal Governments.
 - (b) No tank vehicles shall be parked for over one hour or left unattended at any time.

§ 150.113 - Permit refusal.

Whenever the Chief of the Fire Department or the Community Development Director, disapproves an application or refuse to grant a permit applied for, or when it is claimed that the provisions of the code do not apply or that the true intent and meaning of the code have been misconstrued or wrongly interpreted, the applicant may appeal from the decision of the Chief of the Fire Department or the Community Development Director to the President and Board of Trustees within 30 days from the date of the decision appealed.

(Ord. 2561, passed 10-28-82)