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**701.3 Owner's responsibility.** The owner shall maintain an inventory of all required fire-resistance-rated construction, construction installed to resist the passage of smoke and the construction included in Sections 703 through 707 and Sections 602.4.1 and 602.4.2 of the International Building Code. Such construction shall be visually inspected by the owner annually and properly repaired, restored or replaced where damaged, altered, breached or penetrated. Records of inspection and repair shall be maintained. Where concealed, such elements shall not be required to be visually inspected by the owner unless the concealed space is accessible by the removal or movement of a panel, access door, ceiling tile or similar moveable entry to the space.

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**907.2.3 Group E.** Group E occupancies shall be provided with a manual fire alarm system that initiates the occupant notification signal utilizing one of the following:

1. An emergency voice/alarm communication system meeting the requirements of Section 907.5.2.2 and installed in accordance with Section 907.6; or
2. A system developed as part of a safe school plan adopted in accordance with RCW 28A.320.125 or developed as part of an emergency response system consistent with the provisions of RCW 28A.320.126. The system must achieve all of the following performance standards:
  - 2.1. The ability to broadcast voice messages or customized announcements;
  - 2.2. Includes a feature for multiple sounds, including sounds to initiate a lock down;
  - 2.3. The ability to deliver messages to the interior of a building, areas outside of a building as designated pursuant to the safe school plan, and to personnel;
  - 2.4. The ability for two-way communications;
  - 2.5. The ability for individual room calling;
  - 2.6. The ability for a manual override;

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- 2.7. Installation in accordance with NFPA 72;
- 2.8. Provide 15 minutes of battery backup for alarm and 24 hours of battery backup for standby; and
- 2.9. Includes a program for annual inspection and maintenance in accordance with NFPA 72.

**Exceptions:**

1. A manual fire alarm system is not required in Group E occupancies with an occupant load of 50 or less.
2. Emergency voice/alarm communication systems meeting the requirements of Section 907.5.2.2 and installed in accordance with Section 907.6 shall not be required in Group E occupancies with occupant loads of 100 or less, such as individual portable school classroom buildings; provided that activation of the manual fire alarm system initiates an approved occupant notification signal in accordance with Section 907.5.
3. Where an existing approved alarm system is in place, an emergency voice/alarm system is not required in any portion of an existing Group E building undergoing any one of the following repairs, alteration or addition:
  - 3.1. Alteration or repair to an existing building including, without limitation, alterations to rooms and systems, and/or corridor configurations, not exceeding 35 percent of the fire area of the building (or the fire area undergoing the alteration or repair if the building is comprised of two or more fire areas); or
  - 3.2. An addition to an existing building, not exceeding 35 percent of the fire area of the building (or the fire area to which the addition is made if the building is comprised of two or more fire areas).
4. Manual fire alarm boxes are not required in Group E occupancies where all of the following apply:
  - 4.1. Interior corridors are protected by smoke detectors.
  - 4.2. Auditoriums, cafeterias, gymnasiums and similar areas are protected by heat detectors or other approved detection devices.
  - 4.3. Shops and laboratories involving dusts or vapors are protected by heat detectors or other approved detection devices.
5. Manual fire alarm boxes shall not be required in Group E occupancies where all of the following apply:
  - 5.1. The building is equipped throughout with an approved automatic sprinkler system installed in accordance with Section 903.3.1.1.
  - 5.2. The emergency voice/alarm communication system will activate on sprinkler waterflow.
  - 5.3. Manual activation is provided from a normally occupied location.

**907.2.3.1 Sprinkler system or detection.** When automatic sprinkler systems or smoke detectors are installed, such systems or detectors shall be connected to the building fire alarm system.

system shall be provided in accordance with Sections 907.2.6.1, 907.2.6.2, 907.2.6.3.3 and 907.2.6.4.

**Exceptions:**

1. Manual fire alarm boxes in resident or patient sleeping areas of Group I-1 and I-2 occupancies shall not be required at exits if located at nurses' control stations or other constantly attended staff locations, provided such stations are visible and continually accessible and that travel distances required in Section 907.4.2 are not exceeded.
2. Occupant notification systems are not required to be activated where private mode signaling installed in accordance with NFPA 72 is approved by the fire code official.

**907.2.6.1 Group I-1.** An automatic smoke detection system shall be installed in corridors, waiting areas open to corridors and habitable spaces other than sleeping units and kitchens. The system shall be activated in accordance with Section 907.4.

**Exceptions:**

1. For Group I-1 Condition 1 occupancies, smoke detection in habitable spaces is not required where the facility is equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1.
2. Smoke detection is not required for exterior balconies.

**907.2.6 Group I.** A manual fire alarm system that activates the occupant notification system shall be installed in Group I occupancies. An automatic smoke detection system that notifies the occupant notification

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**907.2.6.4 Group I-4 occupancies.** A manual fire alarm system that initiates the occupant notification signal utilizing an emergency voice/alarm communication system meeting the requirements of Section 907.5.2.2 and installed in accordance with Section 907.6 shall be installed in Group I-4 occupancies. When automatic sprinkler systems or smoke detectors are installed, such systems or detectors shall be connected to the building fire alarm system.

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**907.10 NICET:** National Institute for Certification in Engineering Technologies and ESA/NTS: Electronic Security Association/National Training School.

**907.10.1 Scope.** This section shall apply to new and existing fire alarm systems.

**907.10.2 Design review:** All construction documents shall be reviewed by a NICET III in fire alarms, an ESA/NTS certified fire alarm designer (CFAD) level III fire, or a licensed professional engineer (PE) in Washington prior to being submitted for permitting. The reviewing professional shall submit a stamped, signed, and dated letter; or a verification method approved by the local authority having jurisdiction indicating the system has been reviewed and meets or exceeds the design requirements of the state of Washington and the local jurisdiction.

**907.10.3 Testing/maintenance:** All inspection, testing, maintenance and programming not defined as "*electrical construction trade*" by chapter 19.28 RCW shall be completed by a NICET II in fire alarms or an ESA/NTS certified fire alarm technician (CFAT).

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**3308.8 Fire safety requirements for buildings of Types IV-A, IV-B, and IV-C construction.** Buildings of Types IV-A, IV-B, and IV-C construction designed to be greater than six stories above grade plane shall meet the following requirements during construction unless otherwise approved by the fire code official.

1. Standpipes shall be provided in accordance with Section 3313.
2. A water supply for fire department operations, as approved by the fire code official and the fire chief.
3. Where building construction exceeds six stories above grade plane, at least one layer of noncombustible protection where required by Section 602.4 of the *International Building Code* shall be installed on all building elements more than four floor levels, including mezzanines, below active mass timber construction before erecting additional floor levels.  
**Exception:** Shafts and vertical exit enclosures shall not be considered a part of the active mass timber construction.
4. Where building construction exceeds six stories above grade plane required exterior wall coverings shall be installed on all floor levels more than four floor levels, including mezzanines, below active mass timber construction before erecting additional floor level.  
**Exception:** Shafts

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## CHAPTER 38

## MARIJUANA PROCESSING OR EXTRACTION FACILITIES

SECTION 3801  
ADMINISTRATION

**3801.1 Scope.** Facilities used for marijuana processing or extraction that utilize chemicals or equipment as regulated by the International Fire Code shall comply with this chapter and the International Building Code. The extraction process includes the act of extraction of the oils and fats by use of a solvent, desolventizing of the raw material and production of the miscella, distillation of the solvent from the miscella and solvent recovery. The use, storage, transfilling, and handling of hazardous materials in these facilities shall comply with this chapter and the International Building Code.

**3801.2 Application.** The requirements set forth in this chapter are requirements specific only to marijuana processing and extraction facilities and shall be applied as exceptions or additions to applicable requirements set forth elsewhere in this code.

**3801.2.1** For the purposes of this chapter, marijuana processing and extraction shall be limited to those processes and extraction methods that utilize chemicals defined as hazardous by the International Fire Code and are regulated as such. Such processes and extraction methods shall meet the requirements of this chapter and other applicable requirements elsewhere in this code and its referenced standards.

**Exception:** Provisions of WAC 314-55-104 do not apply to this chapter.

**3801.2.2** The use of equipment regulated by the International Fire Code for either marijuana processing or marijuana extraction shall meet the requirements of this chapter and other applicable requirements elsewhere in this code.

**3801.3 Multiple hazards.** Where a material, its use or the process it is associated with poses multiple hazards, all hazards shall be addressed in accordance with Section 5001.1 and other material specific chapters.

**3801.4 Existing building or facilities.** Existing buildings or facilities used for the processing of marijuana shall comply with this chapter.

**3801.5 Permits.** Permits shall be required as set forth in Section 105.6 and 105.7.

SECTION 3802  
DEFINITIONS

**Desolventizing.** The act of removing a solvent from a material.

**Finding.** The results of an inspection, examination, analysis or review.

**Marijuana processing.** Processing that uses chemicals or equipment as regulated by the International Fire Code; this does not include the harvesting, trimming, or packaging of the plant.

**Miscella.** A mixture, in any proportion, of the extracted oil or fat and the extracting solvent.

**Observation.** A practice or condition not technically noncompliant with other regulations or requirements, but could lead to noncompliance if left unaddressed.

**Transfilling.** The process of taking a gas source, either compressed or in liquid form (usually in bulk containers), and transferring it into a different container (usually a smaller compressed cylinder).

SECTION 3803  
PROCESSING OR EXTRACTION OF MARIJUANA

**3803.1 Location.** Marijuana processing shall be located in a building complying with the International Building Code and this code. Requirements applied to the building shall be based upon the specific needs for mitigation of the specific hazards identified.

**3803.2 Systems, equipment and processes.** Systems, equipment, and processes shall be in accordance with Sections 3803.2.1 through 3803.2.7. In addition to the requirements of this chapter, electrical equipment shall be listed or evaluated for electrical fire and shock hazard in accordance with RCW 19.28.010(1).

**3803.2.1 Application.** Systems, equipment and processes shall include, but are not limited to, vessels, chambers, containers, cylinders, tanks, piping, tubing, valves, fittings, and pumps.

**3803.2.2 General requirements.** In addition to the requirements in Section 3803, systems, equipment and processes shall also comply with Section 5003.2, other applicable provisions of this code, the International Building Code, and the International Mechanical Code. The use of ovens in post-process purification or winterization shall comply with Section 3803.2.7.

**3803.2.3 Systems and equipment.** Systems or equipment used for the extraction of oils from plant material shall be listed and approved for the specific use. If the system used for extraction of oils and products from plant material is not listed, then a technical report prepared by a Washington licensed engineer shall be provided to the code official for review and approval.

(Insert as Page 311a)

**3803.2.4 Change of extraction medium.** Where the medium of extraction or solvent is changed from the material indicated in the technical report, or as required by the manufacturer, the technical report shall be revised at the cost of the facility owner, and submitted for review and approval by the fire code official prior to the use of the equipment with the new medium or solvent.

**3803.2.5 Required technical report.** The technical report documenting the equipment design shall be submitted for review and approval by the fire code official prior to the equipment being installed at the facility.

**3803.2.5.1 Content of technical report and engineering analysis.** All, but not limited to, the items listed below shall be included in the technical report.

1. Manufacturer information.
2. Engineer of record information.
3. Date of review and report revision history.
4. Signature page shall include:
  - 4.1. Author of the report;
  - 4.2. Date of report; and
  - 4.3. Seal, date and signature of engineer of record performing the design.
5. Model number of the item evaluated. If the equipment is provided with a serial number, the serial number shall be included for verification at the time of site inspection.
6. Methodology of the design review process used to determine minimum safety requirements. Methodology shall consider the basis of design, and shall include a code analysis and code path to demonstrate the reason why specific codes or standards are applicable or not.
7. Equipment description. A list of all components and subassemblies of the system or equipment, indicating the material, solvent compatibility, maximum temperature and pressure limits.
8. A general flow schematic or general process flow diagram (PFD) of the process, including maximum temperatures, pressures and solvent state of matter shall be identified in each step or component. It shall provide maximum operating temperature and pressure in the system.
9. Analysis of the vessel(s) if pressurized beyond standard atmospheric pressure. Analysis shall include purchased and fabricated components.
10. Structural analysis for the frame system supporting the equipment.
11. Process safety analysis of the extraction system, from the introduction of raw product to the end of the extraction process.
12. Comprehensive process hazard analysis considering failure modes and points of failure throughout the process. This portion of the review should include review of emergency procedure information provided by the manufacturer of the equipment or process and not that of the facility, building or room.

13. Review of the assembly instructions, operational and maintenance manuals provided by the manufacturer.
14. Report shall include findings and observations of the analysis.
15. List of references used in the analysis.

**3803.2.6 Building analysis.** The technical report, provided by the engineer of record, shall include a review of the construction documents for location, room, space or building and include recommendations to the fire code official.

**3803.2.6.1 Site inspection.** The engineer of record of the equipment shall inspect the installation of the extraction equipment for conformance with the technical report and provide documentation to the fire code official that the equipment was installed in conformance with the approved design.

**3803.2.7 Post-process purification and winterization.** Post-processing and winterization involving the heating or pressurizing of the miscella shall be approved and performed in an appliance listed for such use. Domestic or commercial cooking appliances shall not be used. The use of industrial ovens shall comply with Chapter 30.

**Exception:** An automatic fire extinguishing system shall not be required for batch-type Class A ovens having less than 3.0 cubic feet of work space.

### **3803.3 Construction requirements.**

**3803.3.1 Location.** Marijuana extraction shall not be located in any building containing a Group A, E, I or R occupancy.

**3803.3.1.1 Extraction room.** The extraction equipment and processes utilizing hydrocarbon solvents shall be located in a room or area dedicated to extraction.

**3803.3.2 Egress.** Any egress door serving an extraction room shall swing in the direction of egress travel and be equipped with panic hardware and self-closing hardware.

**3803.3.2.1 Facility egress.** Egress requirements shall be in compliance with Chapter 10 of the International Building Code.

**3803.3.3 Ventilation.** Ventilation shall be provided in compliance with Chapter 4 of the International Mechanical Code.

**3803.3.4 Control area.** Control areas shall comply with Section 5003.8.3.

**3803.3.5 Ignition source control.** Extraction equipment and processes using flammable or combustible gas or liquid solvents shall be provided with ventilation rates for the room to maintain the concentration of flammable constituents in air below 25% of the lower flammability limit of the respective solvent. If not provided with the required ventilation rate, Class I Division II electrical requirements shall apply to the entire room.

**3803.3.6 Interlocks.** When a hazardous exhaust system is provided, all electrical components within the extraction room or area shall be interlocked with the hazardous exhaust system, and when provided, the gas detection system. When the hazardous exhaust system is not operational, then light switches and electrical outlets shall be disabled. Activation of the gas detection system shall disable all light switches and electrical outlets.

**3803.3.7 Emergency power.**

**3803.3.7.1 Emergency power for extraction process.**

Where power is required for the operation of the extraction process, an automatic emergency power source in accordance with Section 5004.7 and 604 shall be provided. The emergency power source shall have sufficient capacity to allow safe shutdown of the extraction process plus an additional 2 hours of capacity beyond the shutdown process.

**3803.3.7.2 Emergency power for other than extraction process.** An automatic emergency power system in accordance with Section 604 shall be provided when any of the following items are installed:

1. Extraction room lighting;
2. Extraction room ventilation system;
3. Solvent gas detection system;
4. Emergency alarm systems;
5. Automatic fire extinguishing systems.

**3803.3.8 Continuous gas detection system.** For extraction processes utilizing gaseous hydrocarbon-based solvents, a continuous gas detection system shall be provided. The gas detection threshold shall not exceed 25% of the LEL/LFL limit of the materials.

**3803.4 Carbon dioxide enrichment or extraction.**

Extraction processes using carbon dioxide shall comply with this section.

**3803.4.1 Scope.** Carbon dioxide systems with more than 100 pounds of carbon dioxide shall comply with Sections 3803.4 through 3803.4.3. This section is applicable to carbon dioxide systems utilizing compressed gas systems, liquefied-gas systems, dry ice, or on-site carbon dioxide generation.

**3803.4.2 Permits.** Permits shall be required as set forth in Sections 105.6 and 105.7.

**3803.4.3 Signage.** At the entrance to each area using or storing carbon dioxide, signage shall be posted indicating the hazard. Signs shall be durable and permanent in nature and not less than 7 inches wide by 10 inches tall. Signs shall bear the warning "DANGER! POTENTIAL OXYGEN DEFICIENT ATMOSPHERE." NFPA 704 signage shall be provided at the building main entry and the rooms where the carbon dioxide is used and stored.

**3803.5 Flammable or combustible liquid.** The use of a flammable or combustible liquid for the extraction of oils and fats from marijuana shall comply with this section.

**3803.5.1 Scope.** The use of flammable and combustible liquids for liquid extraction processes where the liquid is boiled, distilled, or evaporated shall comply with this section and NFPA 30.

**3803.5.2 Location.** The process using a flammable or combustible liquid shall be located within a hazardous exhaust fume hood, rated for exhausting flammable vapors. Electrical equipment used within the hazardous exhaust fume hood shall be listed or approved for use in flammable atmospheres. Heating of flammable or combustible liquids over an open flame is prohibited.

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CHAPTER 39

**FIXED GUIDEWAY TRANSIT AND PASSENGER RAIL SYSTEMS**

**3901.1 Scope.** Fixed guideway transit and passenger rail systems shall be in accordance with NFPA 130.

(Insert as Page 311d)

**NFPA - Continued**

*Add the following standard to the NFPA list:*

<b>96-07</b>	Standard for Ventilation Control and Fire Protection of Commercial Cooking .....	609.3	█
130-17	Standard for Fixed Guideway Transit and Passenger Rail Systems .....	3901.1	█

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**720-15** Standard for the Installation of Carbon Monoxide (CO) Detection and  
Warning Equipment in Dwelling Units.....915.5.1, 915.5.2, 915.6, 1103.9