

STAFF DRAFT PRE-LAW DEPT REVIEW

ORDINANCE NO.

AN ORDINANCE REPEALING AND REPLACING ARTICLE 7 OF CITY CODE CHAPTER 25-12 TO ADOPT THE 2021 2024 INTERNATIONAL FIRE CODE AND LOCAL AMENDMENTS; AND CREATING OFFENSES.

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF AUSTIN:

PART 1. City Code Chapter 25-12 is amended to repeal Article 7 (Fire Code) and replace it with a new Article 7 to read as follows:

ARTICLE 7. FIRE CODE

§ 25-12-171 INTERNATIONAL FIRE CODE.

(A) The International Fire Code and Appendices B and F, 2021 2024 Edition, published by the International Code Council (“2021 2024 International Fire Code”), are adopted and incorporated by reference into this section with the changes described in Subsection (B) and amendments in Section 25-12-173 (Local Amendments to the 2021 2024 International Fire Code).

(B) The following sections are amended, added or deleted:

*amended, † added, **deleted

Table with 7 columns and 16 rows of ordinance codes and amendments. Includes codes like 101.1*, 102.7.1*, 102.7.2*, 102.7.3†, 103.1*, 103.2*, 103.3*, 104.1*, 104.1.1*, 104.7, 104.10, 104.11.2, 104.13*, 105.3.1*, 105.5*, 105.5.2**, 105.5.3**, 105.5.4**, 105.5.5*, 105.5.6**, 105.5.7**, 105.5.8**, 105.5.9*, Table 105.5.9**, 105.5.10**, 105.5.11*, 105.5.12**, 105.5.13**, 105.5.16.1†, 105.5.16.2†, 105.5.16.3†, 105.5.17*, 105.5.18*, 105.5.19**, 105.5.20**, 105.5.21**, 105.5.22*, 105.5.22.1†, 105.5.22.1.1 through 105.22.1.4†, 105.5.22.2†, 105.5.22.3†, 105.5.22.4†, 105.5.22.5†, 105.5.22.6†, 105.5.22.7†, 105.5.22.7.1 through 105.5.22.7.11 †, 105.5.23*, 105.5.24*, 105.5.25**, 105.5.26**, 105.5.27**, 105.5.28**, 105.5.29*, 105.5.30*, 105.5.31**, 105.5.32**, 105.5.33**, 105.5.34, 105.5.35**, 105.5.36*, 105.5.37**, 105.5.38*, 105.5.39*, 105.5.40, 105.5.41*, 105.5.41.1 through 105.5.41.2†, 105.5.42**, 105.5.43**, 105.5.44*, 105.5.45**, 105.5.46**, 105.5.47**, 105.5.48**, 105.5.49**, 105.5.50**, 105.5.51*, 105.5.52**

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105.5.53*	105.5.54*	105.5.57*	105.6*	105.6.1*	105.6.2*	105.6.3 through 105.6.25**
106.1*	106.2	106.2.1	106.2.4	107 108.1 through 108.6*	108.2.3 109.2.3*	111.1 112.1*
112.3.2 113.3.2*	112.3.3 113.3.3*	112.3.3.1 113.3.3.1 through 113.3.3.3†	112.3.4 113.3.4*	203.3*	203.6*	304.3.3 304.3.5*
307.2*	307.4*	308.1.4	308.5 and subsections†	308.6 and subsections†	308.7 and subsections†	311.5*
311.5.1*	311.5.2 through 311.5.5**	314.4*	316.7†	316.7.1	320.2*	323 and subsections †
324 and subsections†	401.3*	401.3.1*	401.3.4 and subsections†	408 and subsections†	409 and subsections†	503.1*
503.1.1*	503.1.4†	503.1.5†	503.2.1*	503.2.2	503.2.3.1†	503.2.4*
503.2.6*	503.2.6.1†	503.3*	503.3.1†	503.3.2†	503.4.1*	503.6*
503.7*	504.1*	505.1*	505.3†	505.3.1†	507.3*	507.4*
507.5.1*	507.5.3*	507.5.7†	507.6 and subsections†	508.1.6*	508.1.7*	510.1
510.1.1	510.1.2	510.5.3*	605.4 and subsections*	609.2 606.2*	611 and subsections†	901.4.7.3*
901.6	Table 901.6.1	901.6.2*	901.6.2.1**	901.6.2.2**	901.6.3*	903.2.1.6*
903.2.2.3†	903.2.4.2*	903.2.8.1.1	903.2.9.3**	903.3.1.1.1*	903.3.1.2.1	903.3.1.2.4†
903.3.5*	903.3.5.3†	903.3.5.4	903.3.6*	903.3.10†	903.4.3*	904.9
904.14*	904.15	905.1	905.1.1	905.3.3*	905.4*	905.5.3
907.2	907.2.1.3†	907.2.2.3†	907.2.2.3.1†	907.2.3.1†	907.2.6.4†	907.2.8.2
907.2.9	907.2.9.1	907.5.2.1.1	907.6.1	907.6.1.1†	907.6.1.2†	907.6.1.3†
907.6.1.4†	907.6.2.1	907.6.7†	909.5*	909.10.2*	909.12.4	909.18.8
909.20.4.1†	909.20.4.2†	909.20.4.3†	909.22.6*	912.1	912.1.1	912.4
912.4.1	912.4.1.1†	912.5*	912.5.1*	912.5.5†	913.1.1†	913.2.2.1†
913.3.1.2†	914.5.3	915.1 entire section replaced*	916.1*	916.4*	916.5*	916.6*
916.6.1†	916.7*	916.8*	916.10*	917.2**	Chapter 10**	1001.1†
1032.2†	1103.4.1**	1103.4.8**	1103.4.9**	1103.5.6†	1103.6	1103.7.6 1103.7.7†
1103.8.3	1103.8.4	1103.9*	1203.2.20†	1207.1*	1207.1.1 1207.1.3*	Table 1207.1.3*

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1207.1.2.1 <u>1207.1.4*</u>	1207.6 <u>1207.1.8*</u>	<u>1207.1.8.1*</u>	<u>1207.1.8.3†</u>	1207.4.7*	1207.5.3*	1207.5.4*
Table 1207.6*	<u>1207.6.3†</u>	1207.6.2.3 <u>1207.6.2.4†</u>	1207.6.6 <u>1207.6.5*</u>	<u>1207.6.5.1</u> through <u>1207.6.3†</u>	1207.9.1*	2301.1*
2304.1*	2304.2*	2305.1.3*	2305.2.1*	2305.5	2306.7.6.2*	2312.1 through 2312.8.6†
2403.5†	2701.4*	3103.5 <u>3103.4*</u>	3103.8.2 <u>3103.7.2*</u>	<u>4104.2*</u>	5001.1.2†	5001.2*
5001.2.3†	5001.5*	5001.5.1	5001.5.2*	5001.7 and subsections†	5001.7.1	5001.7.2
5001.7.3	5001.7.4	5001.7.5	5001.7.6	5001.7.7	5001.7.8	5001.7.9
Table 5003.1.1(1)*	Table <u>5003.1.1(5)†</u>	5003.2.2.3†	5003.2.4.3†	5003.3.1.5 <u>5003.3.1.4*</u>	5003.9.8*	<u>5003.13.2*</u>
5004.2*	5004.2.1*	5004.2.2*	5004.2.2.1*	5004.2.2.5*	5004.2.2.6*	5005.1.8.1†
5005.1.12**	5306.2*	5306.2.1*	5306.2.2*	<u>5306.2.3*</u>	5306.3*	5404.2*
5404.2.1*	5504.3.1.1*	5601.1.6	5601.2.4 and subsections*	5601.2.5 and subsections†	5601.2.6†	5601.4*
5607.4*	5607.5*	5607.11.1†	5607.12.1†	5607.14*	5607.16 and subsections†	5607.17†
5607.18†	5608.2.3	<u>5703.4*</u>	5703.4.1 to 5703.4.4.5.2†	5704.2.9.6.1*	5704.2.10*	5704.2.10.1 *
5704.2.11.2*	5704.2.11.3	5704.2.11.4.1 *	5803.1.1*	6003.1.4.1	6101.2*	6103.2.1*.2
6103.2.2*	6104.2*	6104.3.2*	6104.4*	6107.2*	6108.1	6109.11.2*
6303.1.1.2.1†	Chapter 80, <u>as reflected*</u>	B105.1 to B105.1.2	<u>B104.1*</u>	<u>B104.2*</u>	Appendix F,	Appendix M, M103.2, M103.3, M103.4, M103.5

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(C) Following definitions are deleted:

Group E Day Care	High-hazard Group H	Institution Group I-1	Institution Group I-2
Institution Group I-4	Group R-1	Group R-3 Care Facilities within a Dwelling	

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(D) The city clerk shall retain a copy of the ~~2021~~ 2024 International Fire Code with the official ordinances of the City of Austin.

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§ 25-12-172 CITATIONS TO THE FIRE CODE.

In the City Code, “Fire Code” means the ~~2021~~ [2024](#) Fire Code as adopted by Section 25-12-171 (*International Fire Code*), and as amended by Section 25-12-173 (*Local Amendments to the International Fire Code*).

§ 25-12-173 LOCAL AMENDMENTS TO THE FIRE CODE.

Each provision in this section is a substitute for the identically numbered provision deleted by Section 25-12-171(B),(C) (*International Fire Code*) or is an addition to the ~~2021~~ [2024](#) Fire Code:

[A]101.1 Title. These regulations shall be known as the Fire Code and hereinafter referred to as “this code.”

[A] 102.7.1 Conflicts. In the event of a conflict between referenced provisions of the International Mechanical Code and the Mechanical Code, the Mechanical Code prevails. In the event of a conflict between referenced provisions of the International Plumbing Code, the International Fuel Gas Code and the Plumbing Code, the Plumbing Code prevails. Where differences occur between the provisions of the Fire Code and the referenced standards, the provisions of the Fire Code prevail.

[A] 102.7.2 Provisions in referenced codes and standards. Unless precedence is specified by another ordinance of the City, where the extent of the reference to a referenced code or standard includes subject matter that is within the scope of this code, the provisions of this code, as applicable, shall take precedence over the provisions in the referenced code or standard.

[\[A\] 102.7.3 Fire Protection Criteria Manual. Additional information on procedures and rules for administration of this code are available in the Fire Protection Criteria Manual.](#)

[A] SECTION 103 FIRE PREVENTION

[A] 103.1 General. The Austin Fire Department, under the direction of the fire chief, is authorized to implement, administer and enforce the Fire Code.

[A] 103.2 Appointment. The fire chief is appointed by the City Manager in accordance with the policies and procedures of the City of Austin and in compliance with state law. The fire chief serves as the fire code official.

[A] 103.3 Deputies. The fire chief appoints the fire marshal and assistant fire marshals, inspectors, or other employees and delegates duties consistent with the policies and procedures of the Austin Fire Department. Where the terms “fire code official”, “fire chief”, “chief”, “fire department”, or “fire marshal” are used in the Fire Code, the

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1 provisions apply to assistant fire marshals, inspectors, engineering professionals, and
2 other fire department employees in the execution of their assigned duties.

3 **[A] 104.1 General.** The fire ~~ehief~~chief code official is authorized to administer, implement,
4 and enforce the Fire Code; is authorized to render interpretations of the Fire Code; and
5 to adopt policies, procedures, rules and regulations in order to implement the Fire
6 Code. An interpretation rendered or a policy, procedure, rule, or regulation adopted by
7 the fire ~~ehief~~chief code official must comply with the intent and purpose of the Fire Code
8 and cannot have the effect of waiving a requirement of the Fire Code. Under the fire
9 chief's direction, the fire department is authorized to enforce all ordinances of the
10 jurisdiction pertaining to:

- 11 1. the prevention of fires;
- 12 2. the suppression or extinguishment of dangerous or hazardous fires;
- 13 3. the storage, use and handling of hazardous materials;
- 14 4. the installation and maintenance of automatic, manual and other private
15 fire alarm systems and fire-extinguishing equipment;
- 16 5. the maintenance and regulation of fire escapes;
- 17 6. the maintenance of fire protection and the elimination of fire hazards on
18 land and in buildings, structures and other property, including those under
19 construction;
- 20 7. the maintenance of means of egress; and
- 21 8. the investigation of the cause, origin and circumstances of fire and
22 unauthorized releases of hazardous materials.

23 **[A] 104.1.1 Authorized Personnel.** The fire chief and members of the fire department
24 assigned to enforce the Fire Code are authorized to issue citations for violations of the
25 Fire Code.

26 ~~**[A] 104.10 Alternative materials and methods.** The provisions of the Fire Code are not
27 intended to prevent the installation of any material or to prohibit any method of
28 construction not specifically prescribed by the Fire Code, provided that any such
29 alternative has been approved. The fire chief code official is authorized to approve an
30 alternative material or method of construction where the fire chief code official finds that
31 the proposed design is satisfactory and complies with the intent of the provisions of the
32 Fire Code, and that the material, method or work offered is, for the purpose intended, at~~

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~~least the equivalent of that prescribed in this code in quality, strength, effectiveness, fire resistance, durability and safety. The owner, lessee, or a representative shall apply for approval of an alternate material or method in writing, detailing the specifics of the alternate materials or methods including evidence of equivalence with the prescribed requirements of the Fire Code. If the alternative means or methods also involves matters regulated by the Building Code, the alternative means or methods is also subject to the approval of the building official.~~

[A] 104.13 Authority of the Chief. The fire chief, or the fire chief's designee, may order the evacuation of or cessation of its use or operation of any area, premises, building, building under construction, or vehicle that is or is in imminent danger of becoming a fire hazard, becoming a chemical exposure hazard, or becoming a life or health hazard as a result of flooding or other dangerous condition.

[A] 105.3.1 Expiration. An operational permit remains in effect until reissued, renewed, revoked, or for such a period of time as specified in the permit. Construction permits are issued and administered consistent with the Building Code. Unless otherwise provided in the Fire Code, permits are not transferable and any change in occupancy, operation, tenancy or ownership requires a new permit.

105.5 Required operational permits. The fire code official may issue an operational permit for an operation, practice, or function described in this section.

105.5.2 Aerosol products, aerosol cooking spray products and plastic aerosol 3 products. Not adopted.

105.5.3 Amusement ~~buildings~~ areas. Not adopted.

105.5.4 Aviation facilities. Not adopted.

105.5.5 Carnivals and fairs. An operational permit is required to conduct a carnival or fair.

105.5.6 Cellulose nitrate film. Not adopted.

105.5.7 Combustible dust-producing operations. Not adopted.

105.5.8 Combustible fibers. Not adopted.

105.5.9 Compressed gases. An operational permit for compressed gases is required and must comply with Section ~~105.6.21~~ 105.5.22 (*Hazardous materials*).

105.5.10 Covered and open mall buildings. Not adopted.

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1 **105.5.11 Cryogenic fluids.** An operational permit for cryogenic fluids is required and
2 must comply with Section ~~105.6.21~~ [105.5.22](#) (*Hazardous materials*).

3 **105.5.12 Cutting and welding.** Not adopted.

4 **105.5.13 Dry Cleaning.** Not adopted.

5 **105.5.15 Exhibits and trade shows.** An operational permit is required to operate exhibits
6 and trade shows.

7 **105.5.16 Explosives.**

8 **105.5.16.1 Blasting.** An operational permit is required to use explosives or blasting
9 agents at an addressed location for a specified period, which is based on the class of
10 permit. Chapter 56 (*Explosives and fireworks*) establishes additional requirements for a
11 blasting operational permit.

12 1. Class A: 45 days

13 2. Class B: 120 days

14 3. Class C: 1 year

15 4. Class D: 10 days

16 **105.5.16.2 Explosives or Blasting Agents.** An operational permit is required for the
17 manufacture, storage, handling, sale, or use explosives, and explosive materials within
18 the scope of Chapter 56 (*Explosives and fireworks*).

19 **Exception:** Storage in Group R-3 occupancies of smokeless propellant, black
20 powder and small arms primers for personal use, not for resale and consistent with
21 Section 5606.

22 **105.5.16.3 Fireworks.** An operational permit is required to manufacture, store,
23 handle, sell, or use any quantity of fireworks or pyrotechnic special effects.

24 **105.5.17 Fire protection systems.** An annual operational permit is required for all fixed
25 fire protection systems in buildings and facilities, including but not limited to fire alarm
26 systems, fire sprinkler systems, commercial kitchen hood suppression systems, and
27 mechanical smoke control systems. A single permit is required for each building or
28 facility and must detail the types and locations of systems present. Inspections and testing
29 that complies with the City of Austin Fire Protection Criteria Manual and any other
30 applicable national standards is a condition of permit approval.

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105.5.18 Flammable and combustible liquids. An operation permit for flammable and combustible liquids is required and must comply with Section 105.5.22.2 (*Hazardous materials*).

105.5.19 Floor finishing. Not adopted.

105.5.20 Fruit and crop ripening. Not adopted.

105.5.21 Fumigation and insecticidal fogging. Not adopted.

105.5.22 Hazardous Materials.

105.5.22.1 An operational permit is required to use or possess hazardous materials in a quantity in excess of that described in ~~105.6.21~~ [105.5.22.2](#) below and meeting any one of the following criteria:

105.5.22.1.1 Materials with a ~~toxicity~~ [health](#) rating of 2 or more, as defined in Appendix F.

105.5.22.1.2 Materials with a flammability rating of 2 or more, as defined in Appendix F.

105.5.22.1.3 Materials with an instability rating of 2 or more, as defined in Appendix F.

~~105.6.21~~[5.22.1.4](#) Compressed gases liquefied compressed gases and cryogenic fluids.

105.5.22.2 An operational permit is required to use or possess hazardous materials if the aggregate quantity of each material with the same hazard rating, in the same physical state throughout the facility, is equal to or greater than the following:

MINIMUM AGGREGATE QUANTITY

<u>Flammability</u>	<u>Rating</u>	<u>Quantity</u>
4	<u>Extreme</u>	<u>0.5 pounds or 5 gallons</u>
3	<u>High</u>	<u>12 pounds or 10 gallons</u>
2	<u>Moderate</u>	<u>60 pounds or 120 gallons</u>
Toxicity Health	<u>Rating</u>	<u>Quantity</u>
4	<u>Extreme</u>	<u>0.35 ounces or 0.3 fluid ounces</u>
3	<u>High</u>	<u>10 pounds or 1 gallon</u>
2	<u>Moderate</u>	<u>110 pounds or 55 gallons</u>
<u>Instability</u>	<u>Rating</u>	<u>Quantity</u>

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<u>4</u>	<u>Extreme</u>	<u>0.35 ounces or 0.3 fluid ounces</u>
<u>3</u>	<u>High</u>	<u>10 pounds or 1 gallon</u>
<u>2</u>	<u>Moderate</u>	<u>110 pounds or 55 gallons</u>
<u>Carbon Dioxide System</u>		<u>101 pounds</u>
<u>Compressed gases and liquefied compressed gases, including oxygen</u>		<u>100 cubic feet @ NTP</u>
<u>Cryogenic fluids</u>		<u>1 gallon</u>
<u>Storage of Lithium Metal and Lithium-Ion Batteries</u>		<u>16 cubic feet</u>
<u>Stationary and Mobile Energy Storage System (ESS)</u>		<u>Energy Capacity or Quantity</u>
<u>Capacitor ESS – nameplate rating</u>		<u>3 kWh</u>
<u>Flow batteries – nameplate rating</u>		<u>20 kWh</u>
<u>Lithium ion ESS – nameplate rating</u>		<u>20 kWh</u>
<u>Nickel metal hydride – nameplate rating</u>		<u>70 kWh</u>
<u>Other battery technologies – nameplate rating</u>		<u>10 kWh</u>
<u>Other electrochemical ESS technologies – nameplate rating</u>		<u>3 kWh</u>
<u>Stationary lead-acid batteries - flooded and valve regulated, and Nickel-Cadmium ESS. Mobile ESS utilizing lead acid battery technology are exempt.</u>		<u>15 gallons</u>

1 **105.5.22.3** An operational permit is required to dispense liquid fuels, regardless of hazard
2 classification, from tank vehicles into the fuel tanks of motor vehicles at commercial,
3 industrial, governmental or manufacturing establishments. A person may not dispense
4 liquid fuels of any kind from tank vehicles into the fuel tanks of motor vehicles at a
5 residence.

6 **105.5.22.4** The criteria for the rating of hazardous materials are contained in NFPA
7 Standard No. 704 (See Appendix F). The fire ~~chief~~ code official uses NFPA Standard
8 No. 704 to assign hazard ratings to hazardous materials. If the NFPA Fire Protection
9 Handbook assigns a material a hazard rating, then that rating is used. When a rating is not
10 provided, the fire ~~chief~~ code official uses NFPA 704, information contained in ~~Material~~
11 Safety Data Sheets (~~MSDS~~), Appendix E, or other commonly accepted published
12 standards of nationally recognized organizations/authors to classify hazardous materials.

13 **105.5.22.5** Compressed and liquefied gases and cryogenic fluids will be totaled on a
14 quantitative basis for each hazard class. The materials may be reported in pounds or
15 gallons but, for the purpose of regulation, are calculated in cubic feet by the Fire
16 Department.

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105.5.22.6 The state of a material (liquid, solid, gas) is based on its physical state at NTP.

105.5.22.7 Materials not requiring a permit. The following materials are not subject to the permitting requirements:

105.5.22.7.1 Inert gases that do not support combustion including argon, helium, krypton, neon, xenon, compressed air, and nitrogen. When stored as cryogenic fluids, these gases are subject to permitting requirements.

105.5.22.7.2 Any material used or stored for household purposes at a private residence.

105.5.22.7.3 Any material contained in a transportation vehicle when the vehicle is not being used for permanent storage.

105.5.22.7.4 Commercial products used at a facility solely for janitorial purposes and maintenance products that are necessary for the immediate, continued operation of equipment at the facility (not to include fuels) and are not for resale. This includes air conditioning refrigerant and pool chemicals when maintained in quantities less than the following:

TABLE 105.5.22.7.4 – MATERIAL LIMITS

Material	Rating	Quantity
Corrosives (i.e. Muriatic Acid)	3-0-0	4 gallons
Class 2 Oxidizers Trichloro-s-triazinetriene (trichloroisocyanuric acid)	3-0-2	150 pounds
Class 3 Oxidizers Calcium hypochlorite (HTH, Hy-chlor)	3-0-2	110 pounds
<u>Non-Flammable</u> Air Conditioning Refrigerant	2-0-0	2-30 pound cylinders

105.5.22.7.5 Materials held solely as pharmaceutical products that are packaged for distribution to, and use by, the general public, except for those materials with a toxic or flammable hazard rating of 3 or more and reactive materials with a rating of 2 or more, based on the criteria in the Fire Protection Manual.

105.5.22.7.6 Any waste material regulated by the State of Texas under Chapter 361, Health and Safety Code or under Federal regulations must be listed in a permit application but will not require a permit nor be considered in setting the amount of the permit fee.

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1 **105.5.22.7.7** Nuclear and radioactive material(s) regulated by the State of Texas
2 under Chapter 401, Health and Safety Code or under Federal regulations must be
3 listed in a permit application but will not require a permit nor be considered in
4 setting the amount of the permit fee.

5 **105.5.22.7.8** Any material contained in a process vessel, except when the process
6 vessel is being used for permanent storage.

7 **105.5.22.7.9** Any material stored in an underground tank that complies with the
8 permit requirements of the Development Services Department, or its successor
9 department, and with the reporting requirements of the U.S. Environmental
10 Protection Agency (EPA) Emergency Planning and Community Right-to-Know
11 Act (EPCRA), also known as Title III of the Superfund Amendments and
12 Reauthorization Act (SARA Title III), and if applicable, with the requirements of
13 the Texas Hazard Communication Act.

14 **105.5.22.7.10** Class II combustible liquids used to fuel emergency generators,
15 located outside of buildings, and in approved tanks or containers less than 275
16 gallons in size.

17 **105.5.22.7.11.** Carbon dioxide systems utilizing high pressure cylinders that are
18 not associated with beverage dispensing applications.

19 **105.5.23 HPM facilities.** HPM facilities, including Group H-5 occupancies are required
20 to obtain a hazardous materials permit and must comply with Section ~~105.6.21~~ [105.5.22](#).

21 **105.5.24 High-piled storage.** A triennial operational permit is required to use a building
22 or portion thereof as a high-piled storage area that exceeds ~~500~~ [2000](#) square feet
23 (~~46~~[185](#)m²).

24 **105.5.25 Hot work.** Not adopted.

25 [105.5.26 Indoor plant cultivation.](#) Not adopted

26 ~~105.5.26~~[27](#) **Industrial ovens.** Not adopted.

27 ~~105.5.27 Lumber yards and woodworking plants.~~ Not adopted.

28 **105.5.28 Liquid- or gas-fueled vehicles in assembly buildings.** Not adopted.

29 [105.5.29 Lithium batteries](#) An operational permit for the accumulation of lithium ion
30 and lithium metal batteries is required and must comply with Section 105.5.22

31 ~~105.5.29~~[30](#) **LP-Gas.** An operational permit is required for liquefied petroleum gas and
32 must comply with Section ~~105.6.21~~ [105.5.22](#) (Hazardous materials).

33 [105.5.31 Lumber yards and woodworking plants.](#) Not adopted.

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1 **105.5.3032 Magnesium.** Not adopted.

2 **105.5.3133 Miscellaneous combustible storage.** Not adopted.

3 **105.5.3335 Motor fuel-dispensing facilities.** Not adopted.

4 **105.5.3436 Open burning.** An operational permit is required to kindle or maintain an
5 open fire or a fire on a public street, alley, road or other public or private ground. A
6 person must comply with the instructions and stipulations of the permit. An open fire or
7 fire includes trench burners (Section 308.5), mobile incinerators (Section 308.6) and
8 agricultural burning (Section 308.7)

9 **Exception:** Recreational fires

10 **105.5.3537 Open flames and torches.** Not adopted.

11 **105.5.3638 Open flames and candles.** An operational permit is required to use open
12 flames or candles in connection with an assembly area or the dining area of a restaurant
13 or drinking establishment.

14 **105.5.3739 Organic coatings.** An operational permit is required for organic coatings and
15 must comply with Section 105.6.21 (*Hazardous materials*).

16 **105.5.3941 Places of assembly.** An operational permit or appropriate certificate of
17 occupancy is required to operate a place of assembly.

18 **105.5.3941.1** An annual operational permit is required to operate a place of
19 assembly where 51% or more of the gross receipts at the location are from
20 alcoholic beverage sales.

21 **105.5.3941.2** With concurrence of the Building Official, the fire ~~chief~~-code
22 official may issue a temporary change of use permit to use a structure for public
23 assembly in accordance with Section 408 of this code.

24 **105.5.42 Plant extraction systems.** Not adopted

25 **105.5.4143 Private fire hydrants.** Not adopted.

26 **105.5.4244 Pyrotechnic special effects material.** An operational permit is required to
27 use and handle pyrotechnic special effects material.

28 **105.5.4345 Pyroxylin plastic.** Not adopted.

29 **105.5.4446 Refrigeration equipment.** Not adopted.

30 **105.5.4547 Repair garages and motor fuel-dispensing facilities.** Not adopted.

31 **105.5.4648 Rooftop heliports.** Not adopted.

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1 **105.5.4749 Spraying or dipping.** Not adopted.

2 **105.5.4850 Storage of scrap tires and tire byproducts.** Not adopted.

3 **105.5.4951 Temporary membrane structures, special event structures and tents.** An
4 operational permit is required to operate an air-supported temporary membrane structure,
5 special event structure or a tent having an area in excess of 100 square feet (9.3 m²), or an
6 aggregate area of multiple tents or membrane structures placed side by side in excess of
7 400 square feet (37m²).

8 **Exceptions:**

- 9 1. Tents used exclusively for recreational camping purposes.
- 10 2. Funeral tents and curtains or extensions attached thereto, when used for
11 funeral services.
- 12 3. Tents that are not attached to or located within 20 feet (6096 mm) of, a
13 building shall not require a permit unless the tent is in excess of 400 square
14 feet (37 m²).
- 15 4. Tents open on all sides which comply with all of the following:
- 16 4.1 Individual tents having a maximum size of 700 square feet (65 m²).
- 17 4.2 The aggregate area of multiple tents placed side by side without a
18 firebreak clearance of not less than 12 feet (3658mm) shall not exceed
19 700 square feet (65 m²) total.
- 20 4.3 A minimum clearance of 20 feet (6096 mm) to structures and other
21 tents shall be provided.
- 22 5. Inflatable playground equipment at one- or two- family residences.
- 23 6. Inflatable playground equipment used for less than 24 hours at places of
24 worship or education facilities (for ages served by the 6th grade and younger)
25 when located a minimum of 20 feet from the nearest building.

26 **105.5.5052 Tire-rebuilding plant.** Not adopted.

27 **105.5.5153 Waste handling.** Not adopted.

28 **105.5.5254 Wood Products.** Not adopted.

29 **105.5.57 Temporary heating for construction sites.** Not adopted

30 **105.6 Required construction permits.** The fire code official may issue construction
31 permits for work as described in Section 105.76.1.

1 **105.6.1 No Separate Construction Permits Required.** Construction permits for
2 permanent structures and systems that are issued through the building permit
3 system administered by the Development Services Department, or its successor
4 department.

5 **105.6.2 Temporary membrane structures, special event structures and tents.**
6 A construction permit is required to erect an air supported temporary membrane
7 structure, special event structure or tent having an area in excess of 100 square feet
8 (9.3 m²) or an aggregate area of multiple tents placed side by side in excess of 400
9 square feet (37 m²).

10 **Exceptions:**

- 11 1. Tents used exclusively for recreational camping purposes.
- 12 2. Funeral tents and curtains or extensions attached thereto, when used
13 for funeral services.
- 14 3. Tents that are not attached in any way to or within 20 feet (6096 mm)
15 of a building shall not require a permit unless the tent is in excess of
16 400 square feet (37 m²).
- 17 4. Tents open on all sides, which comply with all of the following;
 - 18 4.1 Individual tents having a maximum size of 700 square feet (65
19 m²).
 - 20 4.2 The aggregate area of multiple tents placed side by side without
21 a fire break clearance of not less than 12 feet (3658 mm) shall
22 not exceed 700 square feet (65 m²) total.
 - 23 4.3 A minimum clearance of 20 feet (3658 mm) to structures and
24 other tents shall be provided.
- 25 5. Inflatable playground equipment at one- or two- family residences.
- 26 6. Inflatable playground equipment used for less than 24 hours at places
27 of worship or education facilities (for ages served by the 6th grade and
28 younger) when located a minimum of 20 feet from the nearest
29 building.

30 **[A] 106.1 Submittals.** Construction documents and supporting data that are part of a site
31 plan or building permit submittal must be submitted consistent with the requirements in
32 Title 25 (Land Development). After building permit review, a shop drawing submittal
33 must be submitted directly to the fire department ~~in two or more sets in such form and~~
34 ~~detail as required by the fire chief code official~~ as described in the Fire Criteria Manual.

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1 The construction documents shall be prepared by a registered design professional,
2 licensed fire alarm planning superintendent (APS), or licensed fire sprinkler responsible
3 managing employee (RME) as appropriate and as required by Texas Law. Construction
4 documents must comply with the Fire Code and be consistent with the guidance in the
5 City's "Fire Protection Criteria Manual".

6 **Exception:** The fire ~~chief~~ code official may waive the submission of construction
7 documents and supporting data that is not required to be prepared by a registered
8 design professional if the fire ~~chief~~ code official finds that the nature of the work
9 applied for is such that review of construction documents is not necessary to obtain
10 compliance with the Fire Code.

11 ~~[A] 106.2 Examination of documents. The fire chief code official shall examine or~~
12 ~~cause to be examined the accompanying construction documents and shall ascertain by~~
13 ~~such examinations whether the work indicated and described is in accordance with the~~
14 ~~requirements of this code the Fire Code.~~

15 ~~[A] 106.2.1 Information on construction documents. Construction documents shall be~~
16 ~~drawn to scale, be on suitable material, and in a media acceptable to the City of Austin~~
17 ~~Development Services Department, or its successor department and the Austin Fire~~
18 ~~Department. Scale of reference shall be based on standard US empirical or SI units. A~~
19 ~~person who submits a shop drawing to the Fire Department that is drawn to a scale other~~
20 ~~than 1/8"=1' or 1/4"=1' must pay a fee, set by a separate ordinance, for non-standard~~
21 ~~drawing scales. Construction documents shall be of sufficient clarity to indicate the~~
22 ~~location, nature and extent of the work proposed and must show, in detail, that the work~~
23 ~~will conform to the provisions of this code and relevant laws, ordinances, rules and~~
24 ~~regulations as determined by the fire code official.~~

25 ~~[A] 106.2.4 Approved documents. Construction documents approved by the fire chief~~
26 ~~code official are approved with the intent that such construction documents comply in all~~
27 ~~respects with Fire Code. When plans, specifications, or other construction documents are~~
28 ~~approved or issued, approval does not authorize a violation of the Fire Code or any other~~
29 ~~City ordinance, regulation, or requirement. An approval that appears to authorize a~~
30 ~~person to violate or disregard a provision of the Fire Code is not valid. Review and~~
31 ~~approval by the fire department does not relieve the applicant of his or her responsibility~~
32 ~~to comply with the Fire Code. The fire chief code official may require a person to correct~~
33 ~~errors in the plans, specifications, or data; and may require a process, building operation,~~
34 ~~or use to cease when it is carried out in a manner that violates the Fire Code or other City~~
35 ~~ordinance, regulation, or requirement.~~

36 Section 1078 FEES

37

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1 [A] **1078.1 Fees.** A permit shall not be issued until the fees have been paid.

2
3 [A] **1078.2 Schedule of fees.** Each permit or service fee established in the Fire Code is
4 set by separate ordinance.

5 [A] **1078.4 Work commencing before permit issuance.** Any person who commences
6 any work, activity or operation regulated by this code before obtaining the necessary
7 permits shall be subject to a notice of violation and to prosecution as provided in
8 section ~~10911.3~~ 11.3 of this code. Any penalties assessed due to prosecution under this
9 code shall be in addition to the required permit or service fees.

10
11 [A] **1078.5 Related fees.** The payment of the fee for the construction, alteration,
12 removal or demolition of work done in connection to or concurrently with the work or
13 activity authorized by a permit shall not relieve the applicant or holder of the permit
14 from the payment of other fees that are prescribed by law.

15 [A] **1078.6 Refunds.** The refund policy of the City of Austin and the Austin Fire
16 Department shall be applicable to the over payment of any fees associated with the
17 administration of this code.

18 **1089.2.3 Re-inspections.** When previously identified violations have not been corrected,
19 a fee shall be assessed for a construction related re-inspection requested by the applicant
20 or contractor. When a scheduled inspection fails, or is cancelled with less than a 24 hour
21 notice, due to the fact that the applicant or contractor was not capable of nor prepared for
22 the inspection to be conducted, a re-inspection fee shall be assessed. The re-inspection
23 fee shall be in an amount set by separate ordinance. No subsequent inspections shall be
24 made until the required fees have been paid and required documentation submitted.

25 **1142.1 Appeals.** Appeals are handled consistent with Chapter 25-1, Article 7, Division 1
26 (*Appeals*).

27 **1123.3.2 Compliance with orders and notices.** Orders and notices of violation issued
28 or served as provided by this code shall be complied with by the owner, operator,
29 occupant or other person responsible for the condition or violation to which the notice
30 of violation pertains. In cases of immediate danger to persons or property, immediate
31 compliance is required. If the building or other premises is not owner occupied, under
32 lease or otherwise, and the order or notice requires additions or changes in the building
33 or premises which would immediately become fixtures and be the property of the
34 owner of the building or premises, such orders or notices shall be complied with by the
35 owner.

36 **Exception:** When the owner and the occupant have agreed otherwise between
37 themselves, in which event the occupant shall comply.

1 **1123.3.3 Prosecution of violations.**

2 **1123.3.3.1** A violation of this code is a misdemeanor punishable as set forth in City
3 Code Section 25-1-462 (*Criminal Enforcement*). The filing of a criminal action
4 does not preclude the pursuit of a civil, quasi-judicial, or administrative action for
5 violation of this code.

6 **1123.3.3.2** The fire ~~chief~~ code official may enforce the provisions of this code by
7 pursuing all civil, quasi-judicial, administrative, and criminal actions; all remedies
8 available to a city under state law; or by any combination of remedies available at
9 law or equity. In any court action, the fire official may pursue the collection of
10 attorney's fees and costs; and maximum interest on liens and judgments as allowed
11 by law. The filing of a civil action does not preclude the pursuit of any other
12 action or remedy, whether quasi-judicial, administrative, or criminal. All remedies
13 authorized under this code are cumulative of all others unless otherwise expressly
14 provided.

15 **1123.3.3.3 Citations.** Persons operating or maintaining an occupancy, premises
16 or vehicle subject to this code who allow a hazard to exist or fail to take
17 immediate action to abate a hazard on such occupancy, premises or vehicle when
18 ordered or notified to do so by the fire ~~chief~~ code official shall be guilty of a
19 misdemeanor.

20 **1123.3.4 Unauthorized tampering.** Signs, notices, orders, tags or seals posted or
21 affixed by the fire ~~chief~~ code official shall not be mutilated, destroyed or tampered with
22 or removed without authorization from the fire ~~chief~~ code official.

23 **202.1 Supplemental and replacement definitions.** The following definitions in this
24 subsection apply throughout this code and supplement the definitions in Section 202
25 (*General Definitions*) of the ~~2021~~ 2024 International Fire Code.

26 **ACCESS ROADWAY.** Any road(s) providing access around the perimeter of any
27 building, to a building from a public street, or to a building or its fire department
28 connection from a required fire hydrant.

29 **ALL WEATHER DRIVING SURFACE.** Hot mix asphaltic concrete or concrete
30 pavement as per City of Austin Standard Specifications or other alternative roadway
31 methods approved by the fire code official.

32 **[B] ANIMAL HOUSING OR CARE FACILITY.** A facility used for twenty-four
33 (24) hour occupancy or permanent housing of animals for the purpose of providing a
34 service, participating in a sport, or for providing general board and care. Animal
35 housing or care facilities include animal shelters, animal breeding facilities, animal

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1 grooming facilities, animal daycare facilities, pet resorts, animal hospitals/veterinary
2 clinics, kennels and pounds. Animal housing or care facilities do not include animal or
3 pet care by pet owners for their own animals at their owned or rented residential
4 property, and these facilities do not include Group U agricultural uses for the care and
5 feeding of the agricultural business owner's own livestock.

6 **AUTOMOBILE WRECKING YARD.** An area that stores salvage vehicles.

7 **BATTERY ELECTRIC VEHICLE (BEV).** A National Highway Traffic Safety
8 Administration certified electrified vehicle with a high voltage system and a battery for
9 propulsion including, but not limited to, hybrid electric vehicle, plug-in hybrid electric
10 vehicle, plug-in electric vehicle, and fuel cell electric vehicle.

11 ~~**[B] BED AND BREAKFAST.** A private residence having a limited number of sleeping~~
12 ~~rooms which are available for transient guests who have paid for accommodations. For~~
13 ~~the different classifications of Bed and Breakfast, refer to Section 25-2-781 (Bed and~~
14 ~~Breakfast Residential Use Structures Classified).~~

15 **CERTIFICATION.** A record of the test, including problems found and corrections
16 made, documenting the actions on approved forms.

17 **CITY.** These terms mean the City of Austin, in the Hays, Travis and Williamson
18 Counties the State of Texas. Geographically these terms indicate all territory within the
19 corporate limits of the City of Austin and that territory annexed for limited purpose by
20 the City of Austin in accordance with Article I, Section 7 of the Charter of the City of
21 Austin.

22 **[B] CONSTANT SUPERVISION FOR GROUP B ANIMAL HOUSING OR CARE**
23 **FACILITY.** Twenty-four (24) hour on-site staff capable or responding to problems or
24 emergencies that could impact the safety or lives of the animals being housed or cared
25 for.

26 **[M] COMMERCIAL COOKING APPLIANCES.** Appliances used in a commercial
27 food service establishment for heating or cooking food and which produce grease vapors,
28 steam, fumes, smoke or odors that are required to be removed through a local exhaust
29 ventilation system. Such appliances include deep fat fryers; upright broilers; griddles;
30 broilers; steam-jacketed kettles; hot-top ranges; under-fired broilers (charbroilers); ovens;
31 barbecues; rotisseries; and similar appliances. For the purpose of this definition, a food
32 service establishment shall include any building or a portion thereof used for the
33 preparation and serving of food for more than 6 hours per week, including food services
34 within a residential board and care facility if the facility serves 12 or more residents.

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1 **EXTENSION CORD AND FLEXIBLE CORD.** Flexible cord of any length which has
2 one male electrical connector on one end and one or more female electrical connectors on
3 the other end.

4 **FIRE APPARATUS ACCESS ROAD.** A road that provides fire apparatus access from
5 a fire station to a facility, building or portion thereof. This is a general term inclusive of
6 all other terms such as fire lane, fire zone, public street, private street, parking lot lane
7 and access roadway.

8 ~~**FIRE COMMAND CENTER.** The principal attended or unattended location where the
9 status of the detection, alarm communications and control systems is displayed, and from
10 which the system(s) can be manually controlled.~~

11 **FIRE DEPARTMENT.** The Austin Fire Department.

12 ~~**FIRE DEPARTMENT MASTER KEY.** A limited issue key of special or controlled
13 design to be carried by fire department officials in command which will open key boxes
14 on specified properties.~~

15 **FIRE LANE AND FIRE ZONE.** A road, an off-street area, or other passageway
16 developed to allow the passage of fire apparatus that is designated in accordance with this
17 code that is to remain free and clear of parked or standing vehicles in order to provide
18 access to buildings, processes, storage areas or fire appliances in case of fire or other
19 emergency. A fire lane is not necessarily intended to be used by vehicular traffic other
20 than fire apparatus.

21 **HAZARDOUS PRODUCTION MATERIAL (HPM).** A solid, liquid or gas associated
22 with semiconductor manufacturing that has a degree-of-hazard rating health,
23 flammability or instability of Class 3 or 4 as ranked by NFPA 704 and which is used
24 directly in research, laboratory or production processes which have, as their end product,
25 materials that are not hazardous. Class II combustible liquids shall also be classified as a
26 hazardous production material when used in the manner described in this definition.

27 **KEY BOX AND KNOX BOX.** A [listed secure security](#) device with a lock operable only
28 by a fire department master key and containing building entry keys and other keys that
29 may be required for access in an emergency.

30 ~~**INDEPENDENT EXIT/INDEPENDENT STAIRWAY/INDEPENDENT EXIT
31 RAMP.** An independent exit, independent stairway, or independent exit ramp is an exit
32 or egress component that does not require the occupant to travel within 10 feet (3.048 m)
33 of another apartment's door or window at any point in the path of egress.~~

34 **LEGITIMATE COOKING FIRE.** A fire kindled within the confines of an appliance or
35 structure manufactured or built for the express purpose of cooking meals for consumption

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1 by human. Incidental cooking or warming of foods with an open recreational fire shall
2 not be considered a “legitimate cooking fire”.

3 **LEGITIMATE WARMING FIRE.** A fire kindled within the confines of a metal or
4 other non-combustible container at a construction site or other similar outdoor
5 employment location for the sole purpose of allowing employees/workers to warm
6 themselves without having to leave the workplace or construction site.

7 **MOTOR VEHICLE FLUIDS.** Liquids which are flammable, combustible or hazardous
8 materials, such as crankcase fluids, fuel, brake fluids, transmission fluids, radiator fluids
9 and gear oil. This definition does not include liquids which are permanently sealed, such
10 as hydraulic fluid within shock absorbers.

11 ~~**OCCUPANCY CLASSIFICATION.** For the purpose of the Fire Code, certain
12 occupancies are defined as follows:~~

13 ~~**[BG] GROUP E, DAY CARE FACILITIES.** This group includes buildings and
14 structures or portions thereof occupied by more than six children older than 2 ½ years of
15 age who receive educational, supervision or personal care services for fewer than 24
16 hours per day. A child care facility that provides care for more than six but no more than
17 100 children 2 ½ years or less of age, where the rooms in which the children are cared for
18 are located on a level of exit discharge serving such rooms and each of these child care
19 rooms has an exit door directly to the exterior, shall also be classified as Group E.~~

20 ~~**[BG] Six or fewer children.** A facility having six or fewer children receiving such
21 day care shall be classified as part of the primary occupancy.~~

22 ~~**[BG] Six or fewer children in a dwelling unit.** A facility such as the above within
23 a dwelling unit and having six or fewer children receiving such day care shall be
24 classified as a Group R-3 occupancy or shall comply with the Residential Code.~~

25 ~~**[BG] HIGH-HAZARD GROUP H.** High hazard Group H occupancy includes, among
26 others, the use of a building or structure, or a portion thereof, that involves the
27 manufacturing, processing, generation or storage of materials that constitute a physical or
28 health hazard in quantities in excess of those allowed in control areas complying with
29 Section 5003.8.3, based on the maximum allowable quantity limits for control areas set
30 forth in Tables 5003.1.1(1) and 5003.1.1(2). Hazardous occupancies are classified in
31 Groups H-1, H-2, H-3, H-4 and H-5 and shall be in accordance with this code and the
32 requirements of Section 415 of the Building Code.~~

33 ~~**[BG] INSTITUTIONAL GROUP I-1.** The same meaning as in the Building Code.~~

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~~[BG] Seven to sixteen persons receiving custodial care. A facility housing not fewer than seven and not more than 16 persons receiving custodial care shall be classified as Group R-4.~~

~~[BG] Six or fewer persons receiving care. A facility having six or fewer persons receiving custodial care shall be classified as part of the primary occupancy.~~

~~[BG] Six or fewer persons receiving care in a dwelling unit. A facility with six or fewer persons receiving custodial care shall be classified as a Group R-3 occupancy or shall comply with the Residential Code provided an automatic sprinkler system is installed in accordance with Section 903.3.1.3 or with Section P2904 of the Residential Code.~~

~~[BG] INSTITUTIONAL GROUP I-2. This occupancy shall include buildings and structures used for medical care on a 24-hour basis for more than six persons who are incapable of self-preservation. This group shall include, but not be limited to, the following: detoxification facilities, hospitals, nursing homes, and psychiatric hospitals.~~

~~[BG] Group I-2 Condition 1. This occupancy condition shall include facilities that provide nursing and medical care but do not provide emergency care, surgery, obstetrics or in-patient stabilization units for psychiatric or detoxification.~~

~~[B] Group I-2 with six or fewer persons receiving medical care. A facility with six or fewer persons receiving medical care shall be classified as Group R-3 or shall comply with the Residential Code provided an automatic sprinkler system is installed in accordance with Section 903.3.1.3 or Section P2904 of the Residential Code.~~

~~[BG] INSTITUTIONAL I-4, DAY CARE FACILITIES. This group shall include buildings and structures not classified above which are occupied by more than six persons of any age who receive custodial care for fewer than 24 hours per day by persons other than parents or guardians, relatives by blood, marriage or adoption, and in a place other than the home of the person cared for. This group shall include, but not be limited to, an adult day care.~~

~~[BG] RESIDENTIAL GROUP R Residential Group R includes, among others, the use of a building or structure, or a portion thereof, for sleeping purposes when not classified as an Institutional Group I or when not regulated by the Residential Code. Residential occupancies shall include the following:~~

~~[BG] R-1 Residential occupancies containing sleeping units where the occupants are primarily transient in nature, including: boarding houses (transient), hotels (transient), motels (transient), and bed and breakfast operations.~~

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~~[BG] Group R-3 care facilities within a dwelling. Care facilities for six or fewer persons receiving care that are within a single family dwelling are permitted to comply with the International Residential Code, provided an automatic sprinkler system is installed in accordance with Section 903.3.1.3 or Section P2904 of the Residential Code.~~

~~**Exception:** Compliance with Section 903.3.1.3 is not required for adult care and child care facilities that are within the proprietor's single family home, provided that the home was constructed and occupied as a residence prior to October 1, 2010.~~

PERMANENT STORAGE. Storage for a period of over 30 days.

PROCESS VESSEL A container, including the associated piping, used or designed to be used to contain or promote a chemical or physical reaction.

SALVAGE VEHICLE A vehicle which is dismantled for parts or awaiting destruction.

~~**STAIRWAY EXTERIOR** A stairway that is open on at least two adjacent sides with 75% of the side with free area, except for required structural columns, beams, handrails and guards. The adjoining areas shall be either yards, courts or public ways. The other sides of the exterior stairway need not be open.~~

TESTS A complete check of the system under nationally recognized standards to determine that the system operates and functions as designed.

203.1 Occupancy classification. The following definitions in this subsection apply throughout this code and supplement the definitions in Section 203 (*Occupancy classification*) of the 2024 International fire code.

[BG] 203.3 business group B. Business Group B occupancy includes, among others, the use of a building or structure, or a portion thereof, for office, professional or service-type transactions, including the storage of records and accounts. Business occupancies shall include, but not be limited to, the following:

Animal hospitals, kennels and pounds Animal housing or care facilities

*All other examples remain unchanged

[BG] 203.6 High-hazard Group H. High-hazard Group H occupancy includes, among others, the use of a building or structure, or a portion thereof, that involves the manufacturing, processing, generation or storage of materials that constitute a physical or health hazard in quantities in excess of those allowed in control areas complying with

1 Section 5003.8.3, based on the maximum allowable quantity limits for control areas set
2 forth in Tables 5003.1.1(1) and 5003.1.1(2). Hazardous occupancies are classified in
3 Groups H-1, H-2, H-3, H-4 and H-5 and shall be in accordance with this code and the
4 requirements of Section 415 of the Building Code. Hazardous materials stored or used on
5 top of roofs or canopies shall be classified as **outdoor** rooftop storage or use and shall
6 comply with this Code.

7 **304.3.35 Capacity exceeding 1.5 cubic yards.** Dumpsters and containers with an
8 individual capacity of 1.5 cubic yards [40.5 cubic feet (1.15 m³)] or more shall not be
9 stored in buildings or placed within 10 feet (3048 mm) of combustible walls, openings or
10 combustible roof eave lines.

11 **Exceptions:**

- 12 1. Dumpsters or containers in areas protected by an approved automatic sprinkler
13 system installed throughout in accordance with Section 903.3.1.1 or 903.3.1.2.
- 14 2. Storage in a structure shall not be prohibited where the structure is of Type I or
15 Type IIA construction, located not less than 10 feet (3048 mm) from other
16 buildings and used exclusively for dumpster or container storage.

17 **307.2 Permit required.** A permit shall be obtained from the fire department emergency
18 prevention division in accordance with Section 105.6 prior to kindling a fire for
19 recognized silvicultural or range or wildlife management practices, prevention or control
20 of disease or pests, a warming fire, a rubbish fire, or a bonfire. Application for such
21 approval shall only be presented by and permits issued to the owner of the land upon
22 which the fire is to be kindled. Rubbish includes waste material from the construction or
23 demolition of buildings. For additional requirements concerning trench burning, see
24 Section 308.5. For mobile incinerators, see Section 308.6. For agricultural burning see
25 Section 308.7.

26 **Exception:** A permit is not required for legitimate cooking fires or legitimate
27 warming fires as defined in this chapter.

28 **307.4 Location.** When authorized by permits in accordance with Section 307.2, the
29 location for open burning shall not be less than 50 feet (15 240 mm) from any structure,
30 and provisions shall be made to prevent the fire from spreading to within 50 feet (15 240
31 mm) of any structure. Such fires shall be constantly attended by a competent person with
32 an approved means to extinguish the fire.

33 **Exceptions:**

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- 1 1. Fires in approved containers that are not less than 15 feet (4572 mm) from a
2 structure.
- 3 2. Operation of a trench burner shall be in accordance with Section 308.5.
- 4 3. Operation of a mobile incinerator shall be in accordance with Section 308.6.
- 5 4. Open burning for agricultural purposes may be approved by the fire ~~chief~~
6 code official in accordance with Section 308.7.

7 ~~**308.1.4 Residential Barbecue Pits and Incinerators.** No person may construct, erect,
8 install, maintain or use any incinerator or barbecue pit or burn any combustible material
9 to constitute a fire hazard by the use or burning or to endanger the life or property of any
10 person. Residential barbecue pits, hibachis or other cooking appliances utilizing charcoal,
11 wood or gas as a fuel may not be stored or used on any balconies of residential
12 occupancies, on other combustible balconies, within five feet measured horizontally from
13 any portion of a combustible building, or within fifteen feet measured along the shortest
14 distance if the pit is located below any portion of a combustible building.~~

15 ~~**Exception:** Detached one and two family dwellings.~~

16 **308.5 Trench Burners.** In addition to the provisions of Section 307 of the Fire Code, all
17 trench burners in the City shall comply with the following:

18 **308.5.1 Construction.** The trench burner shall be located at the center of a circle
19 three hundred feet in diameter, in which no combustible matter will be located or
20 stored, except for the pile of combustible debris which has been readied for loading
21 into the trench burner pit, except as otherwise provided by law.

- 22 1. Pertaining to trees, landscaping, erosion, drainage, or run-off control the
23 surface of the land within the circle shall be cleared of any high grasses,
24 and any trees, brush, and weeds.
- 25 2. The pit must be built in the ground and not above grade.
- 26 3. The dimensions of the pit shall be 14 feet wide, 40 feet long, and at least
27 10 feet deep, except in cases where a permit issued to the applicant by the
28 Texas Commission on Environmental Quality (TCEQ) prescribes
29 different dimensions. The ash generated by the operation of the trench
30 burner shall be removed from the trench as necessary to maintain a
31 minimum trench depth of 10 feet.

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- 1 4. The pit, air blower or fan, and other operating equipment shall be
2 securely enclosed by a locked gate and security fence of a minimum
3 height of eight feet which completely surrounds the pit and equipment at
4 all times when the trench burner is unattended. The top portions of the
5 fence shall consist of at least three runs of barbed wire. The fencing shall
6 not be removed until the pit is closed and filled. An approved Fire
7 Department key lock shall be required to secure the gate.

8 **308.5.2 Location.** A trench burner must not be located within 1320 feet of any
9 recreational area, building or structure that is not occupied or used solely by the
10 owner of the property on which the trench burner is constructed.

11 **308.5.3 Hours of Operation.** The hours of continuous loading operation shall be
12 between 8:00 a.m. and 4:00 p.m., Monday through Friday. Trench burners may not
13 be operated on Saturday, Sunday or legal holidays.

- 14 1. The blower or fan will be allowed to operate an additional two hours from
15 4:00 p.m. to 6:00 p.m. to ensure cool down after its period of continuous
16 loading operations.
- 17 2. The hours of operation may be changed by the fire ~~chief~~ code official when
18 unusual atmospheric conditions exist.
- 19 3. No burning is permitted when air stagnation advisories are in effect for the
20 area in which the trench burner is located.
- 21 4. No burning is permitted during periods of high fire hazard weather
22 conditions.

23 **308.5.4 Method of Operation.** Material that may be burned is limited to trees,
24 brush, untreated waste lumber, shrubs, roots, bushes, and all untreated wood waste
25 cleared from the site described in the permit application. Combustible debris
26 cleared from other sites may not be burned in the trench burner.

- 27 1. All other materials, including but not limited to paper, roofing, shingles,
28 insulation, wiring, treated wood products, metal products, chemicals,
29 plastics, tires and other real or synthetic rubber materials may not be burned
30 in the pit. Flammable or combustible liquids may not be burned except for
31 ignition purposes.
- 32 2. Suitable fire protection shall be present on the site where the trench burner is
33 located during operation. Suitable fire protection consists of a trailer or tank

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1 truck fitted with a water tank capable of transporting a 500 gallon water
2 supply to any location on the job site and an approved water delivery system
3 consisting of a pump, at least 100 feet of rubber booster hose having a
4 minimum diameter of three-fourths inch, and either a straight stream or
5 adjustable spray nozzle.

- 6 3. The pit must be closed and filled with dirt within 48 hours after the trench
7 burner operations are discontinued.
- 8 4. Combustible material may not be placed in the trench any higher than three
9 feet below the surface level.
- 10 5. Every trench burner must be attended when in operation. The trench burner
11 shall be completely extinguished before being left unattended.

12 **308.5.5 Permit Application.** The permit application must contain the following:

- 13 1. The name, address, and phone number of the individual or entity that owns
14 the trench burner unit.
- 15 2. The name, address, and phone number of the individual or entity responsible
16 for the operation of the trench burner unit.
- 17 3. A description of the site to be cleared, and the name, address and telephone
18 number of owner of the property.
- 19 4. An operating schedule including initial date of operation and expected
20 number of weeks of operation.
- 21 5. A copy of the Texas Commission on Environmental Quality permit issued
22 for the construction of the unit, if a permit is required.
- 23 6. A statement from the applicant confirming the applicant will inform the
24 Watershed Protection Department, or its successor department, of the dates
25 the trench burner will be operating.
- 26 7. A description of the type and quantity of petroleum product utilized to ignite
27 the trench burner. If this is to be stored at the site, then the manner of storage
28 and quantity to be stored must be described. The method of igniting the
29 trench burner must be described.

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- 1 8. Proof that the applicant has current liability insurance in the amount of
2 \$1,000,000 for personal injuries, and \$500,000 for property damage any
3 time the trench burner is in use.
- 4 9. The payment of the permit fee as established by the City Council.
- 5 10. Certification from the Development Services Department, or its successor
6 department, as required by Article 308.5.6 of this code.
- 7 11. A construction permit from the Texas Commission on Environmental
8 Quality must be obtained if required by Commission rule. If the trench
9 burner is exempt from the Commission permit requirements all conditions of
10 the exemption must be complied with.

11 **308.5.6 Environmental Protection.** The Development Services Department, or its
12 successor department, shall require the following before the issuance of certification:

- 13 1. The bottom of the trench is located at a minimum distance of 50 feet from
14 the water table;
- 15 2. No fissures are located inside or adjacent to the trench;
- 16 3. Ignition fuel shall be limited to combustible liquids, as defined by this code.
17 Approval shall also be granted where an alternative to the use of
18 combustible liquids is used to ignite the trench;
- 19 4. The method of igniting the trench ensures no amount of combustible liquid
20 greater than necessary to ignite the trench will be used; and,
- 21 5. The manner of storage of the product at the site is designed to prevent any
22 leak or accidental discharge, and where applicable, the hazardous materials
23 storage and registration requirements are met; and
- 24 6. An environmental review shall be conducted of the watershed of Lake
25 Austin, Lake Travis, or with the aquifer-related watershed of Barton,
26 Williamson, Slaughter, Big Bear, Little Bear and Onion Creek, including the
27 Edwards Aquifer recharge zone North and South of the Colorado River, all
28 as shown on the hazardous materials storage and registration map on file in
29 the Office of the City Clerk.

30 **308.6 Mobile Incinerators.** All mobile incinerators in the City must comply with the
31 following:

1 **308.6.1 Construction.** Each mobile incinerator must be constructed as follows:

- 2 1. Engineered and constructed of material and of a gauge to withstand normal
3 operating temperature of 1200° F or higher without deformation.
- 4 2. Chimneys serving mobile incinerators must terminate into a spark arrester
5 having an area not less than four times the net free area of the chimney.
6 Openings shall not permit the passage of spheres having a diameter larger
7 than ½ inch nor block the passage of spheres having a diameter smaller than
8 3/8 inch.
- 9 3. The exterior wall of the mobile incinerator must be of double wall
10 construction. The incinerator must be designed such that the temperature rise
11 above ambient temperature (750° F + 5° F) of any portion of the incinerator
12 accessible to the operator shall not exceed 150° F.
- 13 4. Insulation must be installed or adequate airspace provided between the
14 external casing and the inner wall as required to meet this temperature
15 limitation.
- 16 5. Mobile incinerators must be constructed with a dual combustion chamber of
17 which the secondary chamber must maintain a temperature of 1200° F or
18 higher at all times waste material is being reduced by oxidation caused by
19 heat of combustion.
- 20 6. The secondary chamber must be provided with a thermocouple connected to
21 a temperature display for monitoring the temperature.
- 22 7. Any design not in compliance with the criteria and appropriate nationally
23 recognized standards must have the construction reviewed and submitted as
24 an alternative method under the seal of a registered professional engineer or
25 a recognized testing laboratory.

26 **308.6.2 Location.** No mobile incinerator may be located:

- 27 1. Within 10 feet of any property line, and a minimum of 10 feet must be
28 maintained between any incinerator and rubbish, dry grass, weeds,
29 vegetation and other combustible materials.
- 30 2. Within 300 feet of any recreational area, residence or structure not occupied
31 or used solely by the owner of the mobile incinerator or the owner of the
32 property on which the mobile incinerator is used.

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1 **308.6.3 Hours of Operation.** The hours of continuous loading operation shall be
2 between 8:00 a.m. and 4:00 p.m., Monday through Friday. Mobile incinerators
3 may not be operated on Saturday, Sunday or legal holidays.

- 4 1. The mobile incinerator may be allowed to operate an additional two hours
5 from 4:00 p.m. to 6:00 p.m. to ensure cool down after its period of
6 continuous loading operations.
- 7 2. The fire **chief** **code official** may change the hours of operation when unusual
8 atmospheric conditions exist.
- 9 3. No burning is permitted during air stagnation advisories in effect in the area
10 in which the mobile incinerator is located.
- 11 4. No burning is permitted during periods of high fire hazard weather
12 conditions.

13 **308.6.4 Method of Operation.** Material to be burned in the mobile incinerator is
14 limited to highly combustible waste, paper, wood, cardboard cartons, including up
15 to 10 percent treated papers or plastic scraps.

- 16 1. Suitable fire protection must be present within a distance of 20 feet at all
17 times of operation. Suitable fire protection consists of an approved water
18 extinguisher having a minimum rating of 10-A, and one dry chemical
19 portable fire extinguisher with at least a 2A-10BC rating.
- 20 2. Material to be incinerated may not be stored within 10 linear feet of any
21 surface of the mobile incinerator's combustion chamber, chimney or hot
22 ashes.
- 23 3. The mobile incinerator must be enclosed by a portable security fence of a
24 minimum of four feet, or other equivalent approved barrier, which
25 completely surrounds the mobile incinerator providing a clear space of five
26 feet at all times when the unit is in operation. The fencing may not be
27 removed until the incinerator is cool to the touch.
- 28 4. The mobile incinerator must not be moving and must be in a fixed position
29 when operational or cooling.
- 30 5. Every mobile incinerator must be attended when in operation. It shall be
31 completely extinguished before being left unattended.

32 **308.6.5 Permit Application.** The permit application must contain the following:

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1. Name, address, and phone number of the individual or entity that owns the mobile incinerator.
2. Name, address, and phone number of the individual or entity responsible for the operation of the mobile incinerator.
3. Name, address, and phone number of the owner of the property where the mobile incinerator is to be operated.
4. Copy of the Texas Commission on Environmental Quality permit or exemption letter issued for the use of the unit. (See Chapter 382, Health and Safety Code).
5. Proof that the applicant has in effect liability insurance in the amount of \$1,000,000 for personal injuries, and \$500,000 for property damage any time the mobile incinerator is in use.
6. Written permissions of the owner of the property where the mobile incinerator is to be operated.
7. Certification from the Development Services Department, or its successor department, as required by Section 308.6.6 of this code.
8. The payment of the permit fee set by separate ordinance.

308.6.6 Environmental Protection. The Development Services Department, or its successor department, shall require the following before the issuance of certification:

1. A statement that the applicant will not deposit or discharge any waste in a manner that is in conflict with other applicable City Code requirements.
2. A description of the plan for storage and disposal of combustion residue.

308.7 Agricultural Burning. In addition to the provisions of Section 307 of the Fire Code, all agricultural burning in the City shall comply with the following:

308.7.1 Location. The location of any agricultural burning activity shall be limited to property zoned AG consisting of at least 150 contiguous acres. The burn site shall be located at least 50 feet from the nearest property line or agricultural structure and shall be at least 1320 feet from the nearest recreational property (i.e. park), building or structure not owned and occupied or used solely by the owner of the agricultural property.

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1 **308.7.2 Environmental conditions.** The permit holder shall comply with
2 applicable air quality regulations of the Texas Commission on Environmental
3 Quality (TCEQ) including time limits and atmospheric conditions. Burning shall
4 not be permitted during atmospheric inversions or other conditions that limit
5 dispersion of the smoke plume.

6 **308.7.3 Burning bans.** Burning shall not be permitted during any weather related
7 burn bans.

8 **308.7.4 Fuel limitations.** Material to be burned is limited to trees, brush, untreated
9 waste lumber, shrubs, roots, bushes, and all untreated wood waste associated with
10 the agricultural property for which the burn permit is issued. Distilled
11 hydrocarbons including liquid fuels, lubricants, synthetic materials, tires, rubber,
12 and plastics shall not be burned under an agricultural burn permit.

13 **Exception:** A limited quantity of liquid hydrocarbon fuel may be burned for
14 the sole purpose of initial ignition of organic waste materials.

15 **308.7.5 Insurance.** Proof shall be provided at permit application that the applicant
16 has current liability insurance in the amount of \$1,000,000 for personal injuries,
17 and \$500,000 for property damage any time agricultural burning is in progress.

18 **311.5 Placards.** Any vacant or abandoned buildings or structures determined to be unsafe
19 pursuant to Section 110 of this code relating to structural or interior hazards shall be
20 marked as required by the Austin Code Department, or the successor department.

21 **311.5.1 Placards for hazards related to emergency response.** Any building or
22 structure that is determined to present unique hazards to firefighters during
23 emergency operations shall be protected or marked as required by Section 505.3 of
24 this code.

25 [314.4 Vehicles. Liquid-fueled or gaseous-fueled vehicles, aircraft, boats or other](#)
26 [motorcraft shall not be located indoors except as follows:](#)

27 [1. Provision remains unchanged](#)

28 [2. Fuel in fuel tanks does not exceed any of the following:](#)

29 [2.1. Provision remains unchanged.](#)

30 [2.2. Provision remains unchanged.](#)

31 [2.3. Provision remains unchanged.](#)

32 [2.4. Provision remains unchanged.](#)

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2.5 Battery electric vehicles not exceeding 1/2 of the battery's rated storage capacity or 50% of the battery state of charge, whichever is less.

3. Provision remains unchanged

4. Provision remains unchanged

316.7.1 Unprotected Construction Presenting Hazards To Firefighters in Existing Buildings. When existing buildings, including residential structures, are identified as employing construction methods or materials that have been shown by experience or testing to be associated with early failure or failure with little or no warning under fire exposure, the premises identification markings shall be revised to achieve compliance with Section 505.3.

Exceptions:

1. Buildings protected throughout by automatic fire sprinklers in accordance with 903.3.1.1, 903.3.1.2 or 903.3.1.3.
2. Buildings with a noncombustible or limited combustible membrane that shields the floor or roof construction materials from fire exposure. Such membranes may be constructed using gypsum wallboard of at least ½" nominal thickness, cementous fiberboard of at least ¼ inch nominal thickness, or fire-retardant treated wood (FRTW) of at least ½ inch nominal thickness.

320.2. Permits. Permits shall be required for the accumulation of more than 15 cubic feet (0.42 m3) of lithium-ion and lithium metal batteries, other than batteries listed in the exception to Section 320.1, as set forth in Section 105.5.22.

323 Fixed In Place Battery Electric Vehicle Chargers Inside of Parking Garages

323.1 General. The location and installation of fixed in place BEV chargers inside of an Enclosed, Open or Private parking garage shall be in accordance with these provisions.

323.1.1 Responsibility for cleanup. Responsibility for cleanup shall be in accordance with Section 5003.3.1.5.

323.2 Identification of the Disconnecting Means. The BEV charger shall be provided with a permanent sign indicating the location of its disconnecting means. When the electrical disconnect is in a room or other space it shall be identified with a permanent sign stating BATTERY ELECTRIC VEHICLE DISCONNECT.

1 **323.3 Automatic Sprinkler Protection.** The story where fixed in place BEV chargers
2 are located shall be protected by an automatic sprinkler system in accordance with
3 Section 903.3.1.1.

4
5 **323.3.1 Disconnect of BEV Charger.** Activation of the parking garage automatic
6 sprinkler shall deactivate the BEVs on the floor of incident.


7
8 **323.4 Location.** The location of fixed in place BEV chargers inside of Enclosed, Open or
9 Private parking garage shall be in accordance with this section.

10
11 **323.4.1 Basements.** Underground BEV chargers shall be limited to a one-story
12 basement. BEV chargers located in basements two or more stories below grade are
13 prohibited. The chargers shall be located within 100 feet of the base of a vehicle
14 ramp or an Exit Access Stairway.

15
16 **323.4.2 Enclosed or Open Parking Garages.** BEV chargers in enclosed parking
17 garages shall be limited to two stories but not more than 30 feet above grade plane.
18 BEV chargers in Open Parking Garages shall be limited to three stories but not
19 more than 30 feet above grade plane. The chargers shall be located within 100 feet
20 of a vehicle ramp or an Exit Access Stairway.

21
22 **323.4.3 Private Garages in Enclosed or Open Parking Garages.** Private garages
23 constructed inside of Enclosed or Open Parking garages shall be located within
24 100 feet of a vehicle ramp or an Exit Access Stairway.

25
26 **323.4.3.1 Mechanical Ventilation of Private Garages.** A Private garage
27 with one or more fixed in place BEV chargers shall be provided with
28 exhaust ventilation system that complies with all of the following:

- 29
30  1. Installation shall be in accordance with the Mechanical Code.
31
32 2. Mechanical ventilation system shall be at a rate of not less than one
33 cubic foot per minute per square foot of the garage floor area.
34
35 3. Systems shall operate continuously unless alternative designs are
36 approved.
37
38 4. Exhaust shall be taken from a point within 12 inches of the garage
39 floor.
40

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5. The location of the inlet and exhaust air shall be designed to provide air movement across all portions of the floor or room to prevent the accumulation of vapors and gases.

323.4.3.2 Loss of Mechanical Ventilation. In the event the mechanical ventilation system fails, power to the fixed in place BEV chargers in the Private garage shall be deactivated.

Section 324 - Illumination required by a tertiary power system.

324.1 General. A tertiary power system shall be provided to automatically illuminate the following areas in the event of primary and secondary power failure:

1. Electrical equipment rooms.
2. Fire command centers.
3. Fire pump rooms.
4. Generator rooms.
5. Elevator machine rooms.

324.2 Duration and lighting levels. Duration and lighting levels shall be as required by IBC sections 1008.3.1 and 1008.3.2.

Exception: Generator rooms shall require 3 footcandles (33 lux) as required by NFPA 110 section 7.3.3.

401.3 Emergency responder notification. Notification of emergency responders shall be in accordance with Sections 401.3.1 through 401.3.4.

401.3.1 Emergency events. Except as provided in Section 401.3.4, in the event an unwanted fire occurs, or upon the discovery of a fire, explosion, deflagration, smoke or unauthorized release of flammable, toxic, or hazardous materials on any property, the owner or occupant shall immediately report such condition to the fire department. Building employees and tenants shall implement the appropriate emergency plans and procedures.

401.3.2 Alarm activations. Upon activation of a fire alarm signal, employees or staff shall immediately notify the fire department.

401.3.3 Delayed notification. A person shall not, by verbal or written directive, require any delay in the reporting of a fire or unauthorized chemical release to the fire department.

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1 **401.3.4 Emergency Response Teams and Fire Brigades.** Facilities complying
2 with Section 5003.9.1 by maintaining on-site emergency response teams (ERT) or
3 industrial fire brigades that comply with the requirements of Occupational Safety
4 and Health Administration (OSHA) regulations in 29 CFR 1910.120 or 29 CFR
5 1910 Subpart L may, on completion of an audit of compliance by the fire ~~chief~~
6 code official (audits may be performed during annual inspections by the fire
7 department) and contingent on continued ERT/fire brigade compliance, develop
8 site-specific procedures for determining reporting requirements based on facility
9 staffing and qualifications.

10 **401.3.4.1** Guidance is published in the Fire Protection Criteria Manual to
11 help assure equitable assessment of site procedures. The procedures must be
12 submitted to the fire ~~chief~~ code official for review and approval.
13 Maintenance of the ERT or fire brigade shall be verified by a periodic audit
14 during inspections by the Fire Department. This provision does not waive a
15 facility's or organization's reporting obligations under State or Federal
16 regulations.

17 **401.3.4.2** Failure to maintain and provide records of internal responses will
18 result in revocation of the facility's procedural approach to reporting.

19 SECTION 408 TEMPORARY CHANGE OF USE PERMITS

20 **408.1 Scope.** Temporary Change of Use Permits shall be in accordance with this Section.
21 A temporary permit for a facility or building for public assembly use is not intended to be
22 a means for creating a permanent assembly occupancy or use.

23 **408.1.2 Temporary Change of Use To a Public Assembly (TCOU) Permit.** A
24 TCOU to a public assembly permit is required for any occupancy not classified as
25 Group A with a gathering of more than 50 people for civic, social, recreational or
26 religious functions. A permit is required for gatherings of 50 or more people
27 confined by fences, walls or similar occupancies.

28 **408.2 Annual Permit Limit.** Not more than twelve TCOU permits shall be issued for a
29 given address during a 12-month period. The measurement period shall be based on the
30 date the first permit was approved during a given calendar year.

31 **408.2.1 Permit Duration.** The duration of the TCOU permit shall not exceed 14
32 calendar days.

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1 **408.3 Permit Application.** A TCOU permit application shall be submitted to the fire
2 department for plan review. Applications and required plan information shall be
3 submitted 21 calendar days prior to the event start date.

4 **408.4 Fire Watch.** The Fire Marshal's Office may require a fire watch or standby if
5 additional fire and life safety hazards are identified during plan review.

6 **409 FIRST RESPONDER EMERGENCY PLANS**

7 **409.1 Scope.** First Responder Emergency Plans shall be plans assembled by AFD to aid
8 First Responders in familiarity with the building and its fire safety features in the event of
9 an emergency. Plans will also aid with annual maintenance inspections.

10 **409.2 Building Floor Plans.** At the completion of new projects, the Architect/Engineer
11 shall submit to AFD an electronic set of building floor plan as-builts in an approved
12 format (PDF, DWG, DXF).

13 **409.2.1 Existing Buildings.** Existing buildings shall have 3 years to submit
14 building floor plan of AFD.

15 **409.3 Plan Requirements.** Building floor plans submitted to AFD shall contain the
16 following information, as applicable:

- 17 (a) Locations of exits, exit passageways and horizontal exits.
18 (b) Location of fire alarm control panel and remote annunciator panel.
19 (c) Location of fire department connection.
20 (d) Location of all standpipes and hose valve connections.
21 (e) Rated wall locations.

22 **503.1 Where required.** Fire apparatus access roads shall be provided and maintained in
23 accordance with Sections 503.1.1 through 503.1.5. Where required fire apparatus access
24 roads are located on property other than a public right-of-way, the required fire apparatus
25 access road shall be located within the legal boundaries of the property unless otherwise
26 approved by the fire code official.

27 **503.1.1 Buildings and facilities.** Approved fire apparatus access roads shall be
28 provided for every facility, building or portion of a building hereafter constructed
29 or moved into or within the jurisdiction. The fire apparatus access road shall
30 comply with the requirements of this section and shall extend to within 150 feet
31 (45 720 mm) of all portions of the facility and all portions of the exterior walls of
32 the first story of the building as measured by an approved route around the exterior
33 of the building or facility.

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1 Exceptions:

2 1. The fire ~~chief~~-code official is authorized to increase the dimension of 150 feet
3 (45 720 mm) where any of the following conditions occur:

4 1.1. The building is equipped throughout with an approved automatic
5 sprinkler system installed in accordance with Section 903.3.1.1, 903.3.1.2 or
6 903.3.1.3.

7 1.2. Fire apparatus access roads cannot be installed because of location on
8 property, topography, waterways, nonnegotiable grades or other similar
9 conditions, and an approved alternative means of fire protection is provided
10 ~~by the owner and has been approved by the fire chief code official.~~

11 1.3. There are not more than two Group R-3 or Group U occupancies.

12 2. Where approved by the fire code official, fire apparatus access roads shall be
13 permitted to be exempted or modified for solar photovoltaic power generation
14 facilities.

15 3. Where approved by the fire ~~chief~~-code official, the fire apparatus access roads
16 for a facility, building or portion of a building hereafter constructed, may be
17 located on adjacent property(s), provided the fire apparatus access roads on the
18 adjacent property(s) are bound in perpetuity to any and all associated properties
19 necessary to comply with the fire apparatus road requirements herein by either a
20 Unified Development Agreement (UDA) or a Joint Use Access Easement (JUAE)
21 that is approved and recorded with the county in which the properties are located.

22 **503.1.4 Approval of Fire Zones on Site Plans.** The Director of the Development
23 Services Department, or its successor department, shall submit site plans of proposed
24 commercial developments to the fire ~~chief~~-code official for ~~his~~ review and approval of
25 the adequacy of fire zones before the issuance of a building permit for the
26 development.

27 **503.1.5 Official records.** All required fire apparatus access roads that are not located
28 within a public right-of-way shall be registered with the fire department.

29 **503.2.1 Dimensions.** Fire apparatus access roads shall have an unobstructed width of not
30 less than 25 feet (7620 mm), except for approved security gates in accordance with
31 Section 503.6 and the Fire Protection Criteria Manual, and an unobstructed vertical
32 clearance of not less than 14 feet (4267 mm).

33 **Exceptions.**

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1. The unobstructed roadway width may be reduced to less than 25 feet for all or part of the required roadway so long as the access road complies with the appropriate minimum street width for dedicated City streets, and
 - a. Such fire access roadways, or portions of such roadways, which are less than 25 feet wide are not in locations where aerial apparatus deployment could be necessary to achieve control and/or extinguishment of a fire, and
 - b. Turning radii are adequate for maneuvering Fire Department and other emergency services vehicles.
2. The unobstructed roadway width may be reduced to less than 25 feet for all or part of the required roadway so long as the access road complies with the appropriate minimum street width for dedicated City streets and
 - a. The access roadway is part of a system of roadways or driveways that include interconnected public and/or private roads or driveways that provide multiple pathways for emergency vehicles to access the structures served by the roadway system, provided that a fire vehicle blocking the roadway within the narrowed length will not create a dead-end road segment in excess of 150 feet long.
 - b. The width of each segment is sufficiently wide to accommodate the deployment of emergency vehicles anticipated for that segment during a potential emergency (e.g. outrigger placement and aerial operations for fires in multi-story structures), and turning radii are adequate for maneuvering Fire Department and other emergency services vehicles.
 - c. Divided roadways serving as fire lanes are allowed to consist of two lanes each 15 feet wide, one on each side of the division in locations where aerial operations are not anticipated.
 - d. Throat widths entering a two-way fire access road from a public street (level 1 or 2 street without center left turn lane) shall be allowed to be transitioned to 20' at pedestrian crosswalk locations. The fire access road shall transition back to 25' within the lesser of the throat length to the plane of the first parking stall or crossing drive aisle or transition at a horizontal rate of 1 foot lateral for 15 feet of travel distance after entering the fire access road. Fire access driveways adjacent to zero lot line buildings shall optimize the regulated driveway width, radii and mountable curbs to facilitate apparatus

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1 navigation. Vertical and horizontal clearances of the apparatus
2 undercarriage with the finished grades shall be profiled, modeled,
3 evaluated for adequacy and approved by the fire code official.

4 ~~503.2.2 Authority. The fire chief code official shall have the authority to require an~~
5 ~~increase in the minimum access widths where they are inadequate for fire or rescue~~
6 ~~operations or to permit a decrease in width when necessary to meet the public safety~~
7 ~~objectives of the City of Austin provided the street or access roadway remains compliant~~
8 ~~with 503.2.1.~~

9 503.2.3.1 Alternative Surfaces. Alternative surfaces shall be allowed when the
10 installation and materials used comply with the requirements as set forth in the Fire
11 Protection Criteria Manual. The design engineer of record shall make periodic
12 construction observations and upon substantial completion of the work, the design
13 engineer shall provide the fire code official an engineer's letter of concurrence that the
14 work and materials were installed in substantial conformance with the record document.

- 15
16 1. Alternative surfaces shall be a slip resistance surface in locations that require
17 turning movements and a minimum of 40 linear feet located at building corners
18 for aerial operations. A fire apparatus shall be able to access the scrub areas for
19 both building faces from the slip resistant surface located at the building corner
20 or apex of curvature.
- 21
22 2. Alternative surfaces shall not be utilized as the only fire access to a building.
23 Alternative surfaces shall be limited to a maximum of 25% of the fire protection
24 along the building perimeter, not adjacent to a fire access road or public
25 roadway. Hose lay distances from the apparatus located on an alternative
26 surface shall be included with the 25% maximum limit for the calculation of
27 fire protection along the building perimeter.
- 28
29 3. Alternative surface fire lanes installed without a type 1 or 2 driveway apron
30 shall utilize at a minimum a reinforced mountable curb. The face and top of the
31 curb shall be designated fire lane with striping and signage for the width of the
32 fire lane and the length of curb to prohibit parked cars within the turning
33 movements from the lane of travel.
34

35 **503.2.4 Turning radius.** The required inside turning radius of a fire apparatus access
36 road shall be 25 feet (7.62 m). The required outside turning radius of a fire apparatus
37 access road shall be 50 feet (15.24 m). Turn radii where street grades and travel lane
38 widths are sufficient shall be allowed to be reduced to 15' at the entries to driveways with

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1 crosswalks from public streets as set forth in the Transportation Criteria Manual. Turning
2 movements onto designated opposing traffic lanes shall not be allowed or where the
3 Austin Strategic Mobility Plan has proposed a raised median in the street section.

4 **503.2.6 Bridge and elevated surfaces.** Where a bridge or an elevated surface is part of a
5 fire apparatus access road, the bridge shall be constructed and maintained in accordance
6 with AASHTO HB-17 or the latest addition of AASHTO Load and Resistance Factor
7 Design accepted by the Texas Department of Transportation. Bridges and elevated
8 surfaces shall be designed for a live load sufficient to carry the imposed loads of fire
9 apparatus. Vehicle load limits shall be posted at both entrances to bridges where required
10 by the fire [chief-code official](#). A designated fire lane shall be maintained for the purpose
11 of vehicle access and shall prohibit obstructions as per Section 503.3. The entire bridge
12 deck or elevated surface shall be designed and maintained to support fire apparatus
13 operations as required and approved by the fire [chief-code official](#).

14 **503.2.6.1 Operational and outrigger loads.** Where an elevated surface or
15 structure or portions of a structure are subject to operational loads with deployment
16 of outriggers utilizing a crane, lift or ladder, the structure shall be designed and
17 maintained to support the following independent static loading conditions as
18 required and approved by the fire [chief-code official](#): 1) a load of 43,200 pounds on
19 one outrigger and 2) a load of 28,600 pounds on each of two adjacent outriggers
20 with 18 feet of separation on centers (the total load is 57,200 pounds.) The contact
21 area of each outrigger is 24 inches × 24 inches. In addition to verifying that special
22 inspections per the Building Code, the design engineer of record shall make
23 periodic construction observations and upon substantial completion of the work,
24 the design engineer shall provide the fire [chief-code official](#) an engineer's letter of
25 concurrence that the work and materials were installed in substantial conformance
26 with the fire [chief-code official](#)'s record document.

27 **503.3 Designation, Location, and Maintenance of Fire Zones Official Records.** All
28 fire apparatus access roads required by Sections 503.1.1 and 3206.6 and that are out of
29 the public right-of-way, are designated as fire zones or fire lanes, to maintain the required
30 unobstructed clearance in accordance with Section 503.2.1 as amended. The fire
31 department will keep records of the designation and location of fire zones and fire lanes.

32 **Exception:** Fire apparatus access roads between aisles of parking or under porte
33 cocheres need not be designated as fire zones.

34 **503.3.1 Tow Away Zones.** All fire zones and fire lanes shall be designated
35 as tow away zones. The designation of the fire zones or fire lanes does not
36 make the City responsible for the maintenance of the fire zones or fire lanes

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1 on private property, but the owner of the property continues to be
2 responsible for the maintenance of the area.

3 **503.3.2 Signs and Identification Markers Designating Fire Zones/Fire**
4 **Lanes.** After designation of a fire zone or fire lane under this article, the fire
5 ~~chief~~-code official shall give notice of the designation to the owner of the
6 property, directing the owner to cause, at the expense of the owner, markings
7 to be painted on top and face of curb/pavement of any areas designated as a
8 fire zone or fire lane. The markings must be red with white stenciling
9 reading "FIRE ZONE/TOW AWAY ZONE" or "FIRE LANE/TOW AWAY
10 ZONE" in lettering at least three inches in height. The stenciling shall be at
11 intervals of 35 feet or less. In addition, the owner shall cause signs to be
12 posted at both ends of a fire zone or fire lane and at each entry and exit point
13 which constitutes a portion of the fire zone or fire lane. Alternative marking
14 of fire zones and fire lanes may be approved by the fire ~~chief~~-code official
15 provided fire zones or fire lanes are clearly identified at both ends and at
16 intervals not to exceed 35 feet and are clearly marked "Tow Away Zones" at
17 least every 35 feet. The signs shall be installed with the top of the sign no
18 higher than eight feet above grade and no less than five feet above grade.

19 **503.4.1. Traffic calming devices.** Geometric street features intended to mitigate unsafe
20 traffic conditions such as speeding or excessive cut-through traffic shall be designed to
21 address both traffic safety and emergency access requirements. Approved street features
22 shall mitigate the traffic conditions identified by the city traffic engineer while providing
23 for adequate emergency vehicle access to the satisfaction of the fire department.

24 **503.6 Security gates.** The installation of security gates across a fire apparatus access
25 road shall be approved by the fire code official. Where security gates are installed, they
26 shall have an approved means of emergency operation. The security gates and the
27 emergency operation shall be maintained operational at all times. Electric gate operators,
28 where provided, shall be listed in accordance with UL 325. Gates intended for automatic
29 operation shall be designed, constructed and installed to comply with the requirements of
30 ASTM F2200 and the Fire Protection Criteria Manual.

31 **503.7 Persons authorized to Issue Citations.** A citation for a charge of parking,
32 standing, or stopping in a fire zone or fire lane in violation of this article may be issued
33 by a licensed peace officer employed by the City, an employee of the Fire Department
34 designated by the fire ~~chief~~-code official, an employee of the City authorized to issue
35 tickets for parking violations by the City Code, or a private security guard employed by
36 an agency operating under either a license or a letter of authority issued by the Texas

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1 Board of Private Investigators and Private Security Agencies, and who is employed by
2 the owner or lessee of the property on which a fire zone has been established.

3 **504.1 Required Access.** Exterior doors and openings required by the code or the
4 International Building Code shall be maintained accessible for emergency access by the
5 fire department. An approved access walkway constructed of approved materials at least
6 36 inches in width leading from fire apparatus access roads to exterior openings shall be
7 provided when required by the fire ~~chief~~ [code official](#). The walkway shall be constructed
8 in accordance with Section 1003.4 [of the International Building Code](#).

9 **505.1 Address identification.** New and existing buildings shall be provided with
10 approved address identification in accordance with the Fire Protection Criteria Manual.

11 **505.3 Premise Hazard Identification Signs.** Structures that the fire ~~chief~~ [code official](#)
12 deems to have the potential to present an unusual level of hazard to firefighters during
13 fire ground operations shall be identified such that it is readily identifiable to responding
14 fire department personnel. Such structures may or may not present obvious dangers to
15 the occupants of the building when no fire is present. Potentially hazardous structures
16 may be identified as prescribed by this code, by the Building Code, or by fire department
17 safety policies and procedures.

18 **505.3.1 Hazardous Address Numbering.** Structures that are required to be
19 readily identifiable by responding fire department personnel shall have unique
20 address numbering signs. The signs shall be installed on all sides of the building
21 facing emergency vehicle access established in accordance with Section 503 or
22 facing an approach directly from public rights-of-way. Signs will consist of the
23 address numbers of the building in 8-inch tall white numbers on a solid red
24 background. The address numbers will be oriented vertically. The signage will be
25 reflective to be visible at night, weather resistant and permanent.

26 **507.3 Fire flow.** Fire flow requirements for buildings or portions of buildings and
27 facilities shall be determined in accordance with Appendix B of the Fire Code.

28 **507.4 Water supply test.** The ~~fire department emergency prevention division~~ [Fire](#)
29 [Marshals office](#) shall be notified prior to the water supply test. Water supply tests shall be
30 conducted by or witnessed by the ~~fire department emergency prevention division~~ [Fire](#)
31 [Marshals office](#).

32 **507.5.1 Where required.** Where a portion of the facility or building hereafter
33 constructed or moved into or within the jurisdiction is more than 400 feet (122 m) from
34 the nearest hydrant on a fire apparatus access road or more than 500 feet (152 m) from
35 secondary hydrants needed to supply the minimum fire flow, as measured by an approved

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1 route around the exterior of the facility or building, on-site fire hydrants and mains shall
2 be provided where required by the fire ~~chief~~code official.

3 **Exceptions:**

- 4 1. For Group R-3 and Group U occupancies, the distance requirement shall be
5 600 feet (183 m).
- 6 2. For buildings equipped throughout with an approved automatic sprinkler
7 system installed in accordance with Section 903.3.1.1 or 903.3.1.2, the
8 distance requirement for all required fire hydrants shall be 500 feet (152 m).

9 **507.5.3 Private fire service mains and water tanks.** Private fire service mains,
10 including private fire hydrants and water tanks, shall be inspected, tested and maintained
11 consistent with NFPA 25, *Standard for Inspection, Testing and Maintenance of Water-*
12 *Base Fire Protection Systems*; the Fire Protection *Criteria Manual* and the American
13 Water Works Association (AWWA) Manual M-17, *Installation, Field Testing and*
14 *Maintenance of Fire Hydrants* at the following intervals:

- 15 1. Private fire hydrants (all types): Inspection annually and after each operation; flow
16 test and maintenance annually to ensure proper functioning in accordance with the
17 following:
 - 18 a. Private fire hydrants shall be flushed annually. Chlorine residual tests will be
19 performed on all private hydrant systems not separated from potable water
20 uses by an approved back-flow prevention device. The unseparated hydrants
21 shall be flushed until the free chlorine residual meets or exceeds the 0.2 mg/l
22 minimum established by the Texas Commission on Environmental Quality
23 in Section 290.46(f)(1) of the Rules and regulations for Public Water
24 Systems. Chlorine residual shall be determined using the N,N-diethyl-p-
25 phenylenediamine (DPD) method.
 - 26 b. Static testing shall be performed in accordance with AWWA Manual M-17,
27 *Installation, Field Testing and Maintenance of Fire Hydrants*, Chapter 4.
 - 28 c. Flow tests shall be conducted in accordance with Manual M-17, *Installation,*
29 *Field Testing and Maintenance of Fire Hydrants*, Chapter 6.
- 30 2. Fire service main piping: Inspection of exposed, annually; flow test every 5 years.
- 31 3. Fire service main piping strainers: Inspection and maintenance after each use.

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1 **507.5.7 Marking of Fire-protection equipment and fire hydrants.** Fire-protection
2 equipment and fire hydrants shall be clearly identified in an approved manner to prevent
3 obstruction by parking and other obstructions.

4 All fire hydrants shall be painted in accordance with City of Austin Standard
5 Specifications manual. With the approval of the fire ~~chief~~-code official, private hydrants
6 may be painted an alternate reflective color; multi-colored hydrants are prohibited. When
7 required by the ~~chief~~-code official, hydrant locations shall be identified by the installation
8 of reflective markers.

9 **507.6 Protection of potable water systems.** Fire hydrants and the supply piping to them
10 which contain chemicals or additives shall be separated from sources of potable water by
11 a reduced pressure backflow assembly installed at the connection to the potable water
12 system. Backflow assemblies shall be operationally tested and maintained in accordance
13 with City Code Title 15 Utility Regulations Chapter 15-1 (*Cross-Connection*
14 *Regulations*).

15 Private fire hydrants located at a distance from a flowing water service such that the
16 volume of water in the hydrant lead is more than 100 gallons shall have backflow
17 prevention protection as required by Chapter 15-1 (*Cross-Connection Regulations*).

18 Private fire hydrant systems not maintained, flushed and tested for chlorine residual in
19 accordance with Section 507.5.3, item 1 a. shall be provided with backflow prevention
20 protection in accordance with Chapter 15-1 (*Cross-Connection Regulations*).

21 **507.6.1 Special inspections.** Austin Water ~~Utility~~ shall inspect private property to
22 identify each existing private fire hydrant connected to the City's potable water
23 distribution system. The owner of the property or the water service customer shall bear
24 the costs and the responsibility to provide a flushing and maintenance program in
25 accordance with Section 507.5.3 or to provide backflow prevention protection in
26 accordance with Chapter 15-1 (*Cross-Connection Regulations*).

27 Further modifications shall be made by, and at the expense of, the property owner or
28 water service customer as necessary to correct any water supply deficiencies (flow or
29 pressure) resulting from the installation of required backflow prevention protection
30 assemblies.

31 **508.1.6 Required Features.** The fire command center shall comply with NFPA 72 and
32 shall contain the following features:

33 Items 1 through 6 remain unchanged.

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- 1 7. Controls for unlocking stairway doors simultaneously. Stairways doors shall be
2 physically unlocked by UL listed fire alarm system components. The unlocking
3 means shall be a red light switch mounted on the wall in the command room with
4 appropriate signage or other approved method.

5 Items 8 through 13.3 remain unchanged.

6 **13.4** Exit access stairway and exit stairway information that includes: number of exit
7 access stairways and exit stairways in building, each exit access stairway and exit
8 stairway designation and floors served; location where each exit access stairway
9 and exit stairway discharges; interior exit stairways that are pressurized; exit
10 stairways provided with emergency lighting; each exit stairway that allows reentry;
11 exit stairways providing roof access; elevator information that includes: number of
12 elevator banks, elevator bank designation, elevator car numbers and respective
13 floors that they serve; location of elevator machine rooms, control rooms and
14 control spaces; location of sky lobby; location of freight elevator banks; location of
15 the Fire-fighters Service Access Elevator banks when applicable; and location of
16 Occupant Evacuation Elevator banks when applicable.

17 Items ~~14~~ 13.5 through 18 remain unchanged.

18 **508.1.7 Fire command center identification.** The fire command center shall be
19 identified by a permanent, easily visible sign stating “FIRE COMMAND CENTER”
20 located on the door to the fire command center. Additional signage as required by the fire
21 code official shall be provided when the fire command center is located in an area not
22 readily visible when entering the building.

23 ~~**510.1 Emergency responder communication coverage in buildings.** Approved in-~~
24 ~~building, two-way emergency responder communication coverage for emergency~~
25 ~~responders shall be provided in all new buildings. In-building, two-way emergency~~
26 ~~responder communication coverage within the building shall be based on the existing~~
27 ~~coverage levels of the public safety communication systems utilized by the jurisdiction,~~
28 ~~measured at the exterior of the building. This section shall not require improvement of~~
29 ~~the existing public safety communication systems.~~

30 ~~**Exceptions:** Where it is determined by the fire chief code official that the radio~~
31 ~~coverage system is not needed.~~

32 **510.5.3 Minimum qualifications of personnel.** The minimum qualifications of the
33 system designer and lead installation personnel shall include all of the following:

- 34 1. A valid FCC-issued general radio operator’s license.
35

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1 2. Certification of in-building system training issued by an approved organization
2 or approved school, or a certificate issued by the manufacturer of the equipment
3 being installed.

4 3. Qualified as required by the fire code official.

5
6 These qualifications shall not be required where demonstration of adequate skills and
7 experience satisfactory to the fire code official is provided.

8
9 **605.4 Fuel oil storage systems.** Fuel oil storage systems for building heating
10 systems shall be installed and maintained in accordance with this code. Tanks and fuel-oil
11 piping systems shall be installed in accordance with the Mechanical Code. Aboveground
12 storage tanks and piping for generators shall comply Chapter 57.

13
14 **605.4.1.2 Fuel oil storage for stationary generators.** Aboveground outdoor fuel oil
15 storage for stationary generators in quantities exceeding 660 gallons shall meet the
16 following requirements.

- 17
18 (1) All storage must be located 50 ft. from a property line that is or can be built
19 upon, including the opposite side of a public way.
20 (2) For installations storing all fuel oil in UL 2085 Aboveground Storage Tank, the
21 distance from a property line that is or can be built upon, including the opposite
22 side of a public way shall be in accordance with NFPA 30.
23 (3) All tank openings shall be above the tank liquid level
24 (4) All installations exceeding an aggregate volume of 20,000 gallons (75708 L) shall
25 be subject to public notification requirements of Section 5704.2.9.6.1, Exception 3.

26
27 **605.4.2 Fuel oil storage inside buildings.** Fuel oil storage inside buildings shall comply
28 with Sections 605.4.2.2 through 605.4.2.8 and Chapter 57.

29
30 **605.4.2.1 Approval** Indoor fuel oil storage tanks shall be in accordance with UL 80, UL
31 142 or UL 2085.

32
33 **605.4.2.2 Quantity limits.** One or more fuel oil storage tanks containing Class II or
34 III *combustible liquid* shall be permitted in a building. The aggregate capacity of all tanks
35 shall not exceed the following:

- 36
37 (1) 120 gallons of Class II combustible liquid in unsprinklered buildings where
38 stored in a tank complying with UL 80, UL 142 or UL 2085.
39 (2) 330 gallons of Class III combustible liquid in unsprinklered buildings where
40 stored in a tank complying with UL 80, UL 142 or UL 2085.

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- 1 (3) 660 gallons (2498 L) in buildings equipped with an *automatic*
2 *sprinkler* system in accordance with Section 903.3.1.1, where stored in a tank
3 complying with UL 80, UL 142 or UL 2085.
- 4 (4) 3,000 gallons (11 356 L) in a building equipped with an automatic sprinkler
5 system in accordance with Section 9-3.1.1, when all of the following are met:
 - 6 (a) All storage is in protected aboveground tanks complying with UL 2085
7 and Section 5704.2.9.7.
 - 8 (b) Tanks are listed as secondary containment tanks as required by UL
9 2085 and the secondary containment is monitored visually or
10 automatically.
 - 11 (c) All storage is located 6 stories or less above the lowest level of fire
12 department access.
 - 13 (d) All piping for the tanks above the ground level have welded
14 connections except where replaceable components are installed
15

16 **605.4.2.3 Restricted use and connection.** Tanks installed in accordance with Section
17 605.4.2 shall be used only to supply fuel oil to fuel-burning equipment, generators or fire
18 pumps installed in accordance with Section 605.4.2.5. Connections between tanks and
19 equipment supplied by such tanks shall be made using closed piping systems In
20 accordance with the Mechanical Code. Closed piping systems for generators shall comply
21 with Chapter 57.
22

23 **605.4.2.6 Separation.** Rooms containing fuel oil tanks for internal combustion engines
24 shall be separated from the remainder of the building by *fire barriers, horizontal*
25 *assemblies*, or both, with a minimum 1-hour *fire-resistance rating* with 1-hour fire-
26 protection-rated *opening protectives* constructed in accordance with the Building Code.
27

28 **[M] 6096.2 Where required.** A Type I hood shall be installed at or above all commercial
29 cooking appliances and domestic cooking appliances used for commercial purposes that
30 produce grease vapors.

31 **Exception:** A Type I hood shall not be required for an electric cooking appliance
32 where an approved testing agency provides documentation that the appliance
33 effluent contains less than 5 mg/m³ or less of grease when tested at an exhaust flow
34 rate of 500 CFM (0.236 m³/s) in accordance with UL 710B. The appliance
35 component controls and safety interlocks shall be inspected in accordance with the
36 manufacturer installation instructions by qualified service personnel a minimum of
37 once every 6 months and results of the inspection shall be available on the
38 premises for review by the fire **chief-code official**. When provided, automatic fire
39 extinguishing systems shall be in accordance with Section 904.12.

1 **611 Automated External Defibrillator (AED) in High-Rise Buildings**

2 **611.1 Locations.** All buildings that have occupied floors located more than 75 feet (22
3 860 mm) above the lowest level of fire department vehicle access shall have at least
4 one Automated External Defibrillator (AED) located on each occupied level.

5 **Exception:** The provisions of this section shall not apply to the following
6 buildings and structures:

- 7 (1) Airport traffic control towers in accordance with Section 412.2 of the
8 Building Code.
- 9 (2) Open parking garages in accordance with Section 406.5 of the Building
10 Code.
- 11 (3) Group A-5 occupancies in accordance Section 303.6 of the Building Code.
- 12 (4) Group H-1, H-2 or H-3 in accordance with Section 415 of the Building
13 Code.

14 **611.2 Type.** All AEDs used in high-rise buildings must be of the type approved by the
15 United States Food and Drug Administration (FDA).

16 **611.3 Accessibility.** All AEDs must be available for public use.

- 17 1. All AEDs shall be located in the elevator lobby unless otherwise approved
18 by the fire ~~chief~~ code official.
- 19 2. Standard industry accepted signs shall mark the location of each AED.

20 **611.4 Maintenance.** All AEDs shall be maintained and tested according to
21 manufacturer recommendations.

- 22 1. Maintenance records shall be kept for a period of 1 year.
- 23 2. Disposable supplies (Defibrillation pads) shall be replaced upon their
24 expiration date or following use.

25 **611.5 Medical Direction.** A licensed physician shall be involved to ensure
26 compliance with the requirements of the Health and Safety Code, chapter 779,
27 Automated External Defibrillators.

28 **611.6 Training.** The person or entity that acquires an AED shall ensure that users are
29 trained in cardiopulmonary resuscitation (CPR) and use of the automated external
30 defibrillator (AED) in a course approved by the Texas Department of State Health
31 Services

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1 **611.7 Notifying Emergency Medical Services Providers.** Upon acquisition of an
2 AED, the person or entity shall notify the Fire Department AED Coordinator of the
3 existence, location and type of AED.

4 901.4.7.3 Environment. Automatic sprinkler system riser rooms and fire pump rooms
5 shall be maintained at a temperature of not less than 40°F (4°C). Heating units shall be
6 permanently installed and thermostatically controlled.

7 ~~901.6 Inspection, testing and maintenance.~~ Fire detection, alarm, and extinguishing
8 systems, mechanical smoke exhaust systems, mechanical smoke control systems and
9 smoke and heat vent systems shall be maintained in an operative condition at all times,
10 and shall be replaced or repaired where defective. Non-required fire protection systems
11 and equipment shall be inspected, tested and maintained or removed.

12 **TABLE 901.6.1 FIRE PROTECTION SYSTEM MAINTENANCE STANDARDS.**

SYSTEM	STANDARD
Portable fire extinguishers	NFPA-10
Carbon dioxide fire extinguishing system	NFPA-12
Halon 1301 fire extinguishing systems	NFPA-12A
Dry chemical extinguishing systems	NFPA-17
Wet chemical extinguishing systems	NFPA-17A
Water-based fire protection systems	NFPA-25
Fire alarm systems	NFPA-72
Smoke and heat venting systems	NFPA-204
Mechanical smoke control systems	NFPA-92
Water mist systems	NFPA-750
Clean-agent extinguishing systems	NFPA-2001

13 901.6.2 Integrated Testing. Where two or more fire protection or life safety systems are
14 interconnected, the intended response of subordinate fire protection and life safety
15 systems shall be verified when required testing of the initiating system is conducted,
16 when required by the fire code official.

17 **901.6.3 Records.** Records of all system inspections, tests and maintenance required by
18 the referenced standards shall be maintained on the premises for a minimum of three
19 years and shall be copied to the fire ~~chief~~ code official upon request.

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1 **903.2.1.6 Assembly occupancies on roofs.** Where an occupied roof has an assembly
2 occupancy with an occupant load exceeding 100 for Group A-2 **and or** 300 for other
3 Group A occupancies, all floors between the occupied roof and the level of exit discharge
4 shall be equipped with an automatic sprinkler system in accordance with Section
5 903.3.1.1.

6 **Exception:** Open parking garages of Type I or II construction.

7 **903.2.2.3 Group B – Animal Housing or Care Facilities.** An automatic sprinkler
8 system in accordance with Section 903.3 and 903.4 shall be provided in fire areas
9 containing an animal housing or care facility when the animals are not provided with
10 constant supervision.

11 **Exceptions:**

- 12
- 13 1. An automatic sprinkler system is not required in animal housing or care
14 facilities serving 25 or fewer animals where all of the following conditions
15 are met:
- 16 a. Walls and ceilings have a Class A finish as specified in Section 803
17 b. The facility is provided with a supervised fire alarm system in
18 accordance with Section 907.2.2.2.
- 19 2. An automatic sprinkler system is not required in animal housing or care
20 facility serving 50 or fewer animals where all of the following conditions are
21 met:
- 22 a. The facility is of one (1) hour fire resistive construction on both sides
23 of the boundary walls of the kennel area.
- 24 b. Walls and ceilings have a Class A finish as specified in Section 803
25 c. The facility is provided with a supervised fire alarm system in
26 accordance with Section 907.2.2.2.
- 27

28 **903.2.4.2 Group F-1 distilled spirits and beverages.** An automatic sprinkler system
29 shall be provided throughout a Group F-1 fire area used for the manufacture or mixing of
30 over 20% by volume (15.8% by weight) of ethyl alcohol distilled spirits in an aqueous
31 solution in a volume exceeding the Maximum Allowable Quantity per Control Area.

32 ~~**[BG] 903.2.8.1.1 Group R-1 Bed and Breakfast occupancies.** Compliance with Section~~
33 ~~903.2.8 (Group R) is not required for a single structure Group R-1 Bed and Breakfast~~
34 ~~occupancy as defined in Section 25-2-781 (Bed and Breakfast Residential Use Structures~~
35 ~~Classified) when the owner resides within the Bed and Breakfast occupancy and provided~~
36 ~~that:~~

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- ~~(1) the structure is a detached single family home that was legally constructed and occupied as a single family residence prior to January 1, 2006;~~
- ~~(2) the total number of sleeping rooms has not been increased after January 1, 2006;~~
- ~~(3) the residence is protected by a monitored residential style fire/security system with an appropriate automatic smoke detection system installed throughout the residence with occupant notification devices in accordance with Section 907.5; and~~
- ~~(4) the residential style fire/security system shall be inspected, tested and maintained in accordance with Section 907.8.~~

903.3.1.1.1 Exempt locations. When approved, automatic sprinkler protection shall not be required in the following rooms or areas where such rooms or areas are protected with an approved automatic fire detection system in accordance with Section 907.2 that will respond to visible or invisible particles of combustion. Sprinklers shall not be omitted from a room merely because it is damp, of fire-resistance-rated construction or contains electrical equipment.

- (1) Provision remains unchanged.
- (2) Transformer rooms owned and operated by an electric utility and separated from the remainder of the building by walls and floor/ceiling or roof/ceiling assemblies having a fire-resistance rating of not less than two hours. The automatic fire detection system for exempt locations is not required.
- (3) Provision remains unchanged.
- (4) Provision remains unchanged.
- (5) Provision remains unchanged.

~~**903.3.1.2.1 Balconies and decks.** Sprinkler protection shall be provided for exterior balconies, decks and ground floor patios of dwelling units and sleeping units where the either of the following conditions exists:~~

- ~~(1) the building is of Type V construction, or of Type III construction if the balcony or deck is framed with wood, provided there is a roof or deck above;~~
- ~~or~~

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~~(2) exterior balconies, decks, and ground floor patios of dwelling units and sleeping units are constructed in accordance with Section 705.2.3.1, Exception 3 of the Building Code.~~

~~Sidewall sprinklers that are used to protect such areas shall be permitted to be located such that their deflectors are within 1 inch (25 mm) to 6 inches (152 mm) below the structural members and a maximum distance of 14 inches (356 mm) below the deck of the exterior balconies and decks that are constructed of open wood joist construction.~~

903.3.1.2.24 Balcony closets. Sprinkler protection shall be provided for all balcony closets.

~~**Section 903.3.5 Water supplies.** Water supplies for automatic sprinkler systems shall comply with this section and the standards referenced in Section 903.3.1. Fire hydrant flow tests shall be in accordance with Section 507.4. Protection of potable water supplies shall be in accordance with Section 507.5.6 [and the Plumbing Code](#).~~

903.3.5.3 Safety Factor. Water supplies designed for automatic sprinkler systems shall provide a safety factor of ~~ten~~ **10** pounds per square inch gauge (PSIG). The safety factor shall be based on the calculated system design flow and pressure.

Exception: A safety factor less than those defined in this Section may be approved by the fire ~~chief~~ [code official](#) only if historical water supply data is available to demonstrate that reasonable expected fluctuations will not cause the water supply to fall below the system demand.

~~**903.3.5.4 Hose Stream Demand.** The minimum calculated hose stream demand for Type V-B and Type V-A construction, as defined in the Building Code, shall be a minimum of 250 Gallons Per Minute (GPM).~~

903.3.6 Hose threads. Fire hose threads and fittings used in connection with automatic sprinkler systems shall be approved and shall be National Standard Hose Thread.

903.3.910 Flexible Sprinkler Hose Fittings. Flexible hoses used in automatic sprinkler systems shall be limited in length to a maximum of 6 feet. The extinguishing agent shall pass through a maximum of one 6-foot section before discharging from the sprinkler orifice (head). Approval of shop drawing submittals shall be required for all uses of flexible hose sprinkler piping, and where more than one flexible hose sprinkler drop is used in a remodel application, the adequacy of the water supply shall be verified by hydraulic calculations.

Exception: [The provisions of this section shall not apply when the manufacturer's data sheet does not require an equivalent length.](#)

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1 **903.4.23 Alarms.** A listed fire alarm bell, located on the exterior of the building in an
2 approved location, shall be connected to each automatic sprinkler system. The fire alarm
3 bell shall be activated by water flow equivalent to the flow of a single sprinkler of the
4 smallest orifice size installed in the system. Where a fire alarm system is installed,
5 actuation of the automatic sprinkler system shall actuate the building fire alarm system.

6 ~~**904.9 Halon systems.** Halogenated extinguishing systems shall be installed, maintained,
7 and periodically inspected and tested in accordance with NFPA 12A and their listing.
8 The conditions of approval of all Halon automatic fire extinguishing systems shall
9 include (i) a demonstration of need acceptable to the fire chief code official detailing a
10 critical need for the system such as a direct effect on life safety that cannot be adequately
11 addressed by other types of suppression systems, and (ii) an approved method of testing
12 that does not include the intentional release of Halon gas.~~

13 **904.134 Commercial cooking systems.** The automatic fire-extinguishing system for
14 commercial cooking systems shall be of a type recognized for protection of commercial
15 cooking equipment and exhaust systems of the type and arrangement protected. Each pre-
16 engineered automatic dry- and wet-chemical extinguishing system shall be tested in
17 accordance with UL 300 and listed and labeled for its intended application. Other types
18 of extinguishing systems shall be listed and labeled for specific use as protection for
19 commercial cooking operations. The system shall be installed in accordance with this
20 code, its listing and the manufacturer's installation instructions. Automatic fire-
21 extinguishing suppression systems of the following types shall be installed in accordance
22 with the referenced standard indicated, as follows:

- 23 1. Carbon-dioxide extinguishing systems, NFPA 12.
- 24 2. Automatic sprinkler system, NFPA 13.
- 25 3. Foam-water sprinkler system or foam-water spray systems, NFPA 16.
- 26 4. Dry-chemical extinguishing systems, NFPA 17.
- 27 5. Wet-chemical extinguishing systems, NFPA 17A.

28 **Exception 1:** Factory-built commercial cooking recirculating systems that are
29 tested in accordance with UL 710B, and listed and installed in accordance with
30 Section 304.1 of the Mechanical Code.

31 **Exception 2:** With the concurrence of the building official, commercial cooking
32 equipment used intermittently for periods which total less than 6 hours per week
33 may be served by a Type II ventilation hood without fixed fire suppression. A

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1 portable fire extinguisher rated for commercial cooking applications shall be
2 provided.

3 ~~904.13 Domestic cooking systems facilities. in Group I-2 Condition 1. Cooktops and~~
4 ~~ranges installed in the following occupancies shall be protected in accordance with~~
5 ~~Section 904.14.1:~~

6 ~~(1) In Group I-1 occupancies where domestic cooking facilities are installed in~~
7 ~~accordance with Section 420.9 of the Building Code.~~

8 ~~(2) In Group I-2 occupancies where domestic cooking facilities are installed in~~
9 ~~accordance with Section 407.2.7 of the Building Code~~

10 ~~**Exception:** I-2 Foster Care facilities providing care for 6 or fewer children 2.5~~
11 ~~years of age or younger.~~

12 ~~905.1 General. Standpipe systems shall be provided in new buildings and structures in~~
13 ~~accordance with this section. Fire hose threads used in connection with new fire~~
14 ~~standpipe systems shall be approved and shall be National Standard Hose Thread. Except~~
15 ~~as otherwise approved by the fire chief code official, existing standpipe fire hose threads~~
16 ~~shall be national standard hose thread. The location of fire department hose connections~~
17 ~~shall be approved. In buildings used for high-piled combustible storage, hose connections~~
18 ~~shall be in accordance with Chapter 32 (High Piled Combustible Storage).~~

19 ~~905.1.1 Hose. With the concurrence of the building official, hoses need not be~~
20 ~~installed or maintained on standpipes of any class when the occupancy does not~~
21 ~~provide training in the use of standpipe hose and the employees, residents, or other~~
22 ~~regular occupants of the occupancy are trained or instructed to evacuate and~~
23 ~~evacuation drills are conducted at intervals agreed on by the owner or agent and~~
24 ~~the fire department.~~

25 905.3.3 Covered and open mall buildings. Covered mall and open mall buildings shall
26 be equipped throughout with a standpipe system where required by Section 905.3.1. Mall
27 buildings not required to be equipped with a standpipe system by Section 905.3.1 shall be
28 equipped with Class I hose connections connected to the automatic sprinkler system sized
29 to deliver water at 250 gallons per minute (946.4 L/min) at the hydraulically most remote
30 hose connection while concurrently supplying the automatic sprinkler system demand.
31 The standpipe system shall be designed not to exceed a 50 pounds per square inch (psi)
32 (345 kPa) residual pressure loss with a flow of 250 gallons per minute (946.4 L/min)
33 from the fire department connection to the hydraulically most remote hose connection.
34 Hose connections shall be provided at each of the following locations:
35

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- 1 1. Within the mall at the entrance to each exit passageway or corridor.
- 2 2. At each intermediate floor landing within interior exit stairways opening
- 3 directly on the mall.
- 4 3. At exterior public entrances to the mall of a covered mall building.
- 5 4. At public entrances at the perimeter line of an open mall building.
- 6 5. At other locations as necessary so that the distance to reach all portions of a
- 7 tenant space does not exceed 200 feet (60 960 mm) from a hose connection.
- 8

9 **905.4 Location of Class I standpipe hose connections.** Class I standpipe hose
10 connections shall be provided in all of the following locations:

- 11 (1) In every required interior exit stairway or exterior exit stairway, a hose
12 connection shall be provided for each story above and below grade plane.
13 Hose connections shall be located at the intermediate floor landing unless
14 otherwise approved by the fire ~~chief~~ code official.

15 *Items 2 through 4 and item 6 remain unchanged*

- 16 (5) Where the roof has a slope less than ~~four~~ 4 units vertical in 12 units
17 horizontal (33.3-percent slope), a hose connection shall be located ~~to serve at~~
18 the roof or at the highest landing of a stairway with stair access to the roof
19 provided in accordance with Section ~~1009.16~~ 1011.12. An additional hose
20 connection shall be provided at the top of the most hydraulically remote
21 standpipe for testing purposes.

22 ~~**905.5.3 Class II system hose.** If installed, the minimum diameter for standpipe hose~~
23 ~~shall be 1½ inch (38 mm) and such hose shall be listed for this service.~~

24 ~~**907.2 Where required, new buildings and structures.** An approved manual, automatic~~
25 ~~or manual and automatic fire alarm system installed in accordance with the provisions of~~
26 ~~this code and NFPA 72 shall be provided in new buildings and structures in accordance~~
27 ~~with Sections 907.2.1 through 907.2.23 and provide occupant notification in accordance~~
28 ~~with Section 907.6, unless other requirements are provided by another section of this~~
29 ~~code. The fire alarm control panel or a full function remote annunciator shall be installed~~
30 ~~at the main entrance for use by fire department personnel.~~

31 ~~A minimum of one manual fire alarm box shall be provided in an approved location to~~
32 ~~initiate a fire alarm signal for fire alarm systems employing automatic fire detectors or~~
33 ~~water flow detection devices. Where other sections of this code allow elimination of fire~~
34 ~~alarm boxes due to sprinklers, a single fire alarm box shall be installed. The manual fire~~

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1 ~~alarm box is required to provide a means for fire watch personnel to initiate an alarm~~
2 ~~during a sprinkler system impairment event.~~

3 **Exceptions:**

- 4 ~~1. The manual fire alarm box is not required for fire alarm systems dedicated to~~
5 ~~elevator recall control and supervisory service.~~
- 6 ~~2. Automatic heat detection required by this section shall not be required if~~
7 ~~automatic sprinkler protection installed in accordance with Section 903.3.1.1~~
8 ~~or 903.3.1.2 is provided and connected to the building fire alarm system.~~
- 9 ~~3. Where ambient conditions prohibit installation of automatic smoke~~
10 ~~detection, other approved automatic fire detection may be allowed.~~
- 11 ~~4. Duct smoke detectors installed in accordance with applicable mechanical~~
12 ~~code requirements for stand alone operation, located in separate lease~~
13 ~~spaces, occupied or vacant, of shell buildings need not be connected to the~~
14 ~~fire alarm control panels (FACP) where the FACP is only required for the~~
15 ~~sprinkler monitoring system.~~

16 **907.2.1.3 Electrical Shunt for Amplified Sound Conditions.** For venues with
17 amplified music or sound systems, in Group A occupancies having an occupant load of
18 300 or more, electrical shunts shall be provided to de-energize the music or sound
19 systems upon alarm activation as necessary to demonstrate compliance with the audibility
20 requirements of NFPA 72.

21 **907.2.2.3 Animal Housing or Care Facilities.** Fire areas containing an animal housing
22 or care facility shall be provided with an electronically supervised automatic smoke
23 detection system. In spaces provided with a source of heat or light but otherwise
24 unconditioned, in lieu of smoke detection the alarm system may be activated by quick
25 response heat detectors with a response time index (RTI) of less than 100 (ie. RTI
26 classification of “Quick”, “Ultrafast”, “V-fast”).

27
28 **Exception:** Smoke detectors and/or quick response heat detectors are not required where
29 the building is equipped with an automatic sprinkler system installed in
30 accordance with Sections 903.3 and 903.4 and activation of the automatics
31 sprinkler system activates notification appliances as required by Section
32 907.2.2.3.1.

33
34 **907.2.2.3.1 Notification Appliances.** Notification appliances shall provide
35 audible and visual alarm signals in office areas and other areas within the fire area

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where no animals are housed or cared for. Notification appliances within the areas animals are housed or cared for shall provide visual only notification.

907.2.3.1 Common Areas within a Group E Day Care Occupancies. Group E day care occupancies shall be provided with a fire alarm system in accordance with Section 907.2.3 and shall be protected by smoke detectors installed in accordance with this section, the listing of the detectors and NFPA 72, and shall activate notification in accordance with Section 907.5. Detectors shall be placed throughout all corridors of all floors containing the day care facility, in lounges, and in each room occupied by children.

Exceptions:

1. A day care housed within and serving the students of a Group E occupancy, such as a public charter or private school, grades K-12, is permitted to comply with the alarm and detection requirements of Section 907.2.3.
2. Group E day cares serving 12 or fewer children located in a state licensed or registered Child-Care Home, provided that the dwelling is protected with interconnected hard wired smoke alarms located as required by this section, 907.2.3.1, and powered as required for a new home in accordance with the International Residential Code and NFPA 72 or battery operated in accordance with Section 1103.8.3 and maintained in accordance with Section 1103.8.4. When such day cares serve hearing impaired children, parents, or guardians, the smoke alarms shall be listed for both audible and visual alarm service.

907.2.6.4 Common Areas within Group I-4 Day Care Occupancies. Group I-4 day care occupancies shall be protected by a fire alarm system which monitors smoke detectors installed in accordance with this section, the listing of the detectors and NFPA 72 and activates notification devices in accordance with Section 907.5. Detectors shall be placed on each story in front of doors to the stairways throughout the corridors of all floors containing the day care facility, lounges and each room used by occupants receiving custodial care.

~~**907.2.8.2 Automatic smoke detection system.** An automatic smoke detection system that activates the occupant notification system in accordance with Section 907.6 shall be installed throughout all group R-1 occupancies. Listed system-type automatic detectors shall be installed within interior corridors serving sleeping units and unseparated areas such as recreational rooms, laundry rooms, and similar areas served by interior corridors providing access to and egress from sleeping units.~~

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~~**Exception:** An automatic smoke detection system is not required in buildings that do not have interior corridors serving sleeping units, where each sleeping unit has a means of egress door opening directly to an exit or to an exterior exit access, an egress balcony or similar exit access that leads directly to an exit.~~

~~**907.2.9 Group R-2.** Fire alarm systems and smoke alarms shall be installed in Group R-2 occupancies as required in Sections 907.2.9.1 thru 907.2.9.2.~~

~~**907.2.9.1 Manual and automatic fire alarm system.** A manual and automatic fire alarm system that activates the occupant notification system in accordance with Section 907.6 shall be installed in Group R-2 occupancies where:~~

- ~~1. Any dwelling unit or sleeping unit is located three or more stories above the lowest level of exit discharge;~~
- ~~2. Any dwelling unit or sleeping unit is located more than one story below the highest level of exit discharge of exits serving the dwelling unit or sleeping unit; or~~
- ~~3. The building contains more than 16 dwelling units or sleeping units.~~

~~Listed system-type automatic detectors shall be installed within interior corridors serving as the primary access and egress for dwelling units, and unseparated common areas such as recreational room, laundry rooms and similar areas. Heat detection may be installed in lieu of smoke detection in areas that are not suitable for smoke detection in accordance with NFPA 72 (2013 edition), Sections 17.1.7, and 17.1.8.~~

~~**Exceptions:**~~

- ~~1. A fire alarm system is not required in buildings not more than two stories in height where all dwelling units or sleeping units and contiguous attic and crawl spaces are separated from each other and public or common areas by at least 1-hour fire partitions and each dwelling unit or sleeping unit has an exit directly to a public way, exit court or yard.~~
- ~~2. Manual fire alarm boxes are not required throughout the building when all the following conditions are met:
 - ~~2.1. The building is equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or Section 903.3.1.2;~~
 - ~~2.2. The notification appliances will automatically activate throughout the notification zones upon sprinkler water flow; and~~~~

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1 ~~3.—A separate fire alarm system is not required in buildings that do not have~~
2 ~~interior corridors serving dwelling units and are protected by an approved~~
3 ~~automatic sprinkler system installed in accordance with 903.3.1.1 or~~
4 ~~903.3.1.2, provided that sprinkler system activation results in a local alarm~~
5 ~~designed to notify all occupants, and dwelling units have a means of egress~~
6 ~~door opening directly to an exterior exit access that leads directly to the~~
7 ~~exists or are served by open ended corridors as defined in Section 202 and~~
8 ~~designed in accordance with Section 1027.6, Exception 3.~~

9 ~~**907.5.2.1.1 Average sound pressure.** The audible alarm notification appliances shall~~
10 ~~provide a sound pressure level of 15 decibels (dBA) above the average ambient sound~~
11 ~~level or 5 dBA above the maximum sound level having a duration of not less than 60~~
12 ~~seconds, whichever is greater, in every occupiable space, including occupiable balconies~~
13 ~~within the building.~~

14 ~~**907.6.1 Wiring.** Wiring shall comply with the requirements of NFPA 70 and NFPA 72.~~
15 ~~Wireless protection systems utilizing radio frequency transmitting devices shall comply~~
16 ~~with the special requirements for supervision of low power wireless systems in NFPA 72.~~

17 **907.6.1.1 Surge protection devices.** Surge protection devices (SPDs) for fire alarm
18 circuits shall be in accordance with Sections 907.6.1.1 through 907.6.1.3.

19 SPDs shall be listed for the repeated limiting of transient voltage surges on 60 Hertz
20 power circuits not exceeding 1,000 Volts in accordance with UL 1449, *Standard for*
21 *Surge Protective Devices*. SPDs for power-limited and non-power-limited fire alarm
22 circuits shall be listed in accordance with UL 497B *Protectors for Data Communications*
23 *and Fire Alarm Circuits*.

24 **907.6.1.2 Circuits extending beyond one building.** Non-power-limited and power-
25 limited signaling system circuits that extend beyond building and routed outdoors shall be
26 provided with surge protection devices (SPDs) in accordance with Article 760.32 of the
27 Electrical Code.

28 **907.6.1.3 Fire Alarm Equipment.** An SPD shall be installed on the dedicated AC
29 branch circuit connected to any piece of fire alarm equipment that requires a dedicated
30 AC branch circuit.

31 **907.6.1.4 Signaling Line Circuit (SLC) Protection.** Each SLC shall be provided with an
32 SPD at the connection to the panel that controls the SLC.

33 ~~**907.6.2.1 Protection of fire alarm control unit and notification power supplies.** In~~
34 ~~areas that are not continuously occupied, a single smoke detector shall be provided at the~~

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~~location of each fire alarm control unit, notification appliance circuit power extenders, and supervising station transmitting equipment.~~

Exceptions:

- ~~1. Where ambient conditions prohibit installation of automatic smoke detection, when approved, a heat detector shall be permitted.~~

907.6.7 Annunciation and control. The main fire alarm control panel or a full function remote annunciator shall be installed at the main entrance or at an approved location near the main entrance of buildings with fire alarm systems.

909.5 Smoke barrier construction. Smoke barriers required for passive smoke control and a smoke control system using the pressurization method shall comply with Section 709 of the International Building Code. Smoke barriers shall be constructed and sealed to limit leakage areas exclusive of protected openings. The maximum allowable leakage area shall be the aggregate area calculated using the following leakage area ratios:

- ~~Exterior walls~~ Walls: $A/A_w = 0.00035$ (includes construction cracks, and cracks around windows and doors)
- ~~Stairwell walls~~ Interior exit stairways and ramps and exit passageways: $A/A_w = 0.00035$ (includes construction cracks but not cracks around windows or doors)
- ~~Elevator shaft walls~~ Interior exit stairways and ramps and exit passageways: $A/A_w = 0.0018$ (includes construction cracks but not cracks around doors)
- Floors and roofs: $A/A_F = 0.00017$ (includes construction cracks and gaps around penetrations)

Where:

A= Total leakage area, square feet (m²)

A_F= Unit floor or roof area of barrier, square feet (m²)

A_w= Unit wall area of barrier, square feet (m²)

The leakage area ratios shown do not include openings due to gaps around doors and operable windows. The total leakage area of the smoke barrier shall be determined in accordance with Section 909.5.1 and tested in accordance with Section 909.5.2.

909.10.2 Ducts. Duct materials and joints shall be capable of withstanding the probable temperatures and pressures to which they are exposed as determined in accordance with Section 909.10. Shafts constructed of gypsum board or gypsum panel products are not allowed. Ducts shall be constructed and supported in accordance with the Mechanical

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1 Code. Ducts shall be leak tested to 1.5 times the maximum design pressure in accordance
2 with nationally accepted practices. Measured leakage shall not exceed 5 percent of design
3 flow. Results of such testing shall be a part of the documentation procedure. Ducts shall
4 be supported directly from fire-resistance-rated structural elements of the building by
5 substantial, noncombustible supports.

6 **Exception:** Flexible connections, for the purpose of vibration isolation, complying
7 with the Mechanical Code and that are constructed of approved fire-resistance-
8 rated materials.

9 ~~909.12.4 Automatic Control.~~ Where completely automatic control is required or used,
10 the automatic control sequences shall be initiated from an appropriately zoned automatic
11 sprinkler system complying with Section 903.3.1.1, an automatic smoke detection system
12 complying with 907.2.13, manual controls that are readily accessible to the fire
13 department and any smoke detectors required by the engineering analysis.

14 ~~909.18.8 Testing for smoke control.~~ Smoke control systems shall be tested by a special
15 inspector.

16 ~~909.20 Smokeproof enclosures.~~ Where required by Section 1023.12 of the International
17 Building Code, a smokeproof enclosure shall be constructed in accordance with this
18 section. A smokeproof enclosure shall consist of a pressurized interior exit stairway or
19 ramp that is enclosed in accordance with the applicable provisions of Building Code
20 Section 1023 and a pressurized vestibule meeting the requirements of this section. Where
21 access to the roof is required, such access shall be from the smokeproof enclosure where
22 a smokeproof enclosure is required.

23 ~~909.20.1 Access.~~ Access to the stairway or ramp shall be by way of a vestibule. The
24 minimum dimension of the vestibule shall be not less than the required width of the
25 corridor leading to the vestibule but shall not have a width of less than 44 inches (1118
26 mm) and shall not have a length of less than 72 inches (1829 mm) in the direction of
27 egress travel.

28 ~~909.20.2.1 Door closers.~~ Doors in a smokeproof enclosure shall be self-closing and self-
29 latching.

30 ~~909.20.2 Construction.~~ The smokeproof enclosure shall be separated from the remainder
31 of the building by not less than 2-hour fire barriers constructed in accordance with
32 Section 707 of the Building Code or horizontal assemblies constructed in accordance
33 with Section 711 of the Building Code, or both. Openings are not permitted other than
34 the required means of egress doors. The vestibule shall be separated from the stairway or
35
36
37

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1 ~~ramp by not less than 2-hour fire barriers constructed in accordance with Section 707 of~~
2 ~~the Building Code or horizontal assemblies constructed in accordance with Section 711~~
3 ~~of the Building Code, or both.~~

4
5 ~~**909.20.3 Pressurized stair and entrance vestibule systems.** The provisions of Sections~~
6 ~~909.20.3.1 through 909.20.3.4 shall apply to smokeproof enclosures using a pressurized~~
7 ~~stair and pressurized entrance vestibule.~~

8
9
10 ~~**909.20.34.1 Pressurization system.** Using fans with motor speeds controlled by~~
11 ~~variable-frequency drives, the stair **and entrance vestibules** shall be pressurized to~~
12 ~~accommodate two conditions:~~

- 13 1. All stair ~~and entrance vestibule~~ doors closed.
- 14 2. All stair ~~and entrance vestibule~~ doors closed plus all stair tower exterior
15 ground floor level doors opened.

16 Validation of the pressurization fan sizes shall include the analysis described in ~~Fire Code~~
17 Section 909.4 under both winter and summer conditions using the most recent ASHRAE
18 climatic data tables for Austin, Texas. ~~Use of algebraic equations for sizing of~~
19 ~~pressurization fans shall be acceptable only for simple idealized buildings that are served~~
20 ~~with only a stair and entrance vestibule pressurization system.~~ Sizing of pressurization
21 fans ~~for buildings that include multiple types of mechanical smoke control systems,~~
22 ~~mixed-use occupancies or are very tall buildings~~ shall be performed using computer
23 modeling software as approved by the fire code official.

24
25 ~~**909.20.34.2 Pressure difference Door Opening Force.** Under the two conditions listed~~
26 ~~in Section 909.20.34.1, the stairs shall be pressurized to not less than 0.05 inch of water~~
27 ~~(12.44 Pa) positive pressure relative to the entrance vestibule. The entrance vestibule~~
28 ~~shall be pressurized to not less than 0.05 inch of water (12.44 Pa) positive pressure~~
29 ~~relative to the fire floor. The pressure difference across the closed door from the stair to~~
30 ~~vestibule shall be balanced to within 10 percent of the pressure difference across the door~~
31 ~~from the vestibule to the building. The minimum allowable total pressure difference~~
32 ~~across the smokeproof enclosure shall be not less than 0.10 inch of water.~~ The pressure
33 difference across ~~smokeproof enclosure~~ interior exit stairway and ramp doors shall not
34 exceed 30 pounds (133 N) maximum force to begin opening the door.

35
36 ~~**909.20.34.3 Dampered relief opening.** A relief vent sized at 5,000 cfm and an opening~~
37 ~~point of 0.35 inch of water (field adjustable) shall be provided at the upper portion of the~~
38 ~~stair shaft.~~

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1 ~~909.20.34.4 Pressurization systems. Smokeproof enclosure pressurization systems shall~~
2 ~~be independent of other building ventilation systems. The equipment, control wiring,~~
3 ~~power wiring and ductwork shall comply with one of the following:~~
4

5 ~~1. Equipment, control wiring, power wiring and ductwork shall be located~~
6 ~~exterior to the building and directly connected to the smokeproof enclosure or~~
7 ~~connected to the smokeproof enclosure by ductwork enclosed by not less than~~
8 ~~2-hour fire barriers constructed in accordance with Section 707 of the~~
9 ~~Building Code or horizontal assemblies constructed in accordance with~~
10 ~~Section 711 of the Building Code, or both.~~

11
12 ~~2. Equipment, control wiring, power wiring and ductwork shall be located~~
13 ~~within the smokeproof enclosure with intake or exhaust directly from and to~~
14 ~~the outside or through ductwork enclosed by not less than 2-hour fire barriers~~
15 ~~constructed in accordance with Section 707 of the Building Code or~~
16 ~~horizontal assemblies constructed in accordance with Section 711 of the~~
17 ~~Building Code, or both.~~

18
19 ~~3. Equipment, control wiring, power wiring and ductwork shall be located~~
20 ~~within the building if separated from the remainder of the building, including~~
21 ~~other mechanical equipment, by not less than 2-hour fire barriers constructed~~
22 ~~in accordance with Section 707 of the Building Code or horizontal assemblies~~
23 ~~constructed in accordance with Section 711 of the Building Code, or both.~~

24
25 ~~**Exception:** Control wiring and power wiring located outside of a 2-hour~~
26 ~~fire barrier construction shall be protected using any one of the following~~
27 ~~methods:~~
28

29 ~~1. Cables used for survivability of required critical circuits shall be listed in~~
30 ~~accordance with UL 2196 and shall have a fire-resistance rating of not~~
31 ~~less than 2 hours.~~

32
33 ~~2. Where encased with not less than 2 inches (51 mm) of concrete.~~
34

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~~3. Electrical circuit protective systems shall have a fire resistance rating of not less than 2 hours. Electrical circuit protective systems shall be installed in accordance with their listing requirements.~~

909.22.6 Components bypassing weekly test. Where components of the smoke control system are bypassed by the preprogrammed weekly test required by Section 909.12.1, such components shall be tested annually. The system shall be tested under standby power conditions.

~~**912.1 Installation.** Fire department connections shall be installed in accordance with the NFPA standard applicable to the system design and shall comply with Sections 912.1.1 through 912.7.~~

~~**912.1.1 Number of Hose Connections.** Fire department connections (FDC's) shall include a minimum of two 2½ inch (63.5 mm) female National Standard Hose Thread (NST) inlet connections. Where system design flow rates exceed 500 gpm (1,893 lpm), a minimum of one FDC inlet connection shall be installed for each 250 gpm (946 lpm) or portion thereof.~~

~~**Exception:** A single 2½ inch FDC inlet shall be provided for NFPA 13R automatic sprinkler systems.~~

~~**912.4 Access.** Immediate access to fire department connections shall be maintained at all times and without obstruction by fences, bushes, trees, walls or any other fixed or moveable object for a minimum of 3 feet (914 mm). Access to fire department connections shall be approved by the fire chief code official.~~

~~**Exception:** Fences, where provided with an access gate equipped with a sign complying with the legend requirements of Section 912.5 and a means of emergency operation. Locks, if installed shall be openable by use of a fire department Knox Key. The gate and means of emergency operation shall be approved by the fire chief code official and maintained operational at all times.~~

~~**912.4.1 Locking fire department connection caps.** The fire chief code official is authorized to require locking caps on fire department connections for water-based fire protection systems. The locking caps shall be manufactured by an approved manufacturer and used and maintained as designed.~~

912.4.1.2¹ Locking fire department connection caps in existing buildings or structures. The fire ~~chief~~ code official is authorized to require locking caps on fire department connections (FDC) for water-based fire protection systems serving existing buildings where the fire department has observed obstructions placed in the FDC or

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1 where the FDC is missing caps. The locking caps shall be **manufactured** by an approved
2 manufacturer and used and maintained as designed.

3 912.5 Signs. For new and existing structures, an all-weather, permanent sign shall be
4 placed in a visible location adjacent to fire department connections serving automatic
5 sprinklers, standpipes or fire pump connections. The text shall be white reflective letters
6 on a red background. Such signs shall read: “FDC”, “AUTOMATIC SPRINKLERS,”
7 “STANDPIPES,” “TEST CONNECTION,” “STANDPIPE AND AUTOSPKR” or
8 “AUTOSPKR AND STANDPIPE,” or a combination thereof as applicable.
9

10 912.5.1 Lettering. Each fire department connection (FDC) shall be designated by
11 a sign having the letters “FDC” not less than 6 inches (152 mm) in height and
12 words in letters not less than 2 inches (51 mm) in height. For manual standpipe
13 systems, the sign shall also indicate that the system is manual and that it is either
14 wet or dry.
15

16 ~~912.5.1 Fire Department Connection Placard— for existing structures.~~ In addition to
17 the signage required in 912.5.1, an all-weather, permanent, system placard shall be placed
18 in a visible location adjacent to the fire department connection on all structures with a fire
19 protection system requiring pressures exceeding 150psi. The placard text shall be white
20 reflective letters, 1 ½ inch minimum height, on either a red or black background. The
21 placard shall contain the following information:

- 22 1. ~~Required system pressure at FDC inlet;~~
- 23 2. ~~Area of building served by FDC; and~~
- 24 3. ~~System PRV locations.~~

25 912.5.5 Indication of pressure reducing valves. Where pressure reducing valves are
26 provided within the building, the sign shall indicate the range of floor levels.

27 913.1.1 Fire Pump Rating. Fire pump(s) for fire protection shall be selected so that the
28 greatest single demand for any fire protection system connected to the pump is less than
29 or equal to 125 percent of the rated capacity (flow) of the pump.
30

31 913.2.2.1 Fire Pump Disconnect. Fire pump(s) shall not have any electrical
32 disconnecting means between the utility transformer and the electric fire pump
33 controller.
34

35 913.3.1.2 Freeze Protection for Fire Pump Room. The temperature maintenance
36 required by 913.3 shall be maintained at all times and shall be connected to the building
37 standby power system when required.

~~914.5.3 Compartment smoke control system. Where compartmentation is required by Section 405.4 of the Building Code, each compartment shall have an independent smoke control system. The system shall be automatically activated and capable of manual operation from the firefighter's smoke control panel in accordance with Section 907.2.18.~~

SECTION 915 CARBON MONOXIDE (CO) DETECTION (from 2021 IFC)

915.1 General. Carbon monoxide detection shall be installed in new buildings in accordance with Sections 915.1.1 through 915.6. Carbon monoxide detection shall be installed in existing buildings in accordance with Section 1103.9.

915.1.1 - Where required. Carbon monoxide detection shall be provided in Group I-1, I-2, I-4 and R occupancies and in classrooms in Group E occupancies in the locations specified in Section 915.2 where any of the conditions in Sections 915.1.2 through 915.1.6 exist.

915.1.2 Fuel-burning appliances and fuel-burning fireplaces. Carbon monoxide detection shall be provided in dwelling units, sleeping units and classrooms that contain a fuel-burning appliance or a fuel-burning fireplace.

915.1.3 Fuel-burning forced-air furnaces. Carbon monoxide detection shall be provided in dwelling units, sleeping units and classrooms served by a fuel-burning, forced-air furnace.

Exception: Carbon monoxide detection shall not be required in dwelling units, sleeping units and classrooms where a carbon monoxide detector is provided in the first room or area served by each main duct leaving the furnace, and the carbon monoxide alarm signals are automatically transmitted to an approved location.

915.1.4 Fuel-burning appliances outside of dwelling units, sleeping units and classrooms. Carbon monoxide detection shall be provided in dwelling units, sleeping units and classrooms located in buildings that contain fuel-burning appliances or fuel-burning fireplaces.

Exceptions:

1. Carbon monoxide detection shall not be required in dwelling units, sleeping units and classrooms without communicating openings between the fuel-burning appliance or fuel-burning fireplace and the dwelling unit, sleeping unit or classroom.

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1 2. Carbon monoxide detection shall not be required in dwelling units, sleeping
2 units and classrooms where a carbon monoxide detector is provided in one of the
3 following locations:

4 2.1. In an approved location between the fuel-burning appliance or fuel-
5 burning fireplace and the dwelling unit, sleeping unit or classroom.

6 2.2. On the ceiling of the room containing the fuel-burning appliance or fuel-
7 burning fireplace.

8
9 **915.1.5 Private garages.** Carbon monoxide detection shall be provided in dwelling units,
10 sleeping units and classrooms in buildings with attached private garages.

Exceptions:

11
12
13 1. Carbon monoxide detection shall not be required in dwelling units, sleeping
14 units and classrooms without communicating openings between the private garage
15 and the dwelling unit, sleeping unit or classroom.

16 2. Carbon monoxide detection shall not be required in dwelling units, sleeping
17 units and classrooms located more than one story above or below a private garage.

18 3. Carbon monoxide detection shall not be required where the private garage
19 connects to the building through an open-ended corridor.

20 4. Where a carbon monoxide detector is provided in an approved location between
21 openings to a private garage and dwelling units, sleeping units or classrooms.

22
23 **915.1.6 Exempt garages.** For determining compliance with Section 915.1.5, an open
24 parking garage complying with Section 406.5 of the International Building Code or an
25 enclosed parking garage complying with Section 406.6 of the International Building
26 Code shall not be considered a private garage.

27
28 **915.2 Locations.** Where required by Section 915.1.1, carbon monoxide detection shall be
29 installed in the locations specified in Sections 915.2.1 through 915.2.3.

30
31 **915.2.1 Dwelling units.** Carbon monoxide detection shall be installed in dwelling units
32 outside of each separate sleeping area in the immediate vicinity of the bedrooms. Where a
33 fuel-burning appliance is located within a bedroom or its attached bathroom, carbon
34 monoxide detection shall be installed within the bedroom.

35
36 **915.2.2 Sleeping units.** Carbon monoxide detection shall be installed in sleeping units.

37
38 **Exception:** Carbon monoxide detection shall be allowed to be installed outside of
39 each separate sleeping area in the immediate vicinity of the sleeping unit where the
40 sleeping unit or its attached bathroom does not contain a fuel-burning appliance
41 and is not served by a forced-air furnace.

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1 915.2.3 Group E occupancies. Carbon monoxide detectors shall be installed in
2 classrooms in Group E occupancies. Carbon monoxide alarm signals shall be
3 automatically transmitted to an on-site location that is staffed by school personnel.
4

5 Exception: Carbon monoxide alarm signals shall not be required to be
6 automatically transmitted to an onsite location that is staffed by school personnel
7 in Group E occupancies with an occupant load of 30 or less.
8

9 915.4.3 Locations. Carbon monoxide alarms shall only be installed in dwelling units and
10 in sleeping units. They shall not be installed in locations where the code requires carbon
11 monoxide detectors to be used.

12 915.4.4 Combination alarms. Combination carbon monoxide/smoke alarms shall be an
13 acceptable alternative to carbon monoxide alarms. Combination carbon monoxide/smoke
14 alarms shall be listed in accordance with UL 217 and UL 2034.
15

16 915.4.5 Interconnection. Where more than one carbon monoxide alarm is required to be
17 installed, carbon monoxide alarms shall be interconnected in such a manner that the
18 actuation of one alarm will activate all of the alarms. Physical interconnection of carbon
19 monoxide alarms shall not be required where listed wireless alarms are installed and all
20 alarms sound upon activation of one alarm.
21

22 915.5 Carbon monoxide detection systems. Carbon monoxide detection systems shall
23 be an acceptable alternative to carbon monoxide alarms and shall comply with Sections
24 915.5.1 through 915.5.3.
25

26 915.5.1 General. Carbon monoxide detection systems shall comply with NFPA 720.
27 Carbon monoxide detectors shall be listed in accordance with UL 2075.
28

29 915.5.2 Locations. Carbon monoxide detectors shall be installed in the locations
30 specified in Section 915.2. These locations supersede the locations specified in NFPA
31 720.

32 915.5.3 Combination detectors. Combination carbon monoxide/smoke detectors
33 installed in carbon monoxide detection systems shall be an acceptable alternative to
34 carbon monoxide detectors, provided that they are listed in accordance with UL 268 and
35 UL 2075.
36

37 915.6 Maintenance. Carbon monoxide alarms and carbon monoxide detection systems
38 shall be maintained in accordance with NFPA 720. Carbon monoxide alarms and carbon
39 monoxide detectors that become inoperable or begin producing end-of-life signals shall
40 be replaced.
41

1 **916.1 Gas detection systems.** Gas detection systems required by this code shall comply
2 with Sections 916.2 through 916.11. When prescribed by other adopted standards, vapor
3 detector systems shall comply with Section 916.

4
5 Carbon monoxide detection systems shall comply with Section 915.

6
7 Carbon dioxide gas detectors for insulated liquid carbon dioxide systems used in
8 beverage dispensing application shall comply with Section 5307.3.

9
10 **916.4 Power connections.** Gas detection systems supplies shall be in accordance with
11 Section 907.6.2. Carbon dioxide gas detectors ~~or~~ for beverage dispensing applications
12 shall be permitted to be cord connected to an unswitched receptacle using an approved
13 restraining means that secures the plug to the receptacle.

14
15 **916.5 Emergency and standby power.** Standby or emergency power shall be provided
16 in accordance with Section 1203.2.7. The gas detection system shall initiate a supervisory
17 signal at an approved location if the secondary power supply is interrupted.

18
19 **916.6 Gas detector locations.** Gas detectors shall be installed ~~in~~ at approved storage or
20 use locations where leaking gases are expected to accumulate. Gases or vapors that
21 present a health hazard and are stored or used outside of gas rooms, gas cabinets or
22 exhausted enclosures shall be located based on the vapor density of the gas @ NTP.

23
24 **916.6.1 Gas detector selection.** Gas detectors shall selected be based on the physical
25 hazard or health hazard of the hazardous material being measured.

26
27 **916.7 Gas sampling.** Gas sampling shall be performed continuously. Sample analysis
28 shall be processed immediately after sampling, except as follows:

- 29
- 30 1. For HPM gases, sample analysis shall be performed at intervals not
31 exceeding 30 minutes.
 - 32 2. For highly toxic and toxic gases, sample analysis shall be performed at
33 intervals not exceeding 5 minutes, in accordance with Section 6004.2.2.7.
 - 34 3. Where a less frequent or delayed sampling interval is approved.

35
36 **916.8 System activation.** A gas detection alarm shall be initiated where any detector
37 detects a concentration of gas exceeding the following thresholds:

- 38
- 39 1. For flammable gases, a gas concentration exceeding 25 percent of the lower
40 flammability limit (LFL).
 2. For nonflammable gases, a gas concentration exceeding its Permissible
Exposure Limit or 8-hour Time-Weighted Average, unless a different

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1 threshold is specified by the section of this code requiring a gas detection
2 system.

- 3 3. For simple asphyxiant gases, a gas concentration equal to or less than 19.5%
4 volume of oxygen in air at NTP.
5

6 Upon activation of a gas detection alarm, alarm signals or other required responses shall
7 be as specified by the section of this code requiring a gas detection system. Audible and
8 visible alarm signals associated with a gas detection alarm shall be distinct from fire
9 alarm and carbon monoxide alarm signals.

10 **916.10 Fire alarm system connections.** Gas detectors and gas detection systems
11 connected to fire alarm systems shall be in accordance with NFPA 72.
12

13 **1001.1 Scope.** The provisions of this chapter shall specify the requirements of means of
14 egress and shall apply to the design, installation of means of egress. For those
15 requirements, refer to the Building Code. Refer to section 1032 of the Fire Code for
16 maintenance of the means of egress.
17
18

19 **1032.2 Reliability.** Required exit accesses, exits or exit discharges shall be continuously
20 maintained free from obstructions or impediments to full instant use in the case of fire or
21 other emergency when the areas served by such exits are occupied. Security devices,
22 including drop bars, affecting means of egress shall require approval of the fire **chief**
23 **code official**. Doors utilizing drop bars must have signage on the exterior of the door
24 stating "Door equipped with drop bar". Doors utilizing drop bars must have signage on
25 the interior of the door stating "Drop bar must be removed when building is occupied".
26 When security devices are not in use, they must be secured in a manner where
27 unauthorized use is prevented, such as:

- 28 1. Locking bar in a keeper near the door.
29 2. Securing bar in an office, locked closet, or similar location not accessible to the
30 general public.

31 Approval to use security devices outside the scope of this code may be revoked for
32 failure to meet the letter and intent of these rules.

33 ~~**1102.1 Supplemental Definitions.** The definitions in the 2021 Fire Code are adopted as
34 published except that supplemental definitions are added or amended. The following
35 supplemental definitions are defined in Section 202.1.1. For the purposes of this chapter
36 and as used elsewhere in this code, these definitions shall have the meanings shown in
37 Section 202.1.1.~~

~~INDEPENDENT—EXIT/INDEPENDENT—STAIRWAY/INDEPENDENT—EXIT RAMP.~~

1103.4.1 Group I-2 and I-3 occupancies. *This section is deleted in its entirety.*

1103.4.8 Occupancies other than Group I-2 and I-3. *This section is deleted in its entirety.*

1103.4.9 Waste and linen chutes. *This section is deleted in its entirety.*

1103.5.6 Group B ambulatory health care facilities. An automatic sprinkler system shall be installed throughout all existing fire areas containing a Group B ambulatory health care facility occupancy when the facility is designed to allow either of the following conditions to exist at any time:

1. Four or more care recipients are incapable of self-preservation.
2. One or more care recipients who are incapable of self-preservation are located at other than the level of exit discharge serving such occupancy.

~~**1103.6.1 Existing multiple story buildings.** Existing structures with occupied floors located more than 50 feet (15,240 mm) above or below the lowest level of fire department access shall be equipped with standpipes installed in accordance with Section 905. The standpipes shall have an approved fire department connection with hose connections at each floor level above or below the lowest level of fire department access. The fire chief code official is authorized to approve the installation of manual standpipe systems to achieve compliance with this section where the system is demonstrated to be capable of providing the required hose flow and pressure at the highest standpipe outlet while the fire department is providing the water supply to the fire department connection (FDC) at a maximum FDC inlet pressure of 150 psi (10.3 bar).~~

~~**1103.7.6 Group R-2.** An automatic or manual fire alarm system that activates the occupant notification system in accordance with Section 907.6 shall be installed in existing Group R-2 occupancies more than three stories in height or with more than 16 dwelling or sleeping units. A plan for achieving compliance shall be completed by the owner within 12 months of the discovery of the deficiency. Compliance shall be achieved within 24 months of the discovery of the deficiency.~~

Exceptions:

- ~~1. A fire alarm system is not required in existing R-2 occupancies where each living unit is separated from other contiguous living units by fire barriers having a fire resistance rating of not less than 0.75 hour, and where each~~

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1 ~~living unit has either its own independent exit or its own independent~~
2 ~~stairway or ramp discharging at grade. When conditions warrant, the fire~~
3 ~~chief code official is authorized to accept an alternate minimum distance~~
4 ~~from the egress path to nearby doors and windows of apartments.~~

5 ~~2. A separate fire alarm system is not required in buildings that are equipped~~
6 ~~throughout with an approved supervised automatic sprinkler system installed~~
7 ~~in accordance with Section 903.3.1.1 or 903.3.1.2 and having a local alarm~~
8 ~~to notify all occupants.~~

9 ~~3. A fire alarm system is not required in buildings that do not have interior~~
10 ~~corridors serving dwelling units and are protected by an approved automatic~~
11 ~~sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2,~~
12 ~~provided that dwelling units either have a means of egress door opening~~
13 ~~directly to an exterior exit access that leads directly to the exits or are served~~
14 ~~by open ended corridors designed in accordance with Section 1023.6,~~
15 ~~Exception 4.~~

16 1103.7.7 Animal Housing or Care Facilities. An electronically supervised automatic
17 smoke detection system complying with Section 907.2.2.2 shall be installed in all fire
18 areas containing an existing Group B Animal Housing or Care Facility without constant
19 supervision within two (2) years from the date of adoption of this Ordinance.

20 ~~1103.8.3 Power source. In Group R occupancies, single station smoke alarms shall~~
21 ~~receive their primary power from the building wiring provided that such wiring is served~~
22 ~~from a commercial source and shall be equipped with a battery backup. Smoke alarms~~
23 ~~with integral strobes that are not equipped with battery backup shall be connected to an~~
24 ~~emergency electrical system. Smoke alarms shall emit a signal when the batteries are~~
25 ~~low. Wiring shall be permanent and without a disconnecting switch other than as required~~
26 ~~for overcurrent protection. Listed single station battery operated smoke alarms installed~~
27 ~~or replaced shall be replaced with a non-replaceable, non-removable battery that can~~
28 ~~power the smoke alarm for a minimum of 10 years.~~

Exceptions:

29
30 ~~1. Smoke alarms are permitted to be solely battery operated in existing~~
31 ~~buildings in locations where smoke alarms were not required to be powered~~
32 ~~by the building wiring under the code in effect at the time of construction~~
33 ~~and where no construction is taking place.~~

34 ~~2. Smoke alarms are permitted to be solely battery operated in buildings that~~
35 ~~are not served from a commercial power source.~~

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~~3.— Smoke alarms are permitted to be solely battery operated in existing areas of buildings in locations where smoke alarms were not required to be powered by the building wiring under the code in effect at the time of construction and undergoing alterations or repairs that do not result in the removal of interior walls or ceiling finishes exposing the structure.~~

~~1103.8.4 Smoke Alarm Service Life. Single station battery operated smoke alarms shall be replaced when the smoke alarm has been in service for ten years.~~

1103.9 Carbon monoxide alarms. When interior work requiring a building permit is done in existing Group I-1, I-2, I-4, and R occupancies, they shall be equipped with carbon monoxide alarms in accordance with Section 915 in the unit(s) in which the work was performed, except that the carbon monoxide alarms shall be allowed to be solely battery operated.

1203.2.20 Freeze Protection Equipment. In buildings required to be provided with emergency and/or standby power systems, all equipment required to provide freeze protection for any water-based fire protection system or equipment shall be provided with standby power.

1207.1.13 Scope. Energy Storage System (ESS) having capacities exceeding the values in Table 1207.1.1 shall comply with this section.

**TABLE 1207.1.1
ENERGY STORAGE SYSTEM (ESS) THRESHOLD QUANTITIES**

TECHNOLOGY	ENERGY CAPACITY ^a
Capacitor ESS	3 kWhr
Flow Batteries ^b	20 kWhr
Lead-acid batteries, all types	See Section 1207.1.2, item 3
Lithium-ion batteries	20 kWhr
Nickel metal hydride (Ni-MH)	70 kWhr
Nickel-cadmium batteries (Ni-Cd)	See Section 1207.1.2, item 3
Other battery technologies	10 kWhr
Other electrochemical ESS technology	3 kWhr

a. Energy capacity is the total energy capable of being stored (nameplate rating), not the usable energy rating. For units rated in amp-hours, kWhr shall equal rated voltage time amp-hour rating divided by 1,000

b. Shall include vanadium, zinc-bromine, polysulfide-bromide and other flowing electrolyte-type technologies.

1207.1.24 Permits. Permits shall be obtained for ESS as follows:

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- 1
2 1. Construction permits shall be obtained for stationary ESS installations and
3 mobile ESS charging and mobile station covered by Section 1207.10.1.
4 Permits shall be obtained in accordance with Section 105.5.22.
- 5 2. Operational permits shall be obtained for stationary ESS installations and
6 mobile ESS charging and mobile station covered by Section 1207.1.1 that
7 employ Capacitor ESS, Lithium-ion batteries, Ni-MH, or other
8 electrochemical ESS technologies. Permits shall be obtained in accordance
9 with Section 105.5.22
- 10 3. Operational permits for stationary ESS installations utilizing fifteen or more
11 U.S. gallons of corrosive electrolyte in flooded lead-acid, valve regulated
12 lead-acid batteries or Ni-Cd batteries be obtained in accordance with Section
13 105.5.22 based on Health Hazard Category 3 liquids.

14
15 **1207.1.-68 Fire Remediation.** Where a fire other event has damaged the ESS and
16 ignition or re-ignition is possible, the system owner, agent or lessee shall take the
17 following actions, at their expense, to mitigate the hazard or remove damaged equipment
18 from the premise to an approved location.

19
20 **1207.1.-68.1 Fire Mitigation Personnel.** Where, in the opinion of the fire ~~chief~~[code](#)
21 [official](#), it is essential for public safety that trained personnel be on-site to respond to
22 possible ignition or re-ignition of a damaged ESS, the system owner, agent or lessee shall
23 ~~immediately~~ [within 15 minutes](#) dispatch one or more fire mitigation personnel to the
24 premises, as required, at their expense. Fire mitigation personnel responsible for the
25 preparation of the Decommissioning Plan and in accordance with Section 1207.2.3, shall
26 be approved. The personnel shall remain on duty continuously until the damaged energy
27 storage equipment is removed from the premises and located to an approved location, or
28 earlier if the fire mitigation personnel can demonstrate to the fire ~~chief~~[code official](#) that
29 the public safety hazard is mitigated. ([Material based on NFPA 855 2023](#))

30
31 **1207.1.-68.3 Responsibility for Unauthorized Discharge.** An incident that requires fire
32 remediation shall be treated as an Unauthorized Discharge. The person, firm or
33 corporation responsible for an unauthorized discharge shall institute and complete all
34 actions necessary to remedy the effects of such unauthorized discharge, whether sudden
35 or gradual, at no cost to the jurisdiction, in accordance with Section 5003.3.1.5.

36
37 **1207.1 General.** The provisions in this section are applicable to stationary and mobile
38 energy storage systems (ESS). Battery-electric vehicles using technology identified in

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1 Table 1207.1.43 and marked with a label complying with 49 CFR 567.4 that certifies
2 compliance with the Federal Motor Vehicle Safety Standards are subject to the Fire
3 Remediation provisions in Section 1207.1.68, including responsibility for an
4 Unauthorized Discharge.
5

6 **1207.4.7 Toxic and highly toxic gases.** ESS that have the potential to release toxic and
7 highly toxic gas during charging, discharging and normal use conditions are prohibited.
8

9 **1207.5.3. Elevation.** Electrochemical ESS shall not be located in the following areas:

- 10 1. Where the floor is located more than 20 feet above the lowest level of fire
11 department vehicle access.
- 12
- 13 2. Where the floor is located below the lowest level of exit discharge.
14

15 **Exceptions**

- 16 1. Lead-acid and nickel-cadmium battery systems less than 50 VAC and 60 VDC.
17 [2-5 remain unchanged.](#)
18

19 **1207.5.4 Fire detection.** An approved automatic smoke detection system or radiant
20 energy-sensing fire detection system complying with Section 907.2 shall be installed in
21 rooms, indoor areas and walk-in units containing electrochemical ESS. An approved
22 radiant energy-sensing fire detection system shall be installed to protect open parking
23 garage and rooftop installations. Alarm signals from detection systems shall be
24 transmitted to a central station, proprietary or remote station service in accordance with
25 NFPA 72, or where approved to a constantly attended location.
26

27 **Exception:** Lead-acid battery ESS with an electrolyte volume of 50 US gallons or
28 less.
29

30 **TABLE 1207.6 - ELECTROCHEMICAL ESS TECHNOLOGY SPECIFIC**
31 **REQUIREMENTS**
32

COMPLIANCE REQUIRED ^b		BATTERY TECHNOLOGY				OTHER ESS AND BATTERY TECHNOLOGIES ^b	CAPACITOR ESS ^b
Feature	Section	Lead-Acid	Ni-CD & Ni-MH	Lithium-Ion	Flow		
Exhaust ventilation	1207.6.1	Yes	Yes	No	Yes	Yes	Yes

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Explosion control	1207.6.3	No	Yes ^a	Yes	No	Yes	Yes
Safety caps	1207.6.4	Yes	Yes	No	No	Yes	Yes
Spill control & neutralization	1207.6.2	Yes ^c	Yes ^c	No	Yes	Yes	Yes
Thermal runaway	1207.6.5	Yes ^d	Yes	Yes ^e	No	Yes ^c	Yes
Thermal runaway detection system	1207.6.7	No	No	Yes	No	No	No

b. Applicable to vented-type (i.e., flooded) nickel-cadmium and lead-acid batteries.

c. Not required for vented-type (i.e., flooded) lead-acid batteries.

d. Thermal runaway protection is permitted to be part of a battery management system that has been evaluated with battery as part of the evaluation to UL 1973.

1207.6.3 Explosion Control Where required by **Table 1207.6** or elsewhere in this code, explosion control complying with **Section 911** shall be provided for rooms, areas, ESS cabinets or ESS walk-in units containing electrochemical ESS technologies.

Exceptions 1 Provision unchanged

2 Provision unchanged

3 ESS that eject shrapnel or enclosure pieces during large-scale fire testing complying with Section 12071.5 are prohibited.

4-6 provisions unchanged.

1207.6.2.34 Special provisions for Lead-Acid ESS. The requirements of Section 1207.6.2 shall apply only when the aggregate capacity of multiple vessels exceeds 50 gallons or lead-acid and nickel-cadmium battery systems operating at less than 50 VAC and 60 VDC.

1207.6.65 Thermal Runaway Detection System

1207.6.65.1 When required. A thermal runaway detection system shall be provided for lithium-ion battery storage systems with an energy capacity greater than 20 kWh.

EXCEPTION: Group R-3 & R-4 occupancies.

1 **1207.6.65.1 Approvals.** Devices designed to detect the thermal runaway of a lithium-ion
2 cell containing a flammable or combustible liquid shall be listed in accordance with UL
3 2075, *Gas and Vapor Detectors and Sensors*.

4
5 **1207.6.65.2 Performance.** The thermal runaway detector shall activate upon detection of
6 gas vapors produced by flammable or combustible liquid in a lithium-ion cell at the start
7 of a thermal runaway event. Upon detection of a thermal runaway event the detection
8 system shall shutdown the ESS rack releasing flammable or combustible gas vapors and
9 transmit a supervisory fire alarm signal. Detection of a thermal runaway event shall
10 activate the mechanical ventilation when it is provided as method of explosion control.

11
12 Thermal runaway detectors shall operate independently of the ESS Energy Storage
13 Management System.

14
15 **1207.6.65.3 Annunciation.** The thermal runaway detector shall be capable of identifying
16 the ESS rack where thermal runaway occurred.

17
18 **1207.9.1 Rooftop Installations.** For the purpose of Table 1207.9, rooftop ESS are
19 prohibited on the roof of buildings 30 feet or more above the lowest level of fire
20 department vehicle access.

21
22 **CHAPTER 23 MOTOR FUEL-DISPENSING FACILITIES, REPAIR GARAGES,
23 AND AUTOMOBILE WRECKING YARDS.**

24 **2301.1 Scope.** Automotive motor fuel-dispensing facilities, marine motor fuel-dispensing
25 facilities, fleet vehicle motor fuel-dispensing facilities, automobile wrecking yards, and
26 repair garages shall be in accordance with this chapter and the Building Code, the
27 Plumbing Code and the Mechanical Code. Such operations shall include both operations
28 that are accessible to the public and private operations.

29 **2304.1 Supervision of dispensing.** The dispensing of fuel at motor fuel-dispensing
30 facilities shall be conducted by a qualified attendant who is a Texas Commission on
31 Environmental Quality (TCEQ) certified UST Operator or shall be under the supervision
32 of a qualified attendant who is a TCEQ certified UST Operator at all times or shall be in
33 accordance with Section 2304.3.

34 **2304.2 Attended self-service motor fuel-dispensing facilities.** Attended self-service
35 motor fuel-dispensing facilities shall comply with Sections 2304.2.1 through 2304.2.5.
36 Attended self-service motor fuel-dispensing facilities shall have at least one TCEQ
37 certified UST Operator on duty while the facility is open for business. The attendant's
38 primary function shall be to supervise, observe and control the dispensing of fuel. The

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1 attendant shall prevent the dispensing of fuel into containers that do not comply with
2 Section 2304.4.1, control sources of ignition, give immediate attention to accidental spills
3 or releases, and be prepared to use fire extinguishers.

4 **2305.1.3 Tank fill connections.** Delivery of flammable liquids to tanks shall be made by
5 means of approved liquid- and vapor-tight connections between the delivery hose and
6 tank fill pipe. Where tanks are equipped with any type of vapor recovery system, all
7 connections required to be made for the safe and proper functioning of the particular
8 vapor recovery process shall be made. Such connections shall be made liquid and vapor
9 tight and remain connected throughout the unloading process. Vapors shall not be
10 discharged at grade level during delivery.

11 **2305.2.1 Inspections.** Flammable and combustible liquid fuel dispensing and
12 containment equipment shall be inspected at least once every sixty days in accordance
13 with the regulations of the TCEQ in order to verify that it is in proper working order and
14 not subject to leakage.

15 **2305.3 Spill control.** Provisions shall be made to prevent liquids spilled during
16 dispensing operations from flowing into buildings or off of the property on which the
17 tank is located. Acceptable methods include, but shall not be limited to, grading
18 driveways, raising doorsills, or other approved means.

19 **2306.7.6.2 Testing.** The automatic closing function of automatic closing fuel delivery
20 hose nozzles that dispense Class I, II, and III liquids shall be tested an annual basis.

21 **Section 2312 AUTOMOBILE WRECKING YARDS**

22 **2312.1 Scope.** Automobile wrecking yards shall comply with this section and the
23 Building Code. Rubbish handling operations are addressed in Chapter 3 (*General*
24 *Requirements*).

25 **2312.2 Fire apparatus access roads.** Fire apparatus access roads shall be constructed
26 and maintained throughout the site in accordance with Section 503.

27 **2312.3 Welding and cutting.** Welding and cutting operations shall be in accordance
28 with Chapter 35 (*Welding and Other Hot Work*).

29 **2312.4 Housekeeping.** Combustible rubbish accumulated on the site shall be collected
30 and stored in approved containers, rooms or vaults of noncombustible materials.
31 Combustible vegetation, cut or uncut, shall be removed when determined by the **chief**
32 **code official** to be a fire hazard.

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1 **2312.5 Fire protection.** Offices, storage buildings and vehicles used for site operations
2 shall each be provided with at least one portable fire extinguisher with a rating of not less
3 than 4-A:40-B:C. When required by the ~~chief~~-code official, additional portable fire
4 extinguishers shall be provided in specific use areas in accordance with NFPA 10.

5 **2312.6 Tires.** Tires shall be stored on racks in an approved manner or shall be piled in
6 accordance with Chapter 34 (*Tire Rebuilding and Tire Storage*).

7 **2312.7 Burning operations.** The burning of salvage vehicles and salvage or waste
8 materials shall be in accordance with Chapter 3 (*General Requirements*) and regulations
9 adopted by the Texas Commission on Environmental Quality.

10 **2312.8 Motor Vehicle fluids and hazardous materials.**

11 **2312.8.1 General.** The storage, use and handling of motor vehicle fluids and
12 hazardous materials, such as those used to operate air bags and electrical systems,
13 shall be in accordance with Section 2312 (*Automobile Wrecking Yards*), Section
14 2311 (*Repair Garages*), Chapter 50 (*Hazardous Materials – General Provisions*),
15 and Chapter 57 (*Flammable and Combustible Liquids*).

16 **2312.8.2 Motor Vehicle Fluids.** Motor vehicle fluids shall be drained from
17 salvage vehicles when such fluids are leaking. Storage and handling of motor
18 vehicle fluids shall be done in an approved manner. Flammable and combustible
19 liquids shall be stored and handled in accordance with Section 2311 (*Repair*
20 *Garages*), Chapter 50 (*Hazardous Materials – General Provisions*), and Chapter
21 57 (*Flammable and Combustible Liquids*).

22 **2312.8.3 Mitigation for Vehicle Fluid Leaks.** Supplies or equipment capable of
23 mitigating leaks from fuel tanks, crankcases, brake systems and transmissions shall be
24 kept available on site. Single-use plugging, diking and absorbent materials shall be
25 disposed of as hazardous waste and removed from the site in a manner approved by
26 federal, state or local requirements.

27 **2312.8.4 Air Bag Systems.** Removed air bag systems shall be handled and stored in
28 accordance with Chapter 50 (*Hazardous Materials – General Provisions*).

29 **2312.8.5 Lead-acid Batteries.** Lead-acid batteries shall be removed from salvage
30 vehicles when such batteries are leaking. Lead-acid batteries that have been removed
31 from vehicles shall be stored in an approved manner.

32 **2312.8.6. Container Destruction.** Destruction of vehicle containers containing liquids or
33 gases defined as flammable or combustible by this code is prohibited unless the
34 containers are properly drained and the by-product stored or disposed of in accordance

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1 with Chapter 50 (*Hazardous Materials – General Provisions*), are filled with an inert
2 material or purged, and at the time of destruction, have a vapor content less than 25
3 percent of the by-product's lower explosive limit or an oxygen content of less than 10
4 percent.

5 **2403.5 Mixing and Blending Area.** Mixing, blending, and similar operations involving
6 less than 10 gallons of Class I or Class II liquids, outside of a room approved for inside
7 use, dispensing and mixing in accordance with 5705.3.7, must be performed in an area
8 meeting the following requirements:

- 9 1. All electrical service within 10 feet of the mixing operations must meet the
10 Class I, Division II requirements of the Electrical Code.
- 11 2. Ventilation for the area must be adequate to maintain flammable vapors
12 under 25 percent of the lower explosive limit of the most volatile material in
13 use. A line of site partition of one-hour construction must separate the
14 mixing and blending operations from other spray finishing operations and
15 flammable liquids storage.

16 **2701.4 Existing buildings and existing fabrication areas.** Existing buildings and
17 existing *fabrication areas* shall comply with this chapter.

18 **Exceptions:**

- 19 1. Transportation and handling of HPM in *corridors* and enclosures
20 for *stairways* and *ramps* shall be allowed where in compliance with Section
21 2705.3.2 and the Building Code.
- 22 2. The aggregate quantity of flammable, pyrophoric, toxic and highly toxic gases in a
23 single fabrication area allowed in Table 2704.2.2.1 Footnote d. shall be limited to
24 9000 cubic feet at NTP.

25 **3103.54 Use periods.** Temporary tents, air supported, air-inflated or tensioned membrane
26 structures of any size that are independent of and separated by at least 20 feet (6096 mm)
27 from any building as specified in Section 2403.8.2 shall not be erected for a period of
28 more than 180 days within a 12-month period on a single premises. Temporary tents, air
29 supported, air-inflated or tensioned membrane structures of any size that are in any way
30 attached to or within 20 feet (6096 mm) of a building shall not be issued a permit for a
31 continuous period of more than 30 days or for a total of more than 90 days within a 12-
32 month period on a single premises. Tents, air supported, air-inflated or tensioned
33 membrane structures used for periods exceeding these limits shall be considered
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1 buildings or structures regulated by the Building Code and shall be required to be erected
2 under a building permit and obtain a certificate of occupancy.

3
4 **3103.87.2 Location.** Tents or membrane structures shall not be located within 20 feet
5 (6096 mm) of lot lines, buildings, other tents or membrane structures, parked vehicles or
6 internal combustion engines. For the purpose of determining required distances, support
7 ropes and guy wires shall be considered as part of the temporary membrane structure, or
8 tent.

9 **Exceptions:**

- 10 1. Separation distance between membrane structures and tents not used for
11 cooking, is not required when the aggregate floor area does not exceed
12 15,000 square feet (1394 m²).
- 13 2. Membrane structures or tents need not be separated from buildings when all
14 of the following conditions are met:
 - 15 2.1. The aggregate floor area of the membrane structure or tent shall not
16 exceed 10,000 square feet (929 m²).
 - 17 2.2. The aggregate floor area and total height of the building and
18 membrane structure or tent shall not exceed the allowable floor area
19 or the allowable height, in stories or feet, including increases as
20 indicated in the Building Code.
 - 21 2.3. Required means of egress are provided for both the building and the
22 membrane structure or tent including travel distances.
 - 23 2.4. Fire apparatus access roads are provided in accordance with Section
24 503.
 - 25 2.5. Occupant load is, for the purposes of complying with Chapters 9 and
26 10 of the Building Code and Fire Code, based on the aggregate of the
27 building floor area and the area under the membrane structure or tent.

28 **4104.2 Residential Barbecue Pits and Incinerators.** No person may construct, erect,
29 install, maintain or use any incinerator or barbecue pit or burn any combustible material
30 to constitute a fire hazard by the use or burning or to endanger the life or property of any
31 person. Residential barbecue pits, hibachis or other cooking appliances utilizing charcoal,
32 wood or gas as a fuel may not be stored or used on any balconies of residential
33 occupancies, on other combustible balconies, within five feet measured horizontally from

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any portion of a combustible building, or within fifteen feet measured along the shortest distance if the pit is located below any portion of a combustible building.

Exception: Detached one- and two-family dwellings.

5001.1.2 Purpose. This chapter regulates the handling and storage of hazardous materials in aboveground storage facilities. Underground storage facilities are regulated by City Code Chapter 6-2 (*Hazardous Materials*).

5001.2 Material classification. Hazardous materials are those chemicals or substances defined as such in this code. Definitions of hazardous materials shall apply to all hazardous materials, including those materials regulated elsewhere in this code. Appendix E contains descriptions and examples of materials included in hazard categories.

5001.2.3 Radioactive Materials. Storage of radioactive materials shall be in accordance with the provisions set forth by the Texas Department of State Health Services, Radiation Control Program.

5001.5 Permits. No person, firm, or corporation may store, dispense, use, or handle hazardous materials in more than the quantities named in Section 105.6 unless a valid permit has been issued under this chapter.

When required by the fire chief code official, permit holders shall apply for approval to permanently close a storage, use or handling facility. Such application shall be submitted at least 30 days prior to the termination of the storage, use or handling of hazardous materials. The fire chief code official is authorized to require that the application be accompanied by an approved facility closure plan in accordance with Section 5001.6.3.

~~**5001.5.1 Hazardous Materials Management Plan.** Where required by the fire chief code official, an application for a permit shall include a Hazardous Materials Management Plan (HMMP). The HMMP shall include a facility site plan clearly designating the following:~~

- ~~1. locations of and access to each storage and use area;~~
- ~~2. maximum amount of each material stored or used in each area and the range of container sizes used;~~
- ~~3. location of emergency equipment, including emergency isolation and mitigation valves and devices, and product conveying piping containing liquids or gases, other than utility-owned fuel gas lines and low-pressure fuel~~

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~~gas lines. The normal position of valves (on/off or open/closed) shall be provided for position indicating valves;~~

~~4. location where liaison will meet emergency responders;~~

~~5. facility evacuation meeting point locations;~~

~~6. the general purpose of other areas within the building;~~

~~7. storage plan showing the intended storage arrangement, including the location and dimensions of aisles, the location of all aboveground and underground tanks and their appurtenances including, but not limited to, sumps, vaults, below-grade treatment systems and piping;~~

~~7. the hazard classes in each area;~~

~~8. locations of all control areas and Group H occupancies; and~~

~~9. emergency exits.~~

~~The plans shall be legible and drawn approximately to scale. Separate distribution systems are allowed to be shown on separate pages.~~

5001.5.2 Hazardous Materials Inventory Statement (HMIS). Where required by the fire ~~chief~~ [code official](#), an application for a permit shall include an HMIS, such as Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III, Tier II Report or other approved statement. The HMIS shall include the following information:

1. manufacturer's name;

2. chemical names, product or trade names, hazardous ingredients;

3. United Nations (UN), North America (NA) and the Chemical Abstract Service (CAS) identification number (as applicable and as available);

4. maximum quantities stored or used on-site at one time, including amounts in use-closed systems and amounts in use-open systems;

5. location where stored or used;

6. container sizes; and

7. hazard classifications including the NFPA 704 rating of each chemical.

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1 **5001.7 Permit Procedure.** A hazardous materials permit shall be granted after:

- 2 1. The applicant has filed with the Fire Department a completed hazardous
3 materials permit application, in accordance with Section 5001.5 and this
4 section; and
- 5 2. The applicant has paid the application fee set by separate ordinance.

6 **5001.7.1 Application.** A Hazardous Materials Permit Application shall include the
7 following:

- 8 1. general information including the name, address, and telephone number of
9 the facility, the number of employees, hours of operation, and a name and
10 emergency telephone number of the primary emergency contact person;
- 11 2. ~~an HMMP in accordance with Section 5001.5.1 which includes a facility site~~
12 ~~plan and~~ a storage map, which shall identify the location of hazardous
13 materials storage areas, and access to the materials; and
- 14 3. a Hazardous Materials Inventory Statement (HMIS) in accordance with
15 Section 5001.5.2.

16 **5001.7.1.1** The facility ~~site plan required in Section 5001.5.1~~ may be omitted
17 from applications when, in the opinion of the fire ~~chief~~ code official, the
18 plan will not provide additional information necessary to prevent an actual
19 or potential hazard to the public health, safety, or welfare (including the
20 health, safety, or welfare of firefighters) or to facilitate the fire department's
21 response in the event of an emergency involving hazardous materials at the
22 facility.

23 **5001.7.2 Permit Required.** No person, firm, or corporation may install, repair,
24 abandon, remove, place temporarily out of service, close, or substantially modify a
25 storage facility or other area required to be permitted under this chapter without a
26 permit. Section 5001.6.3 also applies.

27 **Exceptions:**

- 28 1. Routine maintenance.
- 29 2. For emergency repair work performed on an emergency basis,
30 application for permit shall be made within two working days of
31 commencement of work.

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- 1 3. Businesses with an annual permit through the Development Services
2 Department may perform work in accordance with the provisions of
3 the Building Code and rules governing the facilities.

4 Permit holders shall apply for approval to close bulk storage, use, or handling
5 facility at least 30 days before the termination of the storage, use, or handling of
6 hazardous materials. The applicant shall include any change or alteration of the
7 facility closure plan filed under Section 5001.6.3 of this chapter. This 30 day
8 period may be waived by the [ehief-code official](#).

9 **5001.7.3 Permit Effective Date.** The fire department shall grant or deny a permit
10 application no later than 60 days after receipt of the completed application. The
11 Department will provide written confirmation to the applicant demonstrating
12 receipt of the application within 30 days of receipt of the application. If the
13 department fails to grant or deny the permit within 60 days, the permit is
14 considered to be issued and in effect. The fire department may inspect the business
15 for satisfactory storage and use of hazardous materials. The operation of a facility
16 under a permit issued before inspection constitutes the permission of the facility
17 owner/operator for the [ehief-code official](#) to enter on the facility for the purpose of
18 conducting the required inspection. Refusal to allow the inspection shall constitute
19 a prima facie cause to revoke the permit under Section 105.65.22.

20 **5001.7.4 Permit Term and Renewal.** A permit is granted for a term of three years
21 from the date of issuance. Permits may be renewed every three years on the
22 anniversary of permit issuance. At the discretion of the fire [ehief-code official](#), a
23 permit may be issued for a shorter period. The fee assessed for the permits shall be
24 prorated for the appropriate time. If a permit is issued for a shorter period at the
25 request of the applicant, an additional handling fee may be assessed, not to exceed
26 the actual cost of clerical processing time.

27 **5001.7.5 Annexation Procedure.** A facility brought under regulation by this
28 chapter through annexation shall file a permit application with the fire department
29 no later than 90 days after the effective date of annexation. The department shall
30 grant or deny a permit application submitted under this subsection no later than six
31 months after receipt of the completed application. If the department fails to grant
32 or deny the permit within the period, the permit is considered to be issued and in
33 effect. ~~The fire department shall inspect the business for satisfactory storage or use
34 of hazardous materials. The operation of a facility under a permit issued before
35 inspection constitutes the permission of the facility owner/operator for the fire
36 ehief-code official to enter on the facility for the purpose of conducting the~~

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~~required inspection. Refusal to allow the inspection shall constitute a prima facie cause to revoke the permit under Section 105.5 (Revocation).~~

5001.7.6 Permit Denial. If the fire department denies a permit, the department shall notify the applicant in writing of the action. The notification must include a statement of the department's reasons for the action.

5001.7.7 Transfer. A permit may be transferred to a new owner or operator of a business at the same location if the new owner or operator by letter to the fire department accepts responsibility for all obligations under this chapter at the time of the transfer of the business. All permit transfers are subject to the approval of the fire ~~chief~~ code official.

5001.7.8 Fees. No permit may be granted, renewed or continued in effect until the fee set by separate ordinance has been paid. The fee shall be paid at the time an application is filed.

5001.7.9 Amendment. Any information required to be submitted by this chapter shall be amended or supplemented no later than 30 days after the occurrence of an event that would render the information inaccurate. Unless the change(s) would affect the ability of emergency response personnel to safely respond to an emergency, an amendment or supplement is not required to record:

1. minor changes in the quantities of hazardous materials stored;
2. the temporary storage of hazardous materials at the facility; or
3. a temporary change of hazardous materials storage location.

5002.1 Supplemental Definitions. The definitions in the 2021 International Fire Code are adopted as published except that supplemental definitions are added or amended. The following supplemental definitions are defined in Section 202.1.1. For the purposes of this chapter and as used elsewhere in this code, these definitions shall have the meanings shown in Section 202.1.1.

PERMANENT STORAGE.

PERMIT.

PROCESS VESSEL.

~~**Table 5003.1.1(1) Footnote i**~~

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~~i. The maximum allowable quantity for fuel oil storage may be increased in accordance with Section 605.4.1.~~

TABLE 5003.1.1(5)
HAZARDOUS MATERIALS EXEMPTIONS

<u>MATERIAL CLASSIFICATION</u>	<u>OCCUPANCY OR APPLICATION</u>	<u>EXEMPTION</u>
<u>Combustible fiber</u>	<u>Baled Cotton</u>	<u>Densely packed baled cotton shall not be classified as combustible fiber, provided the bales comply with the packing requirements of ISO 8115</u>
<u>Corrosive</u>	<u>Personal and household products</u>	<u>The quantity of personal and household products that are classified as corrosive materials is not limited in retail displays, provided that the products are in the original packaging.</u>
	<u>Retail and wholesale sales occupancies</u>	<u>The quantity of medicines, foodstuffs or consumer products and cosmetics containing not more than 50 percent by volume of water-miscible liquids, with the remainder of the solutions not being flammable, is not limited</u> <u>To qualify for this allowance, such materials shall be packaged in individual containers not exceeding 1.3 gallons.</u>
<u>Explosives</u>	<u>Group M and R-3</u>	<u>Storage of black powder, smokeless propellant and small arms primers is not limited</u>
<u>Flammable and combustible liquids and gases</u>	<u>Aerosols</u>	<u>Buildings and structures occupied for the storage of aerosol products, aerosol cooking spray products, or plastic aerosol products shall be classified as Group S-1</u>
	<u>Alcoholic beverages</u>	<u>The quantity of alcoholic beverages in liquor stores and distributors without bulk storage is not limited</u>
		<u>The quantity of alcoholic beverages in brewing is not limited.</u>
		<u>The storage quantity of beer, distilled spirits and wines in barrels and asks is not limited.</u>
		<u>Alcoholic beverages in retail and wholesale occupancies is not limited. To qualify for this allowance, beverages must be packaged in individual containers not exceeding 1.3 gallons</u>
	<u>Cleaning establishments with combustible liquid solvents</u>	<u>The quantity of combustible liquid solvents used in closed systems and having a flash point at or above 140 F is not limited. To qualify for this allowance, equipment shall be listed by an approved testing agency and the occupancy shall be separated from all other areas of the building by 1-hour fire barriers or 1-hour horizontal assemblies, or both, constructed in accordance with the <i>International Building Code</i>.</u>
	- - -	<u>The quantity of combustible liquid solvents having a flash point at or above 200 F is not limited.</u>
<u>Closed piping systems</u>	<u>The quantity of flammable and combustible liquids and gases utilized for the operation of machinery or equipment is not limited.</u>	

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	<u>Flammable finishing operations using flammable and combustible liquids</u>	<u>Building and structured occupied for the application of flammable finishes shall comply with Section 416.</u>
-	<u>Fuel</u>	<u>The quantity of liquid or gaseous fuel in fuel tanks of vehicles or motorized equipment is not limited.</u>
	-	<u>The quantity of gaseous fuels in piping systems and fixed appliance regulated by the <i>International Fuel Gas Code</i> is not limited.</u>
	-	<u>The quantity of liquid fuels in piping systems and fixed appliances regulated by the <i>International Mechanical Code</i> is not limited.</u>
	<u>Hand Sanitizer</u>	<u>The quantity of alcohol-based hand rubs (ABHR) classified as Class I or II liquids in dispensers installed in accordance with Section 5705.5 and 5705.5.1 is not limited. The location of the ABHR shall be provided in the construction documents.</u>
	<u>Retail and wholesale occupancies with flammable and combustible liquids</u>	<u>The quantity of medicines, foodstuffs or consumer products, and cosmetics containing not more than 50 percent by volume of water-miscible liquids, with the remainder of the solutions not being flammable, is not limited.</u> <u>To qualify for this allowance, such materials shall be packaged in individual containers not exceeding 1.3 gallons.</u>
<u>Highly toxic and toxic materials</u>	<u>Retail and wholesale occupancies</u>	<u>The quantity of medicines, foodstuffs or consumer products, and cosmetics containing not more than 50 percent by volume of water-miscible liquids, with the remainder of the solutions not being flammable, is not limited.</u> <u>To qualify for this allowance, such materials shall be packaged in individual containers not exceeding 1.3 gallons.</u>
<u>Any</u>	<u>Energy Storage</u>	<u>The quantity of hazardous materials in stationary storage battery systems is not limited.</u> <u>The quantity of hazardous materials in stationary fuel cell power systems is not limited.</u> <u>The quantity of hazardous materials in capacity energy storage systems is not limited.</u>
-	<u>Refrigeration systems</u>	<u>The quantity of refrigerants in refrigeration systems is not limited.</u>

For SI: 1 gallon = 3/785 L, C = (F32 -)/1.8.

.a Exempted materials and conditions listed in this table are required to comply with provisions of this code that are not based on exceeding the maximum allowable quantities in Section 5003.

5003.2.2.3 Emergency isolation. Where gases or liquids having a hazard ranking of Health Class 3 or 4, Flammability Class 4 or Instability Class 3 or 4 in accordance with

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1 NFPA 704 are carried in pressurized piping above 15 pounds per square inch gauge
2 (psig) (103 kPa), an approved means of leak detection and emergency shutoff or excess
3 flow control shall be provided. Where the piping originates from within a hazardous
4 material storage room or area, the excess flow control shall be located within the storage
5 room or area. Where the piping originates from a bulk source, the excess flow control
6 shall be located as close to the bulk source as practical.

7 **Exceptions:**

- 8 1. Piping for inlet connections designed to prevent backflow.
- 9 2. Piping for pressure relief devices.

10 **5003.2.4.3 Indoor Tank Filling.** Aboveground stationary tanks used for the indoor
11 storage of hazardous materials shall be filled using one of the liquid transfer methods in
12 Section 5005.1.10. The transfer of hazardous materials to indoor stationary tanks from
13 tank vehicles shall be done from a liquid tight remote fill connection located outdoors.
14 Fill connections shall be not more than five feet above the finished ground level, in an
15 approved location in close proximity to the parked delivery vehicle. Connections shall be
16 five feet away from building openings. Such connections shall be closed and liquid tight
17 when not in use and shall be properly identified.

18 **5003.3.1.54 Responsibility for cleanup.** The person, firm or corporation responsible for
19 an unauthorized discharge shall institute and complete all actions necessary to remedy the
20 effects of such unauthorized discharge, whether sudden or gradual, at no cost to the
21 jurisdiction. When deemed necessary by the fire ~~chief~~ code official, cleanup may be
22 initiated by the fire department or by an authorized individual or firm. Costs associated
23 with such cleanup shall be borne by the owner, operator or other person responsible for
24 the unauthorized discharge. Such costs shall include but shall not be limited to:

- 25 1. chemical absorbent or adsorbent materials;
- 26 2. chemical neutralizers;
- 27 3. chemical resistant suits, gloves, or boots;
- 28 4. chemical containment drums;
- 29 5. vapor suppression foams;
- 30 6. containment tools;
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- 1 7. chemical detection devices; and
- 2
- 3 8. personnel costs for incident related overtime activities.

4 **5003.9.8 Separation of incompatible materials.** Incompatible materials in storage and
5 storage of materials that are incompatible with materials in use shall be separated when
6 the stored materials are in containers having a capacity of more than five pounds (2 kg) or
7 0.5 gallon (2 L). Separation shall be accomplished by:

- 8 1. Segregating incompatible materials in storage by a distance of not less than
9 20 feet (6096 mm).

10 **Exception:** Segregation of less than exempt amounts of corrosive and
11 oxidizing materials, when such materials are necessary to maintain
12 swimming pools for Group R occupancies, may be accomplished by a
13 minimum separation of five feet (1524 mm).

- 14 2. Isolating incompatible materials in storage by a noncombustible partition
15 extending not less than 18 inches (457 mm) above and to the sides of the
16 stored material.
- 17 3. Storing liquid and solid materials in hazardous material storage cabinets.
- 18 4. Storing compressed gases in gas cabinets or exhausted enclosures in
19 accordance with Sections 5003.8.5 and 5003.8.6. Materials that are
20 incompatible shall not be stored within the same cabinet or exhausted
21 enclosure.

22 **5003.13.2 Maximum allowable quantity per rooftop or canopy.** The storage, use and
23 handling of hazardous materials on top of a roof or canopy shall not exceed the maximum
24 allowable quantity set forth in Tables 5003.1.1(1) and 5003.1.1(2). LP-gas storage and
25 use shall be in accordance with Chapter 61.

26 **Exceptions:**

- 27 1. Pollution control, exhaust treatment and dust collection equipment when
28 approved.
- 29 2. Hydrogen storage at motor fuel-dispensing facilities in accordance with
30 Chapter 23.
- 31 3. Hazardous materials in closed piping systems complying with this code.
- 32 4. Hazardous materials on top of a normally unoccupied exterior equipment
33 platforms necessary for the operation of mechanical systems or industrial
34 process equipment when approved.

1 5. Hazardous materials necessary for rooftop swimming pool or hot tub
2 treatment systems, limited to a maximum container size of 50 gallons (189
3 L) or 500 lbs (227 kg) of toxic or corrosive materials, and 200 pounds (91
4 kg) or 20 gallons (76 L) of oxidizers.

5 6. Other situations where rooftop storage or use of hazardous materials is
6 necessary for the operation of equipment serving the building and is
7 approved

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9 **5004.2 Spill control and secondary containment for liquid and solid hazardous**
10 **materials.** Tanks, rooms, buildings or areas used for the storage of liquid or solid
11 hazardous materials shall be provided with spill control and secondary containment in
12 accordance with Sections 5004.2.1 through 5004.2.3.

13 **Exceptions:**

- 14 1. Outdoor storage of containers on approved containment pallets in
15 accordance with Section 5004.2.3.
- 16 2. Liquids that are a gas at NTP.

17 **5004.2.1 Spill control for hazardous material liquids.** Tanks, rooms, buildings or areas
18 used for the storage of hazardous material liquids in excess of the lesser of the maximum
19 allowable quantities established by Tables 5003.1.1(1) and 5003.1.1(2) or limits
20 specifically set in Chapters 51 through 67 shall be provided with spill control to prevent
21 the flow of liquids to adjoining areas. Floors in indoor locations and similar surfaces in
22 outdoor locations shall be constructed to contain a spill from the largest single vessel by
23 one of the following methods:

- 24 1. Liquid-tight sloped or recessed floors in indoor locations or similar areas in
25 outdoor locations.
- 26 2. Liquid-tight floors in indoor locations or similar areas in outdoor locations
27 provided with liquid-tight raised or recessed sills or dikes.
- 28 3. Sumps and collection systems.
- 29 4. Other approved engineered systems.

30 Except for surfacing, the floors, sills, dikes, sumps and collection systems shall be
31 constructed of noncombustible material, and the liquid-tight seal shall be compatible with
32 the material stored. When liquid-tight sills or dikes are provided, they are not required at
33 perimeter openings having an open-grate trench across the opening that connects to an
34 approved collection system.

1 **5004.2.2 Secondary containment for hazardous material liquids and solids.** Where
2 required by Table 5004.2.2 tanks, buildings, rooms or areas used for the storage of
3 hazardous materials liquids or solids shall be provided with secondary containment in
4 accordance with this section when the quantity of materials exceeds the maximum
5 allowable quantity as established by Tables 5003.1.1(1) and 5003.1.1(2) or limits
6 specifically set in Chapters 51 through 67.

7 **5004.2.2.1 Containment and drainage methods.** The tank, building, room or area shall
8 contain or drain the hazardous materials and fire protection water through the use of one
9 of the following methods:

- 10 1. Liquid-tight sloped or recessed floors in indoor locations or similar areas in
11 outdoor locations.
- 12 2. Liquid-tight floors in indoor locations or similar areas in outdoor locations
13 provided with liquid-tight raised or recessed sills or dikes.
- 14 3. Sumps and collection systems.
- 15 4. Drainage systems leading to an approved location.
- 16 5. Other approved engineered systems.

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21 **5004.2.2.2 Incompatible materials.** Incompatible materials used in open systems shall
22 be separated from each other in the secondary containment system. Incompatible
23 materials are allowed to be combined when they have been rendered acceptable by an
24 approved means for discharge into the public sewer.

25 **5004.2.2.5 Monitoring.** An approved monitoring method shall be provided to detect
26 hazardous materials in the secondary containment system. The monitoring method is
27 allowed to be visual inspection of the primary or secondary containment, or other
28 approved means. Where secondary containment is subject to the intrusion of water, a
29 monitoring method for detecting water shall be provided. Where monitoring devices are
30 provided, they shall be connected to an approved visual or audible alarm.

31 Leak-detecting devices must be tested annually by the owner or occupant of the property
32 on which the devices are located. Test results shall be maintained on the premises and be
33 available to the fire ~~chief~~ [code official](#) on request.

34 **5004.2.2.6 Drainage system design.** Drainage systems shall be in accordance with the
35 Plumbing Code and all of the following:

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1. The slope of floors to drains in indoor locations, or similar areas in outdoor locations shall not be less than 1 percent.
2. Drains from indoor storage areas shall be sized to carry the volume of the fire protection water as determined by the design density discharged from the automatic fire-extinguishing system over the minimum required system design area or area of the room or area in which the storage is located, whichever is smaller.
3. Drains from outdoor storage areas shall be sized to carry the volume of the fire flow and the volume of a 24-hour rainfall as determined by a 25-year storm.
4. Materials of construction for drainage systems shall be compatible with the materials stored.
5. Incompatible materials used in open systems shall be separated from each other in the drainage system. Incompatible materials are allowed to be combined when they have been rendered acceptable by an approved means for discharge into the public sewer.
6. Drains, including overflow from secondary containment, shall terminate in an approved location away from buildings, valves, means of egress, fire access roadways, adjoining property storm drains, waterways and critical environmental features (CEF's). Tanks shall be set back at 150 feet (45,720 mm) from any recognized waterway or CEF.

5005.1.8.1 Gas cabinets, exhausted enclosures, and exhaust ducts with a cross sectional dimension of 10 inches or greater shall be internally sprinklered.

5306.2 Interior supply location. Medical gases shall be stored in areas dedicated to the storage of such gases without other storage or uses. Where containers of medical gases in quantities greater than 300 ft³ (8.5 m³) and less than 1500 ft³ (42.5 m³) are located inside buildings, they shall be in a 1-hour exterior room, a 1-hour interior room or a gas cabinet in accordance with Section 5306.2.1, 5306.2.2, or 5306.2.3, respectively. Where containers of medical gases in excess of 1500 ft³ (42.5 m³) and less than 3,000 ft³ (85 m³) are located inside a building, they shall be protected by a local application fire sprinkler system in addition to the room or cabinet enclosure required by 5306.2.1, 5306.2.2 or 5306.2.3. Rooms or areas where medical gases are stored or used in quantities exceeding 3000 ft³ (85 m³) per control area shall be in accordance with the Building Code for high-hazard Group H occupancies.

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1 **5306.2.1 One-hour exterior rooms.** A 1-hour exterior room shall be a room or enclosure
2 separated from the remainder of the building by fire barriers constructed in accordance
3 with Section 707 of the Building Code or horizontal assemblies constructed in
4 accordance with Section 711 of the Building Code, or both, with a fire-resistance rating
5 of not less than 1 hour. Openings between the room or enclosure and interior spaces shall
6 be self-closing smoke- and draft-control assemblies having a fire protection rating of not
7 less than 1 hour. Rooms shall have at least one exterior wall that is provided with at least
8 two vents. Each vent shall not be less than 72 square inches (0.046 m²) in area. One vent
9 shall be within 12 inches (304.8 mm) of the floor and one shall be within 12 inches
10 (304.8 mm) of the ceiling. Rooms containing medical gases in excess of 1500 ft³ (42.5
11 m³) and less than 3,000 ft³ (85 m³) shall be provided with at least one local application
12 automatic sprinkler to provide container cooling in case of fire.

13 **5306.2.2 One-hour interior room.** When an exterior wall cannot be provided for the
14 room, the room shall be exhausted through a duct to the exterior. Supply and exhaust
15 ducts shall be enclosed in a 1-hour-rated shaft enclosure from the room to the exterior.
16 Approved mechanical ventilation shall comply with the Mechanical Code and be
17 provided at a minimum rate of 1 cubic foot per minute per square foot [0.00508 m³/(s ×
18 m²)] of the area of the room. Rooms containing medical gases in excess of 1500 ft³ (42.5
19 m³) and less than 3,000 ft³ (85 m³) shall be provided with at least one local application
20 automatic sprinkler to provide container cooling in case of fire.

21 **5306.2.3 Gas cabinets.** Gas cabinets shall be constructed in accordance with Section
22 5003.8.6 and the following:

- 23 1. The average velocity of ventilation at the face of access ports or windows
24 shall not be less than 200 feet per minute (61 m/s) with a minimum of 150
25 feet per minute (46 m/s) at any point of the access port or window.
- 26 2. Connected to a ducted exhaust system with exhaust ducts enclosed in a 1-
27 hour shaft enclosure to the exterior.
- 28 3. Internally sprinklered when the quantity of medical gases exceeds 1500 ft³
29 (42.5 m³).

30 **5306.3 Exterior supply locations.** Oxidizer medical gas systems located on the exterior
31 of a building shall be located in accordance with Section 6304.2.1.

32 **5404.2 Outdoor storage.** Outdoor storage of corrosive materials shall be in accordance
33 with Sections 5001, 5003, 5004 and this chapter.

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1 **Exception:** Up to 10 gallons of corrosive liquids may be stored outside of
2 buildings without spill control, drainage, and secondary containment provided:

- 3 1. The volume of individual containers is less than five gallons;
- 4 2. The containers are constructed of metal or plastic; and
- 5 3. The containers are located a minimum of 10 feet from property lines, exit
6 openings, and storm water drains.

7 **5404.2.1 Above-ground outside storage tanks.** Above-ground outside storage tanks of
8 corrosive liquids shall be provided with secondary containment in accordance with
9 Section 5004.2.2.

10 **5504.3.1.1 Stationary Containers.** Stationary containers shall be separated from
11 exposure hazards in accordance with the provisions applicable to the type of fluid
12 contained and the minimum separation distance indicated in Table 5504.3.1.1. Storage of
13 flammable cryogenic fluids, including liquefied natural gas (LNG), in aggregate
14 quantities exceeding 15,000 gallon (56,781 L) water capacity is prohibited outside of a
15 light industry (LI) zoning district except as provided in this section.

16 The placement of aboveground or below ground containers of flammable cryogenic
17 fluids, including liquefied natural gas (LNG), in aggregate quantities exceeding 15,000
18 gallon water (56,781 L) capacity may be considered for other locations on a case-by-case
19 basis provided zoning issues, secondary containment, and fire exposures are satisfactorily
20 addressed including the identification of hazard ratings in accordance with Appendix F.
21 Where the nearest off-site exposure(s) is(are) less than 500 feet (152.4 m) from the
22 container(s) the placement may be permitted outside of a light industry (LI) zoning
23 district by the fire [chief-code official](#) only after notification of owners/occupants of
24 properties within 500 feet (152.4 m), requesting their input in order to assess the potential
25 effect on the community. Notice to adjacent property owners shall be accomplished in
26 accordance with the established procedures outlined in the Title 25 (*Land Development*)
27 for notice of applications and administrative actions or decisions.

28 **5601.2.4 Financial responsibility.** Before a permit is issued, the applicant shall submit
29 proof of a public liability insurance policy, in the principal sum of \$5,000,000 for
30 personal injuries and \$5,000,000 for property damage. The policy shall be current and
31 shall name the City as an additional insured for the purpose of the payment of all
32 damages to persons or property that arise from, or are caused by, the conduct of any act
33 authorized by the permit upon which any judicial judgment results. The fire [chief-code](#)
34 [official](#) is authorized to specify a greater or lesser amount when, in his or her opinion,

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1 conditions at the location of use indicate a greater or lesser amount is required.
2 Government entities shall be exempt from this bond requirement.

3
4 **Exception:** The insurance requirements for fireworks and pyrotechnics are as follows:

- 5 • Aerial displays must carry a Certificate of Insurance for a minimum of \$1,000,000
6 (bodily injury) and \$500,000 (property damage).
- 7 • Non-aerial displays must carry a Certificate of Insurance for a minimum of
8 \$500,000 (bodily injury) and \$300,000 (property damage). The City of Austin
9 must be named as co-insured on the policy.
- 10 • The *fire chief code official* is authorized to specify a greater or lesser amount when,
11 in his or her opinion, conditions at the location of use indicate a greater or lesser
12 amount is required.

13 **5601.2.4.1 Blasting.** Before approval to do blasting is issued, the applicant for approval
14 shall submit a certificate of insurance in such form, amount and coverage as determined
15 by the legal department of the jurisdiction to be adequate in each case to indemnify the
16 jurisdiction against any and all damages arising from permitted blasting.

17 **5601.2.4.2 Fireworks display.**

18 The permit holder shall furnish a certificate of insurance in an amount deemed adequate
19 by the *fire chief code official* for the payment of all potential damages to a person or
20 persons or to property by reason of the permitted display, and arising from any acts of the
21 permit holder, the agent, employees or subcontractors.

22 **5601.2.5 Permit application, review and fees.** Blasting permit application, review and
23 fees shall be in accordance with Sections 5601.2.5.1, 5601.2.5.2 and 5601.2.5.3

24 **5601.2.5.1 Permit application.** To obtain a permit, the blaster must file with the fire
25 *chief code official* an application at least 120 days in advance of the proposed work
26 date. Each application must describe the proposed work, the location of the work, and
27 the other pertinent information as may be required.

28 **5601.2.5.2 Permit review.** The fire *chief code official* may require written comments
29 on each permit application from the various affected City departments. When in the
30 opinion of the fire *chief code official* the departments have a valid objection to the
31 issuance of a permit, no permit may be approved until the objection has been resolved
32 to the satisfaction of the fire *chief code official*.

33 **5601.2.5.3 Permit Fees.** Permits authorized by the provisions of Section 5601.2.5 may
34 be issued only on payment of the appropriate fee, which is set by separate ordinance.

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1 City departments are not required to pay permit fees when engaged in the work
2 described in this section.

3 **5601.2.6 Permit Denial.** When in the opinion of the fire ~~chief~~code official there is a
4 substantial danger to life, health, or property in the immediate area exposed to the
5 blasting, fireworks display or use of pyrotechnic materials for which a permit is being
6 requested, the request shall be denied.

7 **5601.4 Qualifications.** Persons in charge of magazines, blasting, fireworks display, or
8 pyrotechnic special effect operations shall not be under the influence of alcohol or drugs
9 that impair sensory or motor skills, shall not be less than 21 years of age and shall
10 demonstrate knowledge of all safety precautions related to the storage, handling or use
11 of *explosives, explosive materials* or fireworks. Persons actively involved in or
12 responsible for blasting, fireworks displays, or the production of pyrotechnic special
13 effects or displays shall meet all applicable federal, state and local license requirements
14 for the work or activity being performed. Persons actively involved in blasting must
15 also meet the following:

- 16 1. have no felony convictions or two or more misdemeanors within two years
17 preceding the date of application for a permit, containing intoxication as an
18 element of the offense; and
- 19 2. have no revoked, suspended, or terminated blaster's license, or any criminal
20 action involving blasting activities pending in a federal, state, or municipal
21 court of law.

22 **5607.4 Restricted hours.** Surface-blasting operations shall only be conducted during
23 daylight hours between sunrise and sunset. Other blasting shall be performed during
24 daylight hours unless otherwise *approved* by the fire ~~chief~~code official. Prior written
25 approval is required for blasting to be conducted on Sunday, legal holidays, or between
26 the hours of 5:00 p.m. and 8:00 a.m. on other days.

27 **5607.5 Notification.** All blasting operations must be preceded by a pre-blast notification
28 to the owners or managers of all affected premises. The range of the pre-blast
29 notification shall be at the discretion of the blaster and as required by the permit.
30 Where blasting is being conducted in the vicinity of utility lines or rights-of-way, the
31 blaster shall notify the appropriate representatives of the Austin Utility Location and
32 Coordination Committee and the Austin Transportation Department not less than 120
33 days in advance of blasting, specifying the location and intended time of such blasting.
34 Verbal notices shall be confirmed with written notice.

35 **Exception:** In an emergency situation, the time limit shall not apply
36 where *approved*.

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1 **5607.11.1** Approved blasting machines must be used. All other equipment is prohibited.

2 **5607.12.1** Only blasting trunk wire of 18 gauge minimum may be used while
3 conducting blasting operations under permits.

4 **5607.14 Post-blast procedures.** After the blast, the following procedures shall be
5 observed.

- 6 1. Persons shall not return to the blast area until allowed to do so by the fire **chief**
7 [code official](#) upon a recommendation from the blaster in charge.
- 8 2. The blaster shall allow sufficient time for smoke and fumes to dissipate and for
9 dust to settle before returning to or approaching the blast area.
- 10 3. The blaster shall inspect the entire blast site for misfires before allowing other
11 personnel to return to the blast area.

12 **5607.16 Particle velocity limits and air overpressures.** Particle velocities and air
13 overpressures shall be in accordance with this section and Chapter 11 of NFPA 495.
14 Particle velocities, frequencies, or air overpressure in excess of the prescribed limits
15 shall require the immediate suspension of blasting and initiation of corrective measures.
16 The fire **chief**[code official](#) may grant or require deviations from these limits as required
17 to adequately protect the public safety.

18 **5607.16.1 Particle velocity.** Particle velocities shall not exceed 1.7 inches per second.
19 Monitoring of particle velocities for all blasting operations shall be carried out as
20 required in this section. When particle velocities exceed 0.5 inches per second, blast
21 frequencies shall also be monitored.

22 **5607.16.2 Air overpressures.** Air overpressures shall not exceed the value specified
23 in Chapter 11 of NFPA 495.

24 **5607.17 Blast Monitoring.** A blast monitor, such as a seismic blast recording machine,
25 is required during all blasting operations for which a permit is issued by the City.
26 Particle velocity shall be recorded in three mutually perpendicular axes. The maximum
27 particle velocity shall be the maximum of any of the three axes. Blast monitoring shall
28 be performed by an independent company, experienced in planning and implementing
29 blast monitoring programs. The blast monitoring company shall prepare monitoring
30 plans and shall be responsible for ensuring that the monitor sensors are placed properly
31 and that the measuring and recording instruments function properly. The monitoring
32 company shall prepare blast monitoring reports. All monitoring reports shall carry the
33 seal of an engineer licensed in the State of Texas and shall be retained on file by the
34 permit holder. These reports shall be submitted to the Fire Department.

1 **Exception:** When, in the opinion of the fire chief code official, the damage to
2 structures or buildings due to blasting operations is unlikely, the requirements of
3 this subsection may be waived.

4 **5607.18 Conditions of Approval.** The fire chief code official shall set other conditions
5 for the approval of the application that are necessary to adequately protect public health
6 and safety. These conditions may include, but are not limited to, reduced allowable
7 particle velocities, reduced allowable air overpressure, additional monitoring, increased
8 insurance protection, hours of operation, type and amount of explosives used,
9 evacuations or shelter-in-place for occupants in adjacent structures, and engineered
10 blasting plans.

11 **5703.4 Spill Control, Drainage Control, and Secondary Containment.**

12 **5703.4.1 General.** Tanks, buildings, rooms, and areas used for storage, dispensing,
13 use, mixing, or handling of Class I, II, and III-A liquids shall be provided with a
14 means to control spillage and to contain or drain spillage and fire protection water
15 as set forth in Section 5004.2.

16 **Exception:** Up to 10 gallons of Class I, II, and III liquids may be stored
17 outside of buildings without spill control, drainage, and secondary
18 containment, provided:

- 19 1. The volume of individual containers is less than 5 gallons;
- 20 2. The containers are constructed of metal or plastic; and,
- 21 3. The containers are located a minimum of 10 feet from property
22 lines, exit openings, and storm water drains.

23 **5703.4.2 Spill Control.** When spill control is required, floors of rooms, buildings
24 or areas containing flammable or combustible liquids must be sloped; constructed
25 with sumps and collection systems; recessed a minimum of four inches (101.6
26 mm); provided with a liquid-tight, raised sill to a minimum height of four inches
27 (101.6 mm) to prevent the flow of liquids to adjoining areas; or otherwise
28 constructed to contain a spill from the largest single container or tank. The floor
29 and sill must be constructed of noncombustible material and must be liquid-tight.
30 The liquid-tight seal must be compatible with the material being stored. When
31 raised sills are provided, they are not required at perimeter openings that are
32 provided with an open-grate trench across the opening that connects to an
33 approved drainage control system.

34 **5703.4.3 Drainage Control.**

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1 **5703.4.3.1 General.** When drainage control is required, rooms, buildings or
2 areas must be provided with a drainage system to direct the flow of liquids
3 to an approved location or treatment system, or be provided with secondary
4 containment for the flammable and combustible liquids and fire protection
5 water.

6 **5703.4.3.2 Sizing.** Drains shall be sized to carry the sprinkler system design
7 flow rate over the sprinkler system design area. The slope of drains may not
8 be less than one percent. The drains must be liquid-tight. Materials used to
9 construct drainage systems must be compatible with the stored materials.

10 **5703.4.3.3 Incompatible Materials.** Incompatible materials must be
11 separated from each other in drainage systems.

12 **Exception:** Incompatible materials are allowed to be combined when
13 they have been rendered acceptable for discharge by an approved
14 means into the public sewer.

15 **5703.4.3.4 Neutralizers and Treatment Systems.** Drainage systems for
16 spillage and fire-protection water which are directed to a neutralizer or
17 treatment system shall comply with the following:

- 18 1. The system must be designed to handle the maximum worst-case spill
19 from the single largest container plus the volume of fire protection
20 water from the system over the minimum design area for a water flow
21 duration of 20 minutes; and
- 22 2. Overflow control from the neutralizer or treatment system must direct
23 liquid leakage and fire protection water to a safe location away from
24 buildings, material, or fire-protection control valves, means of egress,
25 adjoining properties or fire apparatus access roadways.

26 **5703.4.4 Secondary Containment.** When secondary containment is required:

- 27 1. Drains must be directed to a containment system or other location designed
28 as secondary containment for flammable or combustible liquids and fire-
29 protection water; or
- 30 2. The room, building or area must be designed to provide secondary
31 containment of flammable and combustible liquids and fire-protection water
32 through the use of recessed floors or liquid-tight, raised sills.

33 **5703.4.4.1 Sizing of Indoor Containment.** Secondary containment must be
34 designed to retain the spill from the largest single container plus the design flow
35 rate of the sprinkler system for the area of the room or area in which the storage

1 is located or the sprinkler system design area, whichever is smaller. The
2 containment capacity must be capable of containing the water flow from a
3 discharge having a duration of 20 minutes.

4 **5703.4.4.2 Sizing of Outdoor Containment.** If the storage area is open to
5 rainfall, the secondary containment shall be designed to accommodate the
6 volume of the largest container or tank plus a 24-hour rainfall as determined by
7 a 25-year storm [data from NOAA](#).

8 **Exception:** Listed tanks constructed with a integral method of secondary
9 containment.

10 **5703.4.4.3 Construction of Secondary Containment.** The floor and walls of
11 the secondary containment must be constructed of noncombustible material and
12 must be liquid-tight. The liquid-tight seal must be compatible with the material
13 being stored. In addition to these requirements, walls must be constructed in
14 accordance with Section 5004.2.

15 **5703.4.4.4 Overflow.** Overflow control from the secondary containment system
16 must direct liquid leakage and fire-protection water to a safe location away
17 from buildings, material or fire-protection control valves, means of egress, fire
18 apparatus access roadways, adjoining properties, storm drains, waterways, and
19 critical environmental features (CEFs). Tanks shall be set back at least 150 feet
20 from any recognized waterway or CEF.

21 **5703.4.4.5 Monitoring and Leak Detection.**

22 **5703.4.4.5.1 Method.** A monitoring method capable of detecting hazardous
23 material leakage from the primary containment into the secondary
24 containment must be provided. When visual inspection of the primary
25 containment is not practical, other approved means of monitoring are
26 allowed. When double walled tanks are used to provide secondary
27 containment for Class I and II liquids, automatic leak detection devices must
28 be provided. When secondary containment is subject to the intrusion of
29 water, a monitoring method for detecting the water must be provided. When
30 monitoring devices are provided, they must be connected to distinct visual or
31 audible alarms.

32 **5703.4.4.5.2 Testing.** Leak-detecting devices shall be tested annually by the
33 owner or occupant of the property on which they were located. Test results
34 shall be maintained on the premises and available to the fire ~~chief~~-[code](#)
35 [official](#) on request.

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1 **5704.2.9.6.1 Locations where above-ground tanks are prohibited.** Storage of Class I
2 and II liquids in above-ground tanks outside of buildings is prohibited outside of a major
3 industry (MI) district.

4 **Exceptions:**

- 5 1. The storage of up to 12,000 gallons (45,425 L) of Class I and II liquids
6 within the limits defined as Light Industrial is allowable provided the tank is
7 listed and labeled “protected aboveground tank”, and is installed in
8 accordance with Section 5704.2.9.7 and its listing. The product shall be a
9 noncorrosive, nonreactive liquid having a specific gravity equal to or less
10 than one.
- 11 2. The storage of up to 1,100 gallons (4,164 L) of Class I and II liquids at
12 construction sites is allowed provided the tank is listed, labeled, and installed
13 in accordance with its listing.
- 14 3. The placement of aboveground storage tanks at other locations or of greater
15 capacity may be considered on a case-by-case basis provided zoning issues,
16 secondary containment, and fire exposures are satisfactorily addressed. The
17 placement of aboveground tanks of Class I and II liquids in aggregate
18 quantities exceeding 12,000 gallons (45,425 L) water capacity, where the
19 nearest off-site exposure(s) is (are) less than 500 feet (152.4 m) from the
20 tank(s), may be permitted by the fire ~~chief~~code official only after
21 notification of owners/occupants of properties within 500 feet (152.4 m)
22 requesting their input in order to assess the potential effect on the
23 community. Notice to adjacent property owners shall be accomplished in
24 accordance with the established procedures outlined in the Title 25 (*Land*
25 *Development*) for notice of applications and administrative actions or
26 decisions.

27 **5704.2.10 Drainage and diking.** The area surrounding a tank or group of tanks shall be
28 provided with drainage control or shall be diked to prevent accidental discharge of liquid
29 from endangering adjacent tanks, adjoining property, reaching waterways, or CEF’s.

30 **Exceptions:**

- 31 1. For tank installations having an aggregate volume of less than 50,000
32 gallons, the fire ~~chief~~code official is authorized to alter or waive these
33 requirements based on a technical report which demonstrates that such tank
34 or group of tanks does not constitute a hazard to other tanks, waterways,
35 CEF’s, or adjoining property, after consideration of special features such as
36 topographical conditions, nature of occupancy and proximity to buildings on

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1 the same or adjacent property, capacity, and construction of proposed tanks
2 and character of liquids to be stored, and nature and quantity of private and
3 public fire protection provided.

- 4 2. Drainage control and diking is not required for listed secondary containment
5 tanks.

6 **5704.2.10.1 Volumetric capacity.** The volumetric capacity of the diked area shall
7 not be less than the greatest amount of liquid that can be released from the largest
8 tank within the diked area plus a 24-hour rainfall as determined by a 25-year storm
9 [data from NOAA](#).. The capacity of the diked area enclosing more than one tank
10 shall be calculated by deducting the volume of the tanks other than the largest tank
11 below the height of the dike.

12 **5704.2.11.1 Location.** Flammable and combustible liquid storage tanks located
13 underground shall be in accordance with all of the following:

- 14 1. Tanks shall be located with respect to existing foundations and supports such
15 that the loads carried by the latter cannot be transmitted to any portion of the
16 area excavated for the installation of the tank.
- 17 2. The distance from any part of an excavated area intended for the installation
18 of a tank for storing liquids to the nearest wall of a basement, pit, cellar, or
19 lot line shall not be less than five feet (1523 mm).
- 20 3. A minimum distance of two feet (610 mm), shell to shell, shall be
21 maintained between underground tanks.

22 **5704.2.11.2 Depth and cover.** Excavation for underground storage tanks shall be
23 made with due care to avoid undermining of foundations of existing structures.
24 Underground tanks shall be set on firm foundations and surrounded with at least
25 two feet (610 mm) of noncorrosive inert material, such as clean sand or pea gravel
26 well tamped in place or in accordance with the manufacturer's installation
27 instructions. Tanks shall be covered with a minimum of two feet (610 mm) of earth
28 or shall be covered by not less than one foot (305 mm) of earth, on top of which
29 shall be placed a slab of reinforced concrete not less than four inches (102 mm)
30 thick.

31 When underground tanks are, or are likely to be, subjected to traffic, they shall be
32 protected against damage from vehicles passing over them by at least three feet
33 (915 mm) of earth cover, or 18 inches (457 mm) of well-tamped earth plus six
34 inches (152 mm) of reinforced concrete, or eight inches (203 mm) of asphaltic
35 concrete. When asphaltic or reinforced concrete paving is used as part of the

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1 protection, it shall extend at least two feet (610 mm) horizontally beyond the
2 outline of the tank in all directions.

3 For tanks built in accordance with Section 5704.2.7, the burial depth and the height
4 of the vent line shall be such that the static head imposed at the bottom of the tank
5 will not exceed 10 psig (68.9 kPa) if the fill or vent pipe is filled with liquid.

6 If the depth of cover exceeds seven feet (2134 mm) or the manufacturer's
7 specifications, reinforcements shall be provided in accordance with the tank
8 manufacturer's recommendations.

9 Nonmetallic underground tanks shall be installed in accordance with the
10 manufacturer's instructions. The minimum depth of cover shall be as specified
11 above in this section.

12 **5704.2.11.4.1 Inventory control.** Daily inventory records shall be maintained for
13 underground storage tank systems. Fill and withdrawal amounts shall be reconciled
14 monthly.

15 **5803.1.1 Special limitations for indoor storage and use.** Flammable gases shall not be
16 stored or used in Group A, E, I or R occupancies or in offices in Group B
17 occupancies.

18 **Exceptions.**

- 19 1. Cylinders of nonliquefied compressed gases not exceeding a capacity of
20 250 cubic feet (7.08 m³) or liquefied gases not exceeding a capacity of 40
21 pounds (18 kg) each at normal temperature and pressure (NTP) used for
22 maintenance purposes, patient care or operation of equipment.
- 23 2. Food service operations in accordance with Section 6103.2.1.7.

24 ~~6003.1.4.1 Floors. In addition to the requirements set forth in Section 5004.12, floors of~~
25 ~~storage shall be of liquid-tight construction.~~

26 **6101.2 Permits.** The requirements in this chapter for permits to store or use hazardous
27 materials within the City are applicable to a permit to store, use, handle, or dispense LP-
28 gas, or to install or maintain an LP-gas container.

29 Permits shall be required as set forth in Section 105.6. As noted in Section 105.6.21.7 of
30 these amendments, a permit is not required for non-commercial use at a single family
31 residence. However, the information concerning location and exposures, as outlined in
32 the Fire Protection Criteria Manual, shall be provided to the Fire Department by the
33 owner of the residence.

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1 Where a single container is over 2,000 gallon (7571 L) or the aggregate capacity of
2 containers is over 4,000 gallon (15,142 L) water capacity, the installer shall submit plans
3 for the installation.

4 Distributors shall not fill an LP-gas container for which a permit is required unless a
5 permit for installation has been issued for that location by the fire ~~chief~~ code official.

6 **6103.2.1.2 Construction and temporary heating.** Portable LP-gas containers are
7 allowed to be used in buildings or areas of buildings undergoing construction or for
8 temporary heating as set forth in Sections 6.2~~03~~.4, 6.2~~03~~.5 and 6.2~~03~~.8 of NFPA 58.

9 **6103.2.2 Industrial vehicles and floor maintenance machines.** LP-gas containers on
10 industrial vehicles and floor maintenance machines shall comply with Sections 11.~~14~~11
11 and 11.~~15~~12 of NFPA 58.

12 **6104.2 Maximum capacity within established limits.** The storage of LP-gas in
13 aggregate quantities greater than 2000 gallons (7571 L) water capacity is not permitted
14 within the city. The storage of LP-gas in aboveground or below ground containers,
15 greater than 24 gallons (91 L) water capacity and up to a maximum of 2000 gallons (7571
16 L) water capacity, is prohibited outside of Major Industry (MI) or Light Industry (LI)
17 districts. Location of containers within a Light Industry zoning district may be approved
18 by the fire ~~chief~~ code official, subject to zoning and fire exposure concerns being
19 satisfactorily addressed.

20 **Exceptions:**

- 21 1. The fire ~~chief~~ code official may approve the placement of aboveground or
22 below ground containers for single family residential, multi-family
23 residential or commercial occupancies on a case-by-case basis, provided the
24 container and appurtenances are listed and installed in accordance with that
25 listing, and issues such as zoning and fire exposures are satisfactorily
26 addressed. Guidance for evaluating locations for acceptability is published in
27 the Fire Protection Criteria Manual.

28 and

- 29 ~~2.~~ Where the nearest off-site exposure(s) is(are) less than 1,000 feet (304.8 m)
30 from the tank(s), the fire ~~chief~~ code official may approve the placement of
31 aboveground or below ground containers of LP-gas in aggregate quantities
32 exceeding 2000-gallon water capacity only after notification of
33 owners/occupants within 1,000 feet (304.8 m) of the tank(s) to assess the
34 potential effect on the community. Notice to adjacent property owners and
35 occupants shall be accomplished in accordance with the established
36 procedures outlined in the Title 25 (*Land Development*) for notice of

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1 applications and administrative actions or decisions, with the exception that
2 notice shall be made to a distance of 1000 feet (304.8 m).

3 **6104.3.2 Special hazards.** LP-gas containers shall also be located with respect to special
4 hazards including, but not limited to, above-ground flammable or combustible liquid
5 tanks, oxygen or gaseous hydrogen containers, flooding or electric power lines as
6 specified in Sections 6.4 and 6.5 of NFPA 58.

7 **6104.4 Multiple LP-gas container installations.** Multiple LP-gas container installations
8 with a total water storage capacity of more than 180,000 gallons (681 300 L) [150,000-
9 gallon (567 750 L) LP-gas capacity] shall be subdivided into groups containing not more
10 than 180,000 gallons (681 300 L) in each group. Such groups shall be separated by a
11 distance of not less than 50 feet (15 240 mm), unless the containers are protected in
12 accordance with one of the following:

- 13 1. Mounded in an approved manner.
- 14 2. Protected with approved insulation on areas that are subject to impingement of
15 ignited gas from pipelines or other leakage.
- 16 3. Protected by firewalls of approved construction.
- 17 4. Protected by an approved system for application of water as specified in Table
18 6.45.1.2 of NFPA 58.
- 19 5. Protected by other approved means.

20 Where one of these forms of protection is provided, the separation shall not be less than
21 25 feet (7620 mm) between LP-gas container groups.

22 **6107.2 Smoking and other sources of ignition.** “No Smoking” signs complying with
23 Section 310 shall be posted when required by the fire ~~chief~~ code official. Smoking within
24 25 feet (7620 mm) of a point of transfer, while filling operations are in progress at LP-gas
25 containers or vehicles, shall be prohibited.

26 Control of other sources of ignition shall comply with Chapter 3 of this code and Section
27 6.23 of NFPA 58.

28 ~~**6108.1 General.** Fire protection shall be provided for installations having LP-gas storage
29 containers with a water capacity of more than 4,000 gallons (15,140 L), as required by
30 Section 6.29 of NFPA 58.~~

31 **6109.11.2 Construction.** The construction of such buildings and rooms shall comply
32 with requirements for Group H occupancies in the Building Code, Chapter 10 of NFPA
33 58 and both of the following:

- 34 1. Adequate vents shall be provided to the outside at both top and bottom, located at
35 least five feet (1524 mm) from building openings.

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2. The entire area shall be classified for the purposes of ignition source control in accordance with Section 6.~~23~~26 of NFPA 58.

6303.1.1.1.2.1 A maximum of 110 pounds (49.9 kg) of solid Class 3 oxidizer is allowed in nonresidential detached storage adjacent to Group R occupancies, when such materials are necessary for maintenance purposes associated with swimming pools. The oxidizers shall be stored in approved containers and in an approved manner.

CHAPTER 80 REFERENCED STANDARDS

This chapter lists the standards that are referenced in various sections of this document and the ~~2021~~ 2024 International Fire Code. The standards within Chapter 80 of the published ~~2021~~ 2024 International Fire Code and the amendments adopted by the City are listed herein and in the published code by the promulgating agency of the standard, the standard identification, the effective date and title, and the section or sections of this document that reference the standard. The references specifically amended below replace the reference within the published code. All other references remain as published by the ICC. The application of the referenced standards shall be as specified in Section 102.7.

NFPA		National Fire Protection Association Batterymarch Park Quincy, MA 02269
Standard Reference Number	Title	Referenced In Code Section Number
13	2019 Installation of Sprinkler Systems	903.3.1.1, 903.3.2, 903.3.5.1.1, 903.3.8.2, 903.3.8.3.5, 904.11, 905.3.4, 907.6.3, 1009.3, 1103.4.8, 3201.1, 3204.2, Table 3206.2, 3206.4.1, 3206.9, 3207.2, 3207.2.1, 3208.2.2, 3208.2.2.1, 3208.4, 3210.1, 3401.1, 5104.1, 5104.1.1, 5106.5.7, 5704.3.3.9, Table 5704.3.6.3(7), 5704.3.7.5.1, 5704.3.8.4

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13D—2019 24 ²⁵ Installation of Sprinkler Systems in One- and Two-Family Dwellings and Manufactured Homes.	903.3.1.3, 903.3.5.1.1
13R—2019 24 ²⁵ Installation of Sprinkler Systems in Residential Occupancies up to and Including Four Stories in Height.	903.3.1.2, 903.3.5.2 903.3.5.1.2 , 903.4.1
14 — 2019 24 ²⁴ Installation of Standpipe and Hose Systems	905.2, <u>905.3.4</u> , 905.4.2, 905.6.2, 905.8
30—2021 Flammable and Combustible Liquids Code	610.1, 5701.2, 5703.6.2, 5703.6.2.1, 5704.2.7, 5704.2.7.1, 5704.2.7.2, 5704.2.7.3.2, 5704.2.7.4, 5704.2.7.6, 5704.2.7.7, 5704.2.7.8, 5704.2.7.9, 5704.2.9.3, 5704.2.9.4, 5704.2.9.6.1.1, 5704.2.9.6.1.2, 5704.2.9.6.1.3, 5704.2.9.6.1.4, 5704.2.9.6.1.5, 5704.2.9.6.2, 5704.2.9.7.4, 5704.2.10.2, 5704.2.11.4, 5704.2.11.5.2, 5704.2.12.1, 5704.3.1, 5704.3.6, Table 5704.3.6.3(1), Table 5704.3.6.3(2), Table 5704.3.6.3(3), 5704.3.7.2.3, 5704.3.8.4, 5706.8.3
58—2020 Liquefied Petroleum Gas Code	603.4.2.1.1, 2307.4, 6101.1, 6103.1, 6103.2.1, 6103.2.1.2, 6103.2.1.7, 6103.2.2, 6104.1, 6104.3.2, 6104.4, 6105.2, 6106.2, 6106.3, 6107.2, 6107.4, 6108.1, 6108.2,

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72—2019 National Fire Alarm and Signaling Code	6109.11.2, 6111.3 508.1.5, Table 901.6.1, 903.4.1, 904.3.5, 907.2, 907.2.6, 907.2.9.3, 907.2.11, 907.2.13.2, 907.3, 907.3.3, 907.3.4, 907.5.2.1.2, 907.5.2.2, 907.6, 907.6.1, 907.6.2, 907.6.5, 907.7, 907.7.1, 907.7.2, 907.8, 907.8.2, 907.8.5, 1103.3
<u>720 — 2015 Standard for the Installation of Carbon Monoxide (CO) Detection and Warning Equipment</u>	<u>915.5.1, 915.5.2, 915.6</u>
<u>855 – 2023 Standard for the Installation of Stationary Energy Storage Systems</u>	<u>1201.1</u>
1221—2019 Standard for the Installation, Maintenance and Use of Emergency Services Communication Systems, Chapters 1, 3, and 5 and Section 9.6 only.	907.2.13.2

B104.1 General. The fire-flow calculation area shall be the total floor area of all floor levels within the exterior walls, and under the horizontal projections of the roof of a building.

Exceptions:

1. The fire-flow calculation area of buildings constructed of Types IA and IB construction shall be the area of the three largest successive floors.
2. The fire-flow calculation area for open parking garages of Types IA and IB construction shall be determined by the area of the largest floor.
3. The fire-flow calculation for one- and two-family dwellings, Group R-3 and R-4 buildings and townhouses shall be the total combined fire-flow calculation areas for structures separated by less than 10 feet (3.05 m).

B104.2 Area separation. Portions of buildings that are separated by fire walls without openings, constructed in accordance with the International Building Code, are allowed to be considered as separate fire-flow calculation areas.

Exception: The fire-flow calculation area of buildings separated by fire walls with openings, constructed in accordance with the International Building Code, shall be the area of the two adjacent portions of the building with the most demanding fire-flow when combined.

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~~**B105.1 One and two family dwellings.** The minimum fire flow requirements for detached one and two family dwellings having a fire flow calculation area which does not exceed 3,600 square feet (344.5 m²) and separated from adjacent homes and structures by at least 10 feet (3.05 m) shall be 1,000 gallons per minute (3785.4 L/min).~~

~~**B105.1.1** The minimum fire flow requirements one and two family dwellings, including townhomes, having a fire flow calculation area which does not exceed 3,600 square feet (344.5 m²) and separated from adjacent homes and structures by less than 10 feet (3.05 m) shall be 1,500 gallons per minute (3785.4 L/min).~~

~~**B105.1.2** Fire flow and flow duration for dwellings having a fire flow calculation area in excess of 3,600 square feet (344.5 m²) shall not be less than that specified in Table B105.1.~~

~~**Exception:** A reduction in required fire flow of 50 percent, as approved, is allowed when the building is provided with an approved automatic sprinkler system.~~

~~APPENDIX F HAZARDOUS MATERIALS, HAZARD RANKING~~

~~**F101.2 General.** The hazard rating of a material is required to be included in the hazardous materials inventory and shall be determined by evaluating the potential for harm and the relative toxicity of the material or mixture of materials as a whole. NFPA Standard 704, "Standard System for the Identification of the Fire Hazards of Materials for Emergency Response", shall be used to the extent possible in identifying degree of hazard and is declared to be part of this code as if set forth in full in this section. MSDS's, published data (Irving Sax, etc.), Table F101.2, or Appendix E shall be used when NFPA 704-2017 does not apply or provides insufficient guidance, e.g. oxidizers. Sections 105.5.21 and 5001.2 also include applicable requirements.~~

~~As noted in Section 4.2 of NFPA 704, there could be specific reasons to alter the degree of hazard assigned to a specific material; for example, ignition temperature, flammable range or susceptibility of a container to rupture by an internal combustion explosion or to metal failure while under pressure or because of heat from external fire. As a result, the degree of hazard assigned for the same material can vary when assessed by different people of equal competence.~~

~~The hazard rankings assigned to each class represent reasonable minimum hazard levels for a given class based on the use of criteria established by NFPA 704. Specific cases of use or storage may dictate the use of higher degrees of hazard in certain cases.~~