211-1-(Chapter 1) : Accept

SUBMITTER: Technical Committee on Chimneys, Fireplaces, and Venting Systems for Heat Producing Appliances,

RECOMMENDATION: Revise text to read as follows:

Chapter 1 General.

1.1 Scope. This edition of NFPA 211 contains provisions for chimneys, fireplaces, venting systems, and solid fuel-burning appliances, including their installation. The standard applies to residential as well as commercial and industrial installations.

1.2 Purpose.

1.2.1 The primary concern of this standard is the removal of waste gases; the reduction of fire hazards associated with the construction and installation of chimneys, fireplaces, and venting systems for residential, commercial, and industrial appliances; and the installation of solid fuel-burning appliances.

1.2.2 This standard provides minimum construction and installation requirements for chimneys and vents suitable for use with fuel-burning appliances.

1.3 Equivalency. Nothing in this standard is intended to prevent the use of systems, methods, or devices of equivalent or superior quality, strength, fire resistance, effectiveness, durability, and safety over those prescribed by this standard, provided technical documentation is submitted to the authority having jurisdiction to demonstrate equivalency and the system, method, or device is approved for the intended purpose.

1.4 Retroactivity. The provisions of this document are considered necessary to provide a reasonable level of protection from the state of the art at the time the standard was issued. Unless otherwise noted, it is not intended that the provisions of this document be applied to facilities, equipment, structures, or installations that were existing or approved for construction or installation prior to the effective date of the document, except in those cases where it is determined by the authority having jurisdiction that the existing situation involves a distinct hazard to life or adjacent property.

1.5 Dimensions. Where used to describe building construction components, all minimum dimensions specified in this standard are actual unless otherwise stated. Nominal dimensions shall be permitted to vary from their specified dimensions by no more than 1/2 in. (12.7 mm).

SUBSTANTIATION: Editorially revise chapter to comply with NFPA Manual of Style. This is an editorial revision only no technical changes occur in this proposal. Technical changes have been made by other proposals. Comments on technical revisions should be addressed to the appropriate proposal.

COMMITTEE ACTION: Accept

NUMBER OF COMMITTEE MEMBERS ELIGIBLE TO VOTE: 14

VOTE ON COMMITTEE ACTION:

AFFIRMATIVE: 9

NOT RETURNED: 5 Rucker, Grisack, Schulz, Shiver, and Stone

211-2-(1-5 Definitions (GOT)) : Accept

SUBMITTER: Technical Committee on Chimneys, Fireplaces, and Venting Systems for Heat Producing Appliances,

RECOMMENDATION: Adopt the preferred definitions from the NFPA Glossary of Terms for the following terms:


The air necessary to provide for the complete combustion of fuel and usually consisting of primary air, secondary air, and excess air.

Baffle. (secondary) NFPA 211, 2000 ed.

A device built into an appliance, or made a part of the vent connector, that is designed to (1) provide for the ready escape of the flue gases from the appliance in the event of no draft, backdraft, or stoppage beyond the draft hood, (2) to prevent a backdraft from entering the appliance, and (3) to neutralize the effect of stack action of the chimney or vent upon the operation of the appliance.

Gas Vent. (preferred) NFPA 54, 1999 ed.

A passageway composed of listed factory-built components assembled in accordance with the terms of listing for conveying vent gases from gas appliances or their vent connectors to the outside atmosphere.


A material that, in the form in which it is used and under the conditions anticipated, will not ignite, burn, support combustion, or release flammable vapors or liquids when subjected to fire or heat. Materials that are reported as passing ASTM E 136, Standard Test Method for Behavior of Materials in a Vertical Tube Furnace at 750°C, shall be considered noncombustible materials.


Any individual, firm, corporation, or company that, either in person or through a representative, is engaged in and is responsible for the connection, venting, installation, inspection, repair, or servicing of heat-producing appliances and who is experienced in such work, is familiar with all precautions required, and has complied with all the requirements of the authority having jurisdiction.

Vent. (secondary) NFPA 211, 2000 ed.

A flue gas conveying system intended for use only with certain gas, liquid, or pellet fuel fired appliances that do not produce flue gas outlet temperatures higher than a value specified in the listing vent standards.

SUBSTANTIATION: Adoption of preferred definitions will assist the user by providing consistent meaning of defined terms throughout the National Fire Codes.

COMMITTEE ACTION: Accept

NUMBER OF COMMITTEE MEMBERS ELIGIBLE TO VOTE: 14

VOTE ON COMMITTEE ACTION:

AFFIRMATIVE: 9

NOT RETURNED: 5 Rucker, Grisack, Schulz, Shiver, and Stone

WEATHERSBY: In the next round of comment I will submit a proposal for the following change in wording to clarify the proposed definition:

A partial enclosure that is installed to surround or conceal the termination of a venting system for aesthetic purposes.

COMMITTEE ACTION: Accept

NUMBER OF COMMITTEE MEMBERS ELIGIBLE TO VOTE: 14

VOTE ON COMMITTEE ACTION:

AFFIRMATIVE: 9

NOT RETURNED: 5 Rucker, Grisack, Schulz, Shiver, and Stone

211-4-(1-5.2.5 Chimney, Factory-Built, Positive Pressure Capable) : Accept

SUBMITTER: Glen Edgar, Selkirk Inc.

RECOMMENDATION: Add new definition:

“Chimney, Factory-Built, Positive Pressure Capable. A residential type or building heating appliance chimney, or both, listed for use in positive internal pressure applications.

SUBSTANTIATION: Corrects editorial problem. Similar definition was proposed and accepted for inclusion in previous revision cycle, was mistakenly inserted as 1-5.2.5.2 and included incorrect heading.

COMMITTEE ACTION: Accept

NUMBER OF COMMITTEE MEMBERS ELIGIBLE TO VOTE: 14

VOTE ON COMMITTEE ACTION:

AFFIRMATIVE: 9

NOT RETURNED: 5 Rucker, Grisack, Schulz, Shiver, and Stone

211-5-(1-5.2.5 APpliance, Building Heat, Positive Pressure Capable) : Accept

SUBMITTER: Glen Edgar, Selkirk Inc.

RECOMMENDATION: Delete entire statement

SUBSTANTIATION: Delete entire statement. The definition is that for a positive pressure rated chimney and not any type of appliance.

COMMITTEE ACTION: Accept

NUMBER OF COMMITTEE MEMBERS ELIGIBLE TO VOTE: 14
VOTE ON COMMITTEE ACTION:  
AFFIRMATIVE: 9  
NOT RETURNED: 5 Rucker, Grisack, Schulz, Shiver, and Stone

211-6-(1.5.2.13 Boiler) : Accept  
SUBMITTER: Wilbur L. Haag, Jr., A.O. Smith Water Products Company

RECOMMENDATION: Revise text as follows:
1.5.2.13 Boiler. A vessel in which water is heated, steam is generated, steam is superheated, or in which any combination thereof takes place by the application of heat from combustible fuels, in a self-contained or attached furnace.

SUBSTANTIATION: A heating boiler cannot be a closed vessel. It must be able to supply hot water or steam to a heating system. It is the system that is usually closed, not the boiler.

COMMITTEE ACTION: Accept
NUMBER OF COMMITTEE MEMBERS ELIGIBLE TO VOTE: 14
VOTE ON COMMITTEE ACTION:  
AFFIRMATIVE: 9  
NOT RETURNED: 5 Rucker, Grisack, Schulz, Shiver, and Stone

211-7-(1.5.2.13.3 Boiler, Hot Water Supply) : Accept  
SUBMITTER: Wilbur L. Haag, Jr., A.O. Smith Water Products Company

RECOMMENDATION: Revise text as follows:
1.5.2.13.3 Boiler, Hot Water Supply. A low-pressure hot water boiler having a volume exceeding 120 gal (454 L), or a heat input exceeding 200,000 Btu/hr (58.6 kW/hr), or an operating temperature exceeding 200 °F (93 °C) that provides hot water to be used outside the boiler. boiler used to heat water for purposes other than space heating.

SUBSTANTIATION: Hot water supply boilers are included in the Scope of Part HG of the Code. The Code is not intended to apply to residential size water heater, the limit of which are a heat input of 200,00 Btu/h and a capacity of 120 gal. These limits have nothing to do with hot water supply boilers. The proposed definition is patterned after that in the Code.

COMMITTEE ACTION: Accept
NUMBER OF COMMITTEE MEMBERS ELIGIBLE TO VOTE: 14
VOTE ON COMMITTEE ACTION:  
AFFIRMATIVE: 9  
NOT RETURNED: 5 Rucker, Grisack, Schulz, Shiver, and Stone

211-8-(1.5.2.77 Smoke Test) : Accept  
SUBMITTER: Glen Edgar, Selkirk Inc.

RECOMMENDATION: Delete the words from paragraph: 
"...factory-built or..."

SUBSTANTIATION: Most factory-built are and have been non-airtight construction at the joints. The smoke test implies that a factory-built chimney should pass this test. If actually tested, many / most factory-built systems would fail, if any type of slightly positive internal pressure were developed. Yet, in the field, when sized properly, such factory-built systems are never subjected to positive internal pressure.

This statement can cause a perfectly good, new factory-built chimney system to be placed in question concerning its appropriateness for use.

COMMITTEE ACTION: Accept
NUMBER OF COMMITTEE MEMBERS ELIGIBLE TO VOTE: 14
VOTE ON COMMITTEE ACTION:  
AFFIRMATIVE: 9  
NOT RETURNED: 5 Rucker, Grisack, Schulz, Shiver, and Stone

211-9-(1.5.2.90.1 Vent, Gas) : Accept  
SUBMITTER: Glen Edgar, Selkirk Inc.

RECOMMENDATION: Modify as follows: 
"Vent, Gas. A passageway composed of listed, factory-built components assembled in accordance with the terms of the listing for conveying flue gases from gas appliances or their vent connectors to the outside atmosphere."

SUBSTANTIATION: Believed to be typographical error. Makes more sense as proposed revised.

COMMITTEE ACTION: Accept
NUMBER OF COMMITTEE MEMBERS ELIGIBLE TO VOTE: 14
VOTE ON COMMITTEE ACTION:  
AFFIRMATIVE: 9  
NOT RETURNED: 5 Rucker, Grisack, Schulz, Shiver, and Stone

211-10-(1.5.2.96.1 Venting System (Flue Gases), Natural Draft and Venting System (Flue Gas), Mechanical Draft, 1.5.2.96.2) : Accept  
SUBMITTER: Glen Edgar, Selkirk Inc.

RECOMMENDATION: Delete each of these definitions.

SUBSTANTIATION: The heading for each of these definitions is incorrect. The first definition is for "Draft", and is already included in 1.5.2.31.2. The second is the definition for "Draught", Mechanical" and is already included as 1.5.2.31.1.

COMMITTEE ACTION: Accept
NUMBER OF COMMITTEE MEMBERS ELIGIBLE TO VOTE: 14
VOTE ON COMMITTEE ACTION:  
AFFIRMATIVE: 9  
NOT RETURNED: 5 Rucker, Grisack, Schulz, Shiver, and Stone

211-11-(1.5.2.100 Water Heater) : Accept  
SUBMITTER: Wilbur L. Haag, Jr., A.O. Smith Water Products Company

RECOMMENDATION: Revise text as follows:
1.5.2.100 Water Heater. An indirect-fired fuel-burning or electrically induced appliance for heating water to a temperature not more than 200 °F (93 °C), having an input not greater than 200,000 Btu/hr (58.6 kW/hr), and a water containing capacity not exceeding 120 U.S. gal (454 L).

SUBSTANTIATION: Neither the CSA Safety Standards for Water Heaters or the ASME Boiler and Pressure Vessel Code place any limit on the size or input of a water heater.

COMMITTEE ACTION: Accept
NUMBER OF COMMITTEE MEMBERS ELIGIBLE TO VOTE: 14
VOTE ON COMMITTEE ACTION:  
AFFIRMATIVE: 9  
NOT RETURNED: 5 Rucker, Grisack, Schulz, Shiver, and Stone

211-12-(1.8.1) : Accept  
SUBMITTER: Technical Committee on Chimneys, Fireplaces, and Venting Systems for Heat Producing Appliances.

RECOMMENDATION: Amend 1.8.1 to read as follows: Masonry chimneys shall extend above the highest point at which they pass through the roof of a building by at least the distance specified in Table 4.2, Column VI, and shall also extend at least the specified distance above any portion of any structure located within the specified proximity (measured horizontally from the vertical chimney line) in Table 4.2, Column VII.

Reelable Figures 1.8.

SUBSTANTIATION: Clarify the intent of the paragraph.

COMMITTEE ACTION: Accept
NUMBER OF COMMITTEE MEMBERS ELIGIBLE TO VOTE: 14
VOTE ON COMMITTEE ACTION:  
AFFIRMATIVE: 9  
NOT RETURNED: 5 Rucker, Grisack, Schulz, Shiver, and Stone

211-13-(1.10 (New) ) : Accept  
SUBMITTER: Technical Committee on Chimneys, Fireplaces, and Venting Systems for Heat Producing Appliances.

RECOMMENDATION: Add text to read as follows:
1.10 Venting Systems in Ducts
1.10.1 Circulating Air Ducts and Plenums. No portion of a venting system shall extend into or pass through a dedicated circulating air duct orplenum.
1.10.2 Above Ceiling Spaces. Where venting systems pass through a space above a ceiling used as a return air plenum, it shall be installed in a manner approved by the manufacturer of the venting system.
1.10.3 Non-air-tight venting systems installed with no joints or fittings located within the above ceiling return air plenum. Remover the rest of the chapter accordingly.

COMMITTEE ACTION: Accept
NUMBER OF COMMITTEE MEMBERS ELIGIBLE TO VOTE: 14
VOTE ON COMMITTEE ACTION:  
AFFIRMATIVE: 9  
NOT RETURNED: 5 Rucker, Grisack, Schulz, Shiver, and Stone

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**Chapter 2 Mandatory References**

<table>
<thead>
<tr>
<th>Number</th>
<th>Reference</th>
<th>Description</th>
</tr>
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<tbody>
<tr>
<td>2.1.1</td>
<td>NFPA Publications</td>
<td>Contains policies and guidelines for the installation of oil-burning equipment.</td>
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</table>

**Chapter 3 Definitions**

3.1 Official NFPA Definitions

3.1.1 Approved. Acceptable to the authority having jurisdiction.

3.1.2 Authority Having Jurisdiction. The organization, office, or individual responsible for approving equipment, an installation, or a procedure.

3.1.3 Labeled. Equipment or materials to which has been attached a label, symbol, or other identifying mark of an organization that is acceptable to the authority having jurisdiction and concerned with product evaluation that maintains periodic inspection of production of labeled equipment or materials and by whose labeling the manufacturer indicates compliance with appropriate standards or performance in a specified manner.

3.1.4 Listed. Equipment, materials, or services included in a list published by an organization acceptable to the authority having jurisdiction and concerned with evaluation of products or services that maintains periodic inspection of production of listed equipment or materials or periodic evaluation of services and whose listing states either that the equipment, material, or service meets identified standards or has been tested and found suitable for a specified purpose.

3.1.5 Shall. Indicates a mandatory requirement.

3.2 General Definitions. Other definitions relating to chimneys, fireplaces, and venting systems are contained in NFPA 97, Standard for the Installation of Solid-Fueled Appliances, 1999 edition.

3.2.1 Accessible. Capable of being exposed for inspection, maintenance or repair without damage to the chimney or building structure or finish, but which may require the removal of doors, panels or coverings using commonly available tools.

3.2.2 Accessible, Readily (for Inspections). Exposed, or capable of being exposed, for operation, inspection, maintenance or repair without the use of tools to open or remove doors, panels or coverings.

3.2.3 Air, Combustion. The air necessary to provide for the complete combustion of fuel and usually consisting of primary air, secondary air, and excess air.

3.2.4 Air, Dilution. The air that enters the relief opening of a draft hood or draft diverter, or the air that enters another opening in an appliance flue or venting system.
3.2.5 Appliance. Utilization equipment, normally built in standardized sizes or types, that is installed or connected as a unit to perform one or more functions such as clothes washing, air conditioning, food mixing, cooking, heating, or refrigeration.

3.2.5.1 Appliance, Automatically Lighted Fuel-Burning. A fuel-burning appliance in which fuel to the main burner is normally turned on and ignited automatically.

3.2.5.2* Appliance, Building Heat, Positive Pressure Capable. A residential type, building heating appliance, chimney, or both, listed for use in positive internal pressure applications.

3.2.5.3 Appliance, Building Heating. A fuel-burning or electric boiler operating at a gauge pressure not over 50 psig (345 kPa), a central furnace, or a heater intended primarily for heating spaces having a volume exceeding 25,000 ft³ (708 m³).

3.2.5.4 Appliance, Cooking (Floor-Mounted Restaurant-Type). A range, oven, broiler, or other miscellaneous cooking appliance, designated for use in hotel and restaurant kitchens and for mounting on the floor.

3.2.5.5 Appliance, Counter (Gas). Appliances such as gas-operated coffee brewers and coffee urns and any appurtenant water-heating equipment, food and dish warmers, hot plates, and griddles.

3.2.5.6 Appliance, Factory-Built. A manufactured appliance furnished by the manufacturer as a single assembly or as a package set of subassemblies or parts, and including all the essential components necessary for it to function normally where installed as intended.

3.2.5.7 Appliance, Nonresidential, 1400°F. A commercial, industrial, or institutional appliance needing a chimney capable of withstand ing a continuous flue gas temperature not exceeding 1400°F (760°C).

3.2.5.8 Appliance, Nonresidential, High-Heat. A commercial, industrial, or institutional appliance needing a chimney capable of withstand ing a continuous flue gas temperature exceeding 1800°F (982°C).

3.2.5.9 Appliance, Nonresidential, Low-Heat. A commercial, industrial, or institutional appliance needing a chimney capable of withstand ing a continuous flue gas temperature not exceeding 1000°F (538°C).

3.2.5.10 Appliance, Nonresidential, Medium-Heat. A commercial, industrial, or institutional appliance needing a chimney capable of withstand ing a continuous flue gas temperature not exceeding 1800°F (982°C).

3.2.5.11 Appliance, Residential-Type Heating. Fuel-burning and electric heating appliances, not including high-pressure steam boilers, for heating building spaces having a volume of not more than 55,000 ft³ (708 m³) and other heat-producing appliances of the type mainly used in residences but that might be used in other buildings, such as cooking stoves and ranges, clothes dryers, fireplace stoves, domestic incinerators, laundry stoves, water heaters, and heat pumps.

3.2.6 Appliance Casing (or Jacket). An enclosure forming the outside of the appliance.

3.2.7 Appliance Categories. See 3.2.5.1, Gas Appliance Categories.

3.2.8 Ash. The solid residue that remains after combustion is complete.

3.2.9 Ash Receptacle Door. A door below the grade level providing access to the ash receptacle.

3.2.10 Attic-Type Heating Appliance. A heating appliance designed specifically for installation in an attic or in a space with low headroom that normally is unoccupied.

3.2.11 Automatic Electric Igniter. A device for fuel burners designed to utilize electric energy for ignition of a fuel-air mixture at the burner.

3.2.12 Baffle. An object installed in an appliance to change the direction of, or to retard, the flow of air, air-fuel mixtures, or flue gases.

3.2.13 Boiler. A closed vessel in which water is heated, steam is generated, steam is superheated, or in which any combination thereof takes place by the application of heat from combustible fuels, in a self-contained or attached furnace.

3.2.13.1 Boiler, Combination-Fuel. A single boiler unit designed to burn more than one type of fuel (gas, oil, or solid), either separately or simultaneously, using either separate or common combustion chambers and flues.
3.2.19 Chimney Connector. The pipe that connects a fuel-burning appliance to a chimney.

3.2.20 Chimney Flue Base (Base of Flue). The lowest point of a flue within a chimney.

3.2.21 Cleanout Opening. An opening or hole in a chimney, usually located near its base, designed to allow access to the flue for purposes of removing ash, creosote, soot, and other extraneous matter that becomes trapped.

3.2.22 Clearance. The distance between a heat-producing appliance, chimney, chimney connector, vent, vent connector, or plenum and other surfaces.

3.2.23 Clothes Dryer. A device used to dry wet laundry by means of heat derived from the combustion of fuel or from electric heating elements.

3.2.23.1 Clothes Dryer, Type 1. A factory-built, mass-produced dryer, primarily used in a family living environment. It might or might not be coin-operated for public use and usually is the smallest unit both physically and in function.

3.2.23.2 Clothes Dryer, Type 2. A factory-built, mass-produced dryer used in a commercial business. It might or might not be operated by the public or a hired attendant. It might or might not be coin-operated and is not designed for use in an individual family living environment. It can be small, medium, or large in size.

3.2.24 Combustible Material. Material made of or surfaced with wood, compressed paper, plant fibers, plastics, or other material that can ignite and burn, whether flame proofed or not, or whether plastered or unplastered.

3.2.25 Combustion. A chemical process of oxidation that occurs at a rate fast enough to produce heat and usually light in the form of either a flow or flame.

3.2.26 Combustion Products. Constituents resulting from the combustion of a fuel with the oxygen of the air, including the inerts but excluding excess air.

3.2.27 Confined Space. A space whose volume is less than 50 ft\(^3\)/1000 Btu/hr (1.42 m\(^3\)/293 W) of the aggregate input rating of all appliances installed in that space.

3.2.28 Corbel. Units of masonry projecting from or projecting upward and outward from the face of a wall or chimney in courses to form a support or ledge for a beam, rafter, or other member.

3.2.29 Damper. A valve or plate for controlling draft or the flow of gases, including air.

3.2.29.1 Damper, Automatically Operated. A damper operated by an automatic control.

3.2.29.2 Damper, Flue Gas. A damper located on the downstream side of the combustion chamber of a fuel-burning appliance, usually in a flue passage of the appliance or in the chimney or vent connector.

3.2.29.3 Damper, Manually Operated. An adjustable damper manually set and locked in the desired position.

3.2.30 Direct Vent Appliance (Sealed Combustion System Appliance). A system consisting of an appliance, combustion air and flue gas connections between the appliance and the outside atmosphere, and a vent cap supplied by the manufacturer, and constructed so that all air for combustion is obtained from the outside atmosphere and all flue gases are discharged to the outside atmosphere.

3.2.31 Draft. The pressure differential that causes the flow of air or gases through a chimney, gas vent, or venting system.

3.2.31.1 Draft, Mechanical. Draft produced by a fan or an air or steam jet. When a fan is located so as to push the flue gases through the chimney or vent, the draft is forced. When the fan is located so as to pull the flue gases through the chimney or vent, the draft is induced.

3.2.31.2 Draft, Natural. Draft produced by the difference in the weight of a column of flue gases within a chimney or vent and a corresponding column of air of equal dimension outside the chimney or vent.

3.2.32 Draft Hood. A device built into an appliance, or made a part of the vent connector from an appliance, that is designed (1) to provide for the ready escape of the flue gases from the appliance in the event of no draft, backdraft, or stoppage beyond the draft hood; (2) to prevent a backdraft from entering the appliance; and (3) to neutralize the effect of stack action of the chimney or gas vent upon operation of the appliance.

3.2.33 Draft Regulator, Barometric. A device built into a fuel-burning appliance, or made a part of a chimney connector or vent connector, that functions to reduce excessive draft through an appliance to a desired value by admitting ambient air into the appliance chimney, chimney connector, vent, or vent connector.

3.2.34 Engineered Venting or Chimney System. A system that has been sized and configured in accordance with approved engineering methods (1) the vent capacity tables in NFPA 54, National Fuel Gas Code; (2) the fuel-burning manufacturers' venting instructions; (3) drawings, calculations, and specifications provided by the venting equipment manufacturer or by a professional engineer; (4) use of calculations from the ASHRAE Handbook, HVAC Systems and Equipment, Chapter 31, “Chimney, Gas Vent, and Fireplace Systems”; application of the VENT II computer program, developed under Gas Research Institute sponsorship for vent design and analysis.

3.2.35 Fan. A blower or exhaust assembly comprising blades or runners and housings or casings.

3.2.36 Fireplace. A hearth, fire chamber, or similarly prepared area and a chimney.

3.2.36.1 Fireplace, Factory-Built. A fireplace composed of listed, factory-built components assembled in accordance with the terms of the listing.

3.2.36.2 Fireplace, Masonry. A hearth and fire chamber of solid masonry units, such as bricks, stones, listed masonry units, or reinforced concrete, provided with a suitable chimney.

3.2.37 Fireplace Accessories. Accessories intended for field installation into or attachment to existing masonry fireplaces. These include such items as heat exchangers, door assemblies, tabular grates, and blowers.

3.2.38 Fireplace Insert. A factory-built, field-installed product consisting of a firebox assembly designed to be installed within or partially within the fire chamber of a fireplace that uses the fireplace flue to vent the products of combustion.

3.2.39 Fireplace Stove. A freestanding, chimney-connected, solid fuel-burning appliance that is designed to be operated with the fire chamber either open or closed.

3.2.40 Fireplace Unit, Steel. A unit consisting of a steel firebox and an air chamber adjacent to the sides and rear of the firebox, used to construct a masonry fireplace. The unit usually has ducts to circulate air to and heated air from the air chamber to the living space.

3.2.41 Flame Spread Rating. A relative measurement of the surface burning characteristics of building materials when tested in accordance with NFPA 255, Standard Method of Test of Surface Burning Characteristics of Building Materials.

3.2.42 Floor Protector. A noncombustible surfacing applied to the floor area underneath and extending in front, to the sides, and to the rear of a heat-producing appliance.

3.2.43 Flue. The general term for a passage through which flue gases are conveyed from the combustion chamber to the outer air.

3.2.43.1 Flue, Appliance. The flue passage within an appliance.

3.2.43.2 Flue, Chimney. The passage in a chimney for conveying the flue gases to the outside atmosphere.

3.2.43.3 Flue, Dilution. A passage designed to effect the dilution of flue gases with air before discharge from an appliance.

3.2.44 Flue Collar. That portion of an appliance designed for attachment of a chimney or vent connector or a draft hood.

3.2.45 Flue Gases. Combustion products from fuel-burning appliances along with excess air.

3.2.46 Furnace, Central Warm-Air. A self-contained indirect-fired or electrically heated appliance designed to supply heated air through ducts to spaces remote from or adjacent to the appliance location.

3.2.46.1 Furnace, Central Warm-Air, Forced-Air-Type. A forced-air-type furnace designed specifically for installation in an attic or in a space with low headroom that is normally occupied.
3.2.46.3 Furnace, Central Warm-Air, Forced-Air, Downflow-Type. A forced-air-type furnace designed with airflow essentially in a vertical path, discharging air at or near the bottom of the furnace.

3.2.46.4 Furnace, Central Warm-Air, Forced-Air, Horizontal-Type. A forced-air-type furnace designed with airflow through the furnace essentially in a horizontal path.

3.2.46.5 Furnace, Central Warm-Air, Forced-Air, Upflow-Type. A forced-air-type furnace designed with airflow essentially in a vertical path, discharging air at or near the top of the furnace.

3.2.46.6 Furnace, Central Warm-Air, Gravity-Type Central Furnace. A central furnace depending primarily on circulation of air by gravity.

3.2.46.7 Furnace, Central Warm-Air, Gravity-Type with Booster Fan. A central furnace equipped with a booster fan that does not materially restrict free circulation of air by gravity flow when such a fan is not in operation.

3.2.46.8 Furnace, Central Warm-Air, Gravity Type with Integral Fan. A central furnace equipped with a fan as an integral part of its construction and operable on gravity systems only. The fan is used only to overcome the internal resistance to airflow.

3.2.47 Furnace, Combination-Fuel. A single furnace unit designed to burn more than one type of fuel (gas, oil, or solid), either separately or simultaneously, using either separate or common combustion chambers and flues.

3.2.48 Furnace, Duct. A central furnace designed for installation in a duct of an air distribution system to supply warm air for heating and that depends on a blower not furnished as part of the furnace for air circulation.

3.2.49 Furnace, Floor. A self-contained indirect-fired or electrically heated furnace designed to be suspended from the floor of the space to be heated. A fuel-burning floor furnace is designed to take air for combustion from outside the space being heated and is provided with means for observing the flame and lighting the appliance from such space.

3.2.49.1 Furnace, Floor, Fan-Type. A floor furnace equipped with a blower that provides the primary means for circulation of air.

3.2.49.2 Furnace, Floor, Gravity-Type. A floor furnace depending primarily on circulation of air by gravity. This classification also includes floor furnaces equipped with booster-type fans that do not materially restrict free circulation of air by gravity flow when such fans are not in operation.

3.2.50 Furnace, Supplementary. A furnace designed to burn one type of fuel (gas, oil, or solid) that is intended for supplementing a central warm-air furnace burning another type of fuel (gas, oil, or solid) by means of a common warm-air supply plenum.

3.2.51* Gas Appliance Categories. Vented gas appliances are classified for venting purposes into four categories as follows: (1) Category I — An appliance that operates with a non-positive vent static pressure and with a vent gas temperature that avoids excessive condensate production in the vent; (2) Category II — An appliance that operates with a non-positive vent static pressure and with a vent gas temperature that may cause excessive condensate production in the vent; (3) Category III — An appliance that operates with a positive vent static pressure and with a vent gas temperature that avoids excessive condensate production in the vent; (4) Category IV — An appliance that operates with a positive vent static pressure and with a vent gas temperature that may cause excessive condensate production in the vent.

3.2.52 Gas Vent. See 3.2.90, Vent; 3.2.90.1, Vent, Gas.

3.2.53 Header. Where referring to chimneys, a beam set at right angles to floor or roof joists to provide support and framing around the opening.

3.2.54 Hearth. The floor area within the fire chamber of a fireplace or a fireplace stove.

3.2.55 Hearth Extension. The noncombustible surfacing applied to the floor area extending in front of and at the sides of the hearth opening of a fireplace or a fireplace stove; also where applied to the floor area beneath a fireplace stove or beneath an elevated overhanging fireplace hearth.

3.2.56 Heat Exchanger. A chamber in which heat resulting directly from the combustion of fuel, or heat from a medium such as air, water, or steam, is transferred through the walls of the chamber to air passing through the exchanger; or a chamber in which heat from electric resistors is transferred to the air.

3.2.57 Heat-Producing Appliance. An appliance that produces heat by utilizing electric energy or by burning fuel.

3.2.58 Heat Reclaimer, Chimney Connector-Type. A heat exchanger intended to be installed in a chimney connector between a heating appliance and the chimney to transfer heat from the flue gases through metal to air or water.

3.2.59 Incinerator. An appliance or combustion chamber for the reduction, by burning, of rubbish, garbage, and other wastes.

3.2.59.1 Incinerator, Chute-Fed (Class IIA). An incinerator designed specifically to be fed refuse from one or more floors above the incinerator directly into the incinerator by a separate chute constructed with a positive means to avoid penetration by smoke or fumes and connected directly over the primary combustion chamber. The incinerator is built with a primary and secondary combustion chamber and a settling chamber. It can include a flue gas washer or scrubber. A separate chimney serves to convey the combustion gases to the outdoors. This class of incinerator is suitable for Type I and Type 2 wastes. It generally is used in residential and institutional buildings, including apartments, clubs, dormitories, churches, schools, and other occupancies where Type I and Type 2 wastes are to be incinerated.

3.2.59.2 Incinerator, Commercial-Industrial-Type (Classes III, IV, V, VI, VII). An incinerator having a charging capacity in excess of 5 ft³ (0.142 m³) and suitable for a variety of wastes as follows: (1) Class III — Waste Type 0, Type 1, or Type 2; (2) Class IV — Waste Type 3; (3) Class V — Waste Types 4-6 (municipal incinerators); (4) Class VI — Waste Type 4; (5) Class VII — Waste Types 5 and 6.

3.2.59.3 Incinerator, Flue-Fed (Class II). An incinerator served by a single chimney flue that serves also as the charging chute, where refuse is fed directly to the incinerator through this chimney flue from one or more floors above the incinerator. This class of incinerator is suitable for Type 1 and Type 2 waste materials and garbage incidental to residential occupancy in single and multifamily buildings. This class of incinerator is generally used in residential and institutional buildings, including apartments, clubs, dormitories, churches, schools, and other occupancies where Type I and Type 2 wastes are to be incinerated.

3.2.59.4 Incinerator, Residential-Type. An incinerator for the burning of ordinary combustible waste material and garbage (Type 2 waste) incidental to residential occupancy and having a firebox or charging compartment not greater than 5 ft³ (0.142 m³) in capacity. Residential-type incinerators can be self-contained, factory-built units that do not necessitate field construction, or can be of a built-in type designed to be encased in masonry or installed in a masonry wall or chimney.

3.2.60 Lintel, Masonry Fireplace. The horizontal, noncombustible member, usually of masonry or steel, spanning the opening of a masonry fireplace to support the load above.

3.2.61 Mantel. A shelf or facing ornament above a fireplace opening.

3.2.62 Manufacturer. The person or persons, company, firm, corporation, partnership, or other organization responsible for turning raw materials or components into a finished product.

3.2.63 Masonry Unit, Solid. A masonry unit whose net cross-sectional area in every plane parallel to the bearing surface is 75 percent or more of its gross cross-sectional area measured in the same plane.

3.2.64 Non-Accessible, Concealed (for Inspections). Not capable of being exposed for inspection, maintenance, or repair without damage to the chimney or building structure or finish, or without the use of special tools.

3.2.65 Noncombustible Material. A material that, in the form in which it is used and under the conditions anticipated, does not ignite, burn, support combustion, or release flammable vapors, when subjected to fire or heat. Materials that are reported as passing ASTM E 136, Standard Test Method for Behavior of Materials in a Vertical Tube Furnace at 750°C, shall be considered noncombustible materials.

3.2.66 Pellet Fuel. A solid processed fuel of specified size and composition capable of being fed to the appliance combustion system at a controlled rate.

3.2.67 Pellet Fuel-Burning Appliance. A closed combustion pellet vent or chimney-connected solid pellet fuel-burning appliance incorporating a fuel-feed control mechanism.

3.2.68 Pellet Vent. See 3.2.90, Vent.

3.2.69 Qualified Agency. Any individual, firm, corporation, or company that, either in person or through a representative, is engaged in and is responsible for the connection, venting, installation, inspection, repair, or servicing of...
heat-producing appliances and who is experienced in such work, is familiar with all precautions required, and has complied with all the requirements of the authority having jurisdiction.

3.2.70 Range. An appliance intended primarily for cooking, including roasting, baking, or broiling or any combination of these functions.

3.2.70.1 Range, Built-in Residential-Type. A range designed to be recessed into, placed upon, or attached to counters, cabinets, walls, or partitions.

3.2.70.2 Range, Bungalow Utility-Type. A range having an additional section for gas, liquid, or solid fuel that is designed for space heating and heating a solid top section but not for oven heating.

3.2.70.3 Range, Residential-Type. A range intended primarily for residential cooking purposes.

3.2.70.4 Range, Restaurant-Type. A range of the type designed for use primarily in restaurant and hotel kitchens.

3.2.70.5 Range, Room Heater-Type. A range having a separate room heater section.

3.2.71 Roof Jack. A factory-built assembly for conveying flue gases through a roof and that includes a flue gas passageway, an insulating means, flashing, and a cap.

3.2.72 Room Heater. A heating appliance intended for installation in the space being heated and not intended for duct connection.

3.2.72.1 Room Heater, Circulating. A room heater with an outer jacket surrounding the heat exchanger, arranged with openings at top and bottom so that air circulates between the heat exchanger and the outer jacket. Room heaters that have openings in an outer jacket to allow some direct radiation from the heat exchanger are classified as a radiant type.

3.2.72.2 Room Heater, Radiant. A room heater designed to transfer heat primarily by direct radiation.

3.2.72.3 Room Heater, Solid Fuel. A chimney-connected, solid fuel-burning room heater that is designed to be operated with the fire chamber closed.

3.2.73 Room Heater/Fireplace Stove, Combination. A chimney-connected, solid fuel-burning room heater that is designed to be operated with the fire chamber either open or closed.

3.2.74 Room Large in Comparison with the Size of the Appliance. A room having a volume equal to at least 12 times the total volume of a furnace and at least 16 times the total volume of a boiler. The total volume of the furnace or boiler is determined from the exterior dimensions and is to include a fan compartment and burner vestibule, where used. Where the actual ceiling height of a room is greater than 8 ft. (2.44 m), the volume of the room is to be figured on the basis of a ceiling height of 8 ft. (2.44 m).

3.2.75 Smoke Chamber. The transitional area from the damper opening to the beginning of the flue liner in a fireplace system.


3.2.77 Smoke Test. A procedure for ascertaining the tightness of a chimney and for detecting any cracks in a masonry chimney flue or deterioration or breaks in the integrity of a factory-built or metal chimney flue, and that involves igniting a smoke bomb or building a smoky fire in a fireplace or solid fuel-burning appliance, covering the chimney termination, and checking for smoke escapeage through the chimney walls.

3.2.78 Solid Fuel. Wood, coal, and other similar organic materials and any combination of them.

3.2.79 Solid Fuel-Burning Appliance. A chimney-connected device that burns solid fuel designed for purposes of heating, cooking, or both.

3.2.80 Solid Masonry Construction. A bonded assembly of stones or solid masonry units.

3.2.81 Spark Arresters. Screening material or a screening device attached to a chimney termination to prevent the passage of sparks and brands to the outside atmosphere.

3.2.82 Splay. See 3.2.99, Wash.

3.2.83 Steel Fireplace Unit. A unit consisting of a steel firebox and an air chamber adjacent to the sides and rear of the firebox, used to construct a masonry fireplace. The unit usually has ducts to circulate air to and heated air from the air chamber to the living space.

3.2.84 Thimble. A fixed or removable ring, tube, or lining usually located in the hole where the chimney connector or vent connector passes through a wall or enters a chimney or vent.

3.2.85 Trimmer. Where referring to chimneys, the longer floor or roof framing member around a rectangular opening into which the end of a header is joined.

3.2.86 Type B Gas Vent. See 3.2.90, Vent; 3.2.90.1, Gas Vent.

3.2.87 Type BW Gas Vent. See 3.2.90, Vent; 3.2.90.1, Vent, Gas.

3.2.88 Type I. Vent. See 3.2.90, Vent.

3.2.89 Unit Heater. A self-contained heating appliance that might or might not include an integral fan for circulating air and that can be of the floor-mounted or suspended type that is intended for the heating of the space in which it is installed. A unit heater can be an indirect-fired fuel-burning appliance or might utilize steam, hot water, or electricity.

3.2.90 Vent. A flue gas conveying system intended for use only with certain gas, liquid, or pellet fuel fired appliances that do not produce flue gas outlet temperatures higher than a value specified in the listing vent standards.

3.2.90.1 Vent, Gas. A passageway composed of listed, factory-built components assembled in accordance with the terms of listing for conveying flue gases from gas appliances or the vent connectors to the outside atmosphere.

3.2.90.2 Vent, Gas, Type B. A vertical or nearly vertical gas vent for venting listed gas appliances with draft hoods and other Category I gas appliances listed for use with Type B gas vents.

3.2.90.3 Vent, Gas, Type BW. A vertical or nearly vertical gas vent for venting listed gas-fired vented wall furnaces.

3.2.90.4 Vent, Gas, Special. A gas vent for venting listed Category II, III, and IV gas appliances.

3.2.90.5 Vent, Pellet. A venting system composed of listed, factory-built components assembled in accordance with the manufacturer’s instructions for conveying flue gases from a listed pellet fuel-burning appliance to the outside atmosphere.

3.2.90.6 Vent, Type I. A vertical or nearly vertical composed of listed factory-built components assembled in accordance with the terms of listing for conveying flue gases from oil and gas appliances or their vent connectors to the outside atmosphere.

3.2.91 Vent Cap. A protective covering or housing attached to the vent termination, intended for preventing downdrafts and the entry of rain, snow, and animals.

3.2.92 Vent Connector. The pipe that connects a fuel-burning appliance to a gas vent or Type I vent.

3.2.93 Vent Gases. Products of combustion from fuel-burning appliances along with excess air, plus any dilution air in the venting system above a draft hood or draft regulator.

3.2.94 Vented Appliance. An indirect-fired appliance provided with a flue collar to accommodate a venting system for conveying flue gases to the outer air.

3.2.95 Venting. Removal of combustion products as well as noxious or toxic fumes to the outer air.

3.2.96 Venting System (Flue Gases). A continuous, open passageway from the flue collar or draft hood of a fuel-burning appliance to the outside atmosphere for the purpose of removing flue gases.

3.2.96.1 Venting System (Flue Gases), Natural Draft. Draft produced by the difference in the weight of a column of flue gases within a chimney or vent and a corresponding column of air of equal dimension outside the chimney or vent.

3.2.96.2 Venting System (Flue Gases), Mechanical Draft. Draft produced by a fan or an air or steam jet. When a fan is located so as to push the flue gases through the chimney or vent, the draft is forced. When the fan is located so as to pull the flue gases through the chimney or vent, the draft is forced.
induced.

3.2.97 Wall Furnace. A self-contained, vented appliance complete with grilles or equivalent, designed for incorporation or permanent attachment to the structure of a building, manufactured home, or recreational vehicle, and furnishing heated air directly into the space to be heated through openings in the casing. Such appliances should not be provided with duct extensions beyond the vertical and horizontal limits of the casing proper, except that boots not exceeding 10 in. (254 mm) beyond the horizontal of the casing for extension through walls of nominal thickness can be used. Where provided, such boots should be supplied by the manufacturer as an integral part of the appliance. This definition excludes floor furnaces, unit heaters, and central furnaces.

3.2.97.1 Wall Furnace, Fan-Type. A wall furnace equipped with a fan for the circulation of air.

3.2.97.2 Wall Furnace, Gravity-Type. A wall furnace dependent on the circulation of air by gravity.

3.2.98 Wall Protector (Shield). Noncombustible surfacing applied to a wall area for the purpose of reducing the clearance between the wall and a heat-producing appliance.

3.2.99 Wash. A slight slope or beveled edge on the top surface of a chimney designed to shed water away from the flue liner.

3.100 Water Heater. An indirect-fired fuel-burning or electrically heated appliance for heating water to a temperature not more than 200°F (93°C), having an input not greater than 200,000 Btu or (58.6 kW/hr), and a water-containing capacity not exceeding 120 U.S. gal (454 L).

3.101 Wythe. Where referring to masonry chimneys, a course, a thickness, or a continuous vertical section of masonry separating flues in a chimney. SUBSTANTIATION: Editorially revise chapter to comply with NFPA Manual of Style. This is an editorial revision only, no technical changes occur in this proposal. Technical changes have been made by other proposals. Comments on technical revisions should be addressed to the appropriate proposal.

COMMITTEE ACTION: Accept NUMBER OF COMMITTEE MEMBERS ELIGIBLE TO VOTE: 14 VOTE ON COMMITTEE ACTION: AFFIRMATIVE: 9 NOT RETURNED: 5 Rucker, Grisack, Schulz, Shiver, and Stone (Log #35)

211-19-(Chapter 4) : Accept SUBMITTER: Technical Committee on Chimneys, Fireplaces, and Venting Systems for Heat Producing Appliances. RECOMMENDATION: Revise text to read as follows: Chapter 4 General Requirements

4.1* Sizing and Draft.

4.1.1 Minimum Performance. A chimney or vent shall be so designed and constructed to develop a flow sufficient to remove completely all flue or vent gases to the outside atmosphere.

4.1.1.1 Chimneys or vents shall be evaluated to ensure proper performance with respect to draft, creosote buildup, and condensation.

4.1.1.2 The venting system shall satisfy the draft requirements of the connected appliance(s) in accordance with the manufacturers’ instructions or approved methods.

4.1.2 Mechanical Draft Systems. A listed mechanical draft system of either forced or induced draft design shall be permitted to be used to increase draft or capacity.

4.1.2.1 Where a mechanical draft system is installed, provision shall be made to prevent the flow of fuel to an automatically fired appliance(s) when that system is not operating.

4.1.2.2 Effect on Other Equipment. The operation of a mechanical draft system shall not adversely affect the performance or safety of, or cause spillage of combustion products from, other combustion equipment operating in the same building.

4.1.2.3 Proper performance and safety of other combustion equipment shall be verified by testing prior to putting the mechanical draft system into service.

4.1.2.4 Such testing shall include operation of the mechanical draft system together with other exhaust equipment likely to operate simultaneously.

4.1.2.5 Manually Fired Appliances. Mechanical draft systems of either forced or induced draft shall not serve serving manually fired appliances shall be one of the following:

- Exception No. 1: A mechanical draft system that is an integral part of a listed appliance or.

- Exception No. 2: (1) A solid-sold fuel cooking appliances as addressed in NFPA 96, Standard for Ventilation Control and Fire Protection of Commercial Cooking Operations or.

- Exception No. 3: (2) Engineered mechanical draft systems that include the following provisions:
  (a) The following detection and warning devices shall be installed and line voltage devices when installed, shall be provided with a battery backup system:
    (1) A device that produces an audible and visible warning upon failure of the mechanical draft system shall be installed. The device shall be activated by both loss of electrical power supply or by operational failure of the mechanical draft system, at any time while the mechanical draft system is switched on.
    (2) A smoke detector and alarm shall be installed and maintained in accordance with NFPA 72, National Fire Alarm Code®. The detector shall be installed in the same room as the appliance served by the mechanical draft system.
  (3) A listed carbon monoxide warning device shall be installed in accordance with the manufacturers’ instructions.

- (b) The mechanical draft system shall be listed in accordance with UL 378, Draft Equipment, for use with the type of appliance and range of chimney service appropriate for the application. The mechanical draft system shall not cause or permit blockage of the flue or electrical hazard after exposure to a chimney fire or over fire conditions. The mechanical draft system shall be installed in accordance with the terms of the listing and the manufacturers’ instructions.

- (c) The mechanical draft system shall be sized to maintain draft within the range specified by the appliance manufacturer.

4.1.3 Natural Draft Sizing. Chimneys serving incinerators, or other process equipment where the combustion process cannot be stopped completely by fuel shutoff alone, shall be sized for natural draft conditions.
4.1.3.1 Where air pollution control devices or other devices in the chimney system require a mechanical draft system, the chimney system shall be so arranged that, upon a power failure, the natural draft chimney alone can satisfactorily remove the products of combustion until the combustible material is completely consumed.

4.1.4 Forced/Induced Draft Systems. Forced draft systems and all portions of induced draft systems under positive pressure during operation shall be designed and installed to be gastight or to prevent the leakage of combustion products into a building.

4.1.5 Natural Draft Vent Connectors. Vent connectors serving appliances vented by natural draft shall not be connected into any portion of mechanical draft systems operating under positive pressure.

4.2 Termination (Height). Chimneys and vents shall terminate above the roof level in accordance with the requirements of this standard and as illustrated in Figures 1-8(a) and (b).

4.2.1 Unless permitted elsewhere in this standard, masonry chimneys shall: (1) extend above the highest point at which they pass through the roof of a building by at least the distance specified in Table 4.2, column VI, and (2) above any portion of any structure by at least the distance specified in Table 4.2, column VII, measured horizontally from the vertical chimney line. (See 8.2.1 Exception, 10.4 and 10.7)

Exception: As provided in 5-2.1, Exception, Section 7-4, and Section 7-7.

4.2.2 Unless permitted elsewhere in this standard, natural draft chimneys and vents shall not terminate at an elevation less than 5 ft. (1.53 m) above the flue collar or the highest connected draft hood outlet. (See Section 10.7)

Exception: As provided in Section 7-7.

Figure 1-8(a) Chimney or vent termination [less than 10 ft. (3.1 m)].

Figure 1-8(b) Chimney or vent termination [more than 10 ft. (3.1 m)].

4.3 Enclosure.

4.3.1 General. Interior residential chimneys shall be enclosed where they extend through closets, storage areas, or habitable spaces where the surface of the chimney could be contacted by persons or combustible materials.

4.3.2 Clearance. The space between the chimney and the enclosure shall be at least the minimum air space clearance specified in this standard (see Table 4-2) or the clearance specified in the manufacturer's instructions for listed chimneys.

4.4 Flue Lining.

4.4.1 Resistance Equivalency. Castable or plastic refractories used to line chimneys or connectors shall be the equivalent in resistance to heat and erosion by flue gases to that of the fireclay brick that would otherwise be specified.

4.4.2 Lining Support. Lining made of castable or plastic refractories shall be secured to the supporting walls by anchors made of corrosion-resistant stainless steel capable of supporting the refractory load at 1500°F (816°C).

4.4.3 Space Surrounding Liner or Vent. The remaining space surrounding a chimney liner, gas vent, special gas vent, or plastic piping installed within a chimney flue shall not be used to vent another appliance.

4.5 Caps and Spark Arresters for Chimneys and Vents.

4.5.1 Design. Chimney or vent caps, where required for the termination of chimneys or vents, shall be designed to prevent the entry of rain, snow, and animals, including birds.

4.5.2 Screening. Screening material attached to chimney or vent caps to prevent the entry of animals and insects shall not adversely affect the chimney or vent draft.

4.5.3 Spark Arresters. Spark arresters, where required by the authority having jurisdiction for chimneys attached to solid fuel-burning equipment, shall meet the following requirements: (1) The net-free area of the arrester shall be not less than four times the net-free area of the outlet of the chimney flue it serves.

(2) The arrester screen shall have heat and corrosion resistance equivalent to 19-gauge [0.041 in. (0.14 mm)] galvanized steel or 24-gauge [0.024 in. (0.61 mm)] stainless steel.

(3) Openings shall not allow the passage of spheres having a diameter larger than 1/2 in. (12.7 mm) or block the passage of spheres having a diameter of less than 3/8 in. (9.5 mm).

4.5.4 Chimney Caps. Chimney caps or connectors shall be the equivalent in resistance to heat and shall be secured to the supporting walls by anchors made of corrosion-resistant materials.

4.6 Enclosure of Terminals.

4.6.1 Chimney Collars. Chimney collars shall be designed to prevent the entry of rain, snow, and animals, including birds. A 5-inch or 6-inch thimble opening is not adequate for cleaning a chimney flue. When a 6 to 8 foot area of chimney is available under the flue entrance you cannot adequately clean that area with a vacuum hose. Keeping in mind that this is a construction standard.

COMMITTEE ACTION: Accept in Principle

SUBMITTER: Anne Head, State of Maine, Department of Professional & Financial Regulations

RECOMMENDATION: Revise text as follows:

4.1.4.1 Cleanout openings or a means for cleaning shall be provided in all chimney flues. Cleanout openings shall be equipped with ferrous metal, precast cement, or other approved noncombustible doors and frames arranged to remain tightly closed and secured when not in use.

SUBSTANTIATION: A 5-inch or 6-inch thimble opening is not adequate for cleaning a chimney flue. When a 6 to 8 foot area of chimney is available under the flue entrance you cannot adequately clean that area with a vacuum hose. Keeping in mind that this is a construction standard.

COMMITTEE ACTION: Accept in Principle

Revise text to read as follows: 4.1.4 Cleanout Openings.

4.1.4.1 Cleanout openings or a means for cleaning shall be provided in all chimney flues serving free-standing appliances. Cleanout openings shall be equipped with ferrous metal, stainless steel, precast cement, or other approved noncombustible doors and frames arranged to remain tightly closed and secured when not in use.

COMMITTEE STATEMENT: The committee agrees with the submitter that this is a beneficial addition to the standard and will assist in the cleaning and inspection of chimneys. However it is necessary to further clarify that this provision is not meant for fireplaces.

NUMBER OF COMMITTEE MEMBERS ELIGIBLE TO VOTE: 14

VOTE ON COMMITTEE ACTION:

AFFIRMATIVE: 9

NOT RETURNED: 5 Rucker, Grisack, Schulz, Shiver, and Stone

4.7 Enclosure of Terminals.

4.7.1 chimney Collars. Chimney collars shall be designed to prevent the entry of rain, snow, and animals, including birds. A 5-inch or 6-inch thimble opening is not adequate for cleaning a chimney flue. When a 6 to 8 foot area of chimney is available under the flue entrance you cannot adequately clean that area with a vacuum hose. Keeping in mind that this is a construction standard.

COMMITTEE ACTION: Accept in Principle

SUBMITTER: Anne Head, State of Maine, Department of Professional & Financial Regulations

RECOMMENDATION: Revise text as follows:

4.1.6.1 Firestopping and the chimney/fireplace material. This could allow fire to travel from one chimney to another. The metal chimney/cap and other material used in construction. We have observed many chimney/fireplace because of the different size blocks, bricks, rocks and other material used in construction. We have observed many chimney/fireplace installation and have found large gaps between the metal firestopping and the chimney/fireplace material. This could allow fire to travel from one chimney to another. The metal chimney/cap and other material used in construction.

COMMITTEE STATEMENT: The committee agrees with the submitter that this is a beneficial addition to the standard and will assist in the cleaning and inspection of chimneys. However it is necessary to further clarify that this provision is not meant for fireplaces.

NUMBER OF COMMITTEE MEMBERS ELIGIBLE TO VOTE: 14

VOTE ON COMMITTEE ACTION:

AFFIRMATIVE: 9

NOT RETURNED: 5 Rucker, Grisack, Schulz, Shiver, and Stone

4.8 Vent Collars or Draft Hoods or Draft Collars. Vent collars or draft hoods or draft collars of the outlet of the chimney flue it serves.

4.9.1 The net-free area of the arrester shall be not less than four times the net-free area of the outlet of the chimney flue it serves.

(2) The arrester screen shall have heat and corrosion resistance equivalent to 19-gauge [0.041 in. (0.14 mm)] galvanized steel or 24-gauge [0.024 in. (0.61 mm)] stainless steel.

(3) Openings shall not allow the passage of spheres having a diameter larger than 1/2 in. (12.7 mm) or block the passage of spheres having a diameter of less than 3/8 in. (9.5 mm).

(4) The spark screen shall be accessible for cleaning, and the screen or chimney cap shall be removable to allow for cleaning of the chimney flue.

4.9.3 Spark Arresters. Spark arresters shall be installed and shall be constructed in accordance with the listing.

SUBSTANTIATION: Editorial review with the NFPA Manual of Style. This is an editorial revision only no technical changes occur in this proposal. Technical changes have been made by other proposals. Comments on technical revisions should be addressed to the appropriate proposal.

COMMITTEE ACTION: Accept

NUMBER OF COMMITTEE MEMBERS ELIGIBLE TO VOTE: 14

VOTE ON COMMITTEE ACTION:

AFFIRMATIVE: 9

NOT RETURNED: 5 Rucker, Grisack, Schulz, Shiver, and Stone

4.10.1 Chimney or vent termination (less than 10 ft. (3.1 m)].

4.10.2 Chimney or vent termination (more than 10 ft. (3.1 m)].

4.11 Enclosure.

4.11.1 General. Interior residential chimneys shall be enclosed where they extend through closets, storage areas, or habitable spaces where the surface of the chimney could be contacted by persons or combustible materials.

4.11.2 Clearance. The space between the chimney and the enclosure shall be at least the minimum air space clearance specified in this standard (see Table 4-2) or the clearance specified in the manufacturer's instructions for listed chimneys.

4.12 Flue Lining.

4.12.1 Resistance Equivalency. Castable or plastic refractories used to line chimneys or connectors shall be the equivalent in resistance to heat and erosion by flue gases to that of the fireclay brick that would otherwise be specified.

4.12.2 Lining Support. Lining made of castable or plastic refractories shall be secured to the supporting walls by anchors made of corrosion-resistant stainless steel capable of supporting the refractory load at 1500°F (816°C).

4.12.3 Space Surrounding Liner or Vent. The remaining space surrounding a chimney liner, gas vent, special gas vent, or plastic piping installed within a chimney flue shall not be used to vent another appliance.

4.13 Caps and Spark Arresters for Chimneys and Vents.

4.13.1 Design. Chimney or vent caps, where required for the termination of chimneys or vents, shall be designed to prevent the entry of rain, snow, and animals, including birds.

4.13.2 Screening. Screening material attached to chimney or vent caps to prevent the entry of animals and insects shall not adversely affect the chimney or vent draft.

4.13.3 Spark Arresters. Spark arresters, where required by the authority having jurisdiction for chimneys attached to solid fuel-burning equipment, shall meet the following requirements: (1) The net-free area of the arrester shall be not less than four times the net-free area of the outlet of the chimney flue it serves.

(2) The arrester screen shall have heat and corrosion resistance equivalent to 19-gauge [0.041 in. (0.14 mm)] galvanized steel or 24-gauge [0.024 in. (0.61 mm)] stainless steel.

(3) Openings shall not allow the passage of spheres having a diameter larger than 1/2 in. (12.7 mm) or block the passage of spheres having a diameter of less than 3/8 in. (9.5 mm).
5.2.1 Chimney Selection Chart

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5.2.2 Chimney Selection Chart

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5.2.3 Vents. A vent shall be used only where appliances are listed for use with a vent.

5.2.3.1 The vent type shall be selected according to Table 5.2.2.

Figure 5.2.2(a) Masonry chimney. [Existing Figure 2.1(b)]

Figure 5.2.2(c) A typical unlisted metal chimney installation in a commercial or industrial application. [Existing Figure 2.1(c)]

Figure 5.2.2(d) Masonry chimney. [Existing Figure 2.1(b)]

5.2.2.1 Unlisted metal chimneys are not suitable for shall not be installed in one- and two-family dwellings.

Substantiation

5.2.3.1 The vent type shall be selected according to Table 5.2.2.

Note 2: See 7.1.1 for single wall chimney or unlisted metal chimneys for prohibition inside or outside one- and two-family dwellings.

Delete Notes 4 and 5

Substantiation: Editorially revise chapter to comply with NFPA Manual of Style. This is an editorial revision only no technical changes occur in this proposal. Technical changes have been made by other proposals. Comments on technical revisions should be addressed to the appropriate proposal.

Committee Action: Accept

Number of Committee Members Eligible to Vote: 14

Vote on Committee Action:

Affirmative: 9

Not Returned: 5 Rucker, Grisack, Schulz, Shiver, and Stone
insulation around an unlisted metal chimney. Placing insulation around such may result in deterioration of the metal chimney system going undetected. Such insulation may also play a factor in such deterioration. Separate shielding would be more appropriate.

As an alternate the Exception should perhaps be deleted completely.

COMMITTEE ACTION: Reject

COMMITTEE STATEMENT: See Committee Action taken on Chapter 8, Proposal 211-38 (Log #CP11).

NUMBER OF COMMITTEE MEMBERS ELIGIBLE TO VOTE: 14
VOTE ON COMMITTEE ACTION:
AFFIRMATIVE: 9
NOT RETURNED: 5 Rucker, Grisack, Schulz, Shiver, and Stone

(Proposals and Amendments)

211-28-(5.4.3) : Accept
SUBMITTER: Glen Edgar, Selkirk Inc.
RECOMMENDATION: Delete entire paragraph.

(Proposals and Amendments)

211-29-(Chapter 6) : Accept
SUBMITTER: Technical Committee on Chimneys, Fireplaces, and Venting Systems for Heat Producing Appliances.
RECOMMENDATION: Revise text to read as follows:
Chapter 6 Factory-Built Chimneys and Chimney Units

6.1 Type and Installation.
6.1.1 Factory-built chimneys and chimney units shall be listed and installed in accordance with the temperature and pressure conditions of the listing and the manufacturer's instructions.
6.1.2 Gas temperatures and static pressures within the chimney shall not exceed the limits during testing.
6.1.3 Listing Requirements.
6.1.3.1 Factory-built chimneys for use with wood-burning appliances shall comply with the Type HT requirements of UL 103, Standard for Safety Chimneys, Factory-Built, Residential Type and Building Heating Appliance, or the requirements of CAN/ULC-S629-M87, Standard for 650°C Factory-Built Chimney Systems for Solid Fuel-Burning Appliances.
6.1.3.2 Exception No. 1: Chimneys for factory-built fireplaces shall be permitted to meet the requirements of UL 127, Standard for Safety Factory-Built Fireplaces.
6.1.3.3 Exception No. 2: Freestanding open combustion chamber fireplace stoves listed only to UL 737, Standard for Safety Fireplace Stoves, shall be permitted to use residential-type and building heating appliance chimneys.
6.1.3.4 Exception No. 3: Engineered appliance-venting systems that have been designed to operate without producing combustible deposits to the venting system shall be installed in accordance with the conditions of their listing and the manufacturer's instructions.
6.1.4 Enclosures. Factory-built chimneys that pass through floors of buildings requiring the protection of vertical openings shall be encased with approved walls having a fire resistance rating of not less than 1 hour where such chimneys are located in a building less than four stories in height, and not less than 2 hours where such chimneys are located in a building four or more stories in height.

6.1.5 Decorative Shrouds. Only Decorative shrouds listed for use with the specific factory-built chimney system shall be permitted. Use. Factory-built chimneys shall be permitted to be used for heat systems and ducting from hoods, industrial ovens, furnaces, and process equipment of any temperature classification (see Table 5.2.1), provided the system is engineered so that gas temperatures and pressures do not exceed the applicable limit for the type of chimney.

6.3 Sizing. Factory-built chimneys shall be sized and configured in accordance with the appliance and chimney manufacturers’ instructions or approved methods.

SUBSTANTIATION: Editorially revise chapter to comply with NFPA Manual of Style. This is an editorial revision only no technical changes occur in this proposal. Technical changes have been made by other proposals. Comments on technical revisions should be addressed to the appropriate proposal.

COMMITTEE ACTION: Accept
NUMBER OF COMMITTEE MEMBERS ELIGIBLE TO VOTE: 14
VOTE ON COMMITTEE ACTION:
AFFIRMATIVE: 9
NOT RETURNED: 5 Rucker, Grisack, Schulz, Shiver, and Stone

(Proposals and Amendments)

211-30-(6.2.1) : Accept
SUBMITTER: Glen Edgar, Selkirk Inc.
RECOMMENDATION: Change statement so that it reads:
“Connectors shall be made of noncombustible, corrosion-resistant material capable of withstanding the flue gas condensate, pressures and temperatures produced by the appliances and shall be of sufficient thickness to withstand physical damage.”

SUBSTANTIATION: Connectors also needed to be able to withstand internal pressures as well; especially positive internal pressure which could allow outward leakage of products of combustion.

COMMITTEE ACTION: Accept
NUMBER OF COMMITTEE MEMBERS ELIGIBLE TO VOTE: 14
VOTE ON COMMITTEE ACTION:
AFFIRMATIVE: 9
NOT RETURNED: 5 Rucker, Grisack, Schulz, Shiver, and Stone

(Proposals and Amendments)

211-31-(6.2.2.2) : Accept in Principle
SUBMITTER: John J. Filger, Chief Chimney Services, Inc.
RECOMMENDATION: Revised wording for 6.2.2.2:
“Where reduced clearance is necessary, listed reduced clearance connectors may be used if they are installed in accordance with the manufacturer’s installation instructions.

SUBSTANTIATION: Many existing oil appliance installations do not meet the chimney connector clearance to combustibles as stated in Table 6.5.1.1 Chimney Connector and Vent Connector Clearances from Combustible Materials.

COMMITTEE ACTION: Accept in Principle
SUBSTANTIATION: Edited wording by adding text as follows:
“Where reduced clearance is necessary, listed reduced clearance connectors may be used if they are installed in accordance with the manufacturer’s installation instructions.

COMMITTEE STATEMENT: Adding the word “clearance” more accurately identifies the purpose of these components.

COMMITTEE ACTION: Accept
NUMBER OF COMMITTEE MEMBERS ELIGIBLE TO VOTE: 14
VOTE ON COMMITTEE ACTION:
AFFIRMATIVE: 9
NOT RETURNED: 5 Rucker, Grisack, Schulz, Shiver, and Stone

(Proposals and Amendments)

211-32-(6.2.2.2) : Accept
SUBMITTER: Technical Committee on Chimneys, Fireplaces, and Venting Systems for Heat Producing Appliances.
RECOMMENDATION: Add the words “and chimney” after “listed vent”.

SUBSTANTIATION: Clarifies that this section is intended for chimney connectors as well.

COMMITTEE ACTION: Accept
NUMBER OF COMMITTEE MEMBERS ELIGIBLE TO VOTE: 14
VOTE ON COMMITTEE ACTION:
AFFIRMATIVE: 9
NOT RETURNED: 5 Rucker, Grisack, Schulz, Shiver, and Stone

(Proposals and Amendments)

211-33-(6.2.2.3 and Table 6-2.2.3, 6-2.3) : Accept
SUBMITTER: Technical Committee on Chimneys, Fireplaces, and Venting Systems for Heat Producing Appliances.
RECOMMENDATION: Delete “galvanized” in 6.2.2.3 and in the table 6.2.2.3.

SUBSTANTIATION: Not necessary for “galvanized” to be use in this requirement.

COMMITTEE ACTION: Accept
NUMBER OF COMMITTEE MEMBERS ELIGIBLE TO VOTE: 14
VOTE ON COMMITTEE ACTION:
AFFIRMATIVE: 9
NOT RETURNED: 5 Rucker, Grisack, Schulz, Shiver, and Stone

(Proposals and Amendments)

211-34-(Chapter 7) : Accept
SUBMITTER: Technical Committee on Chimneys, Fireplaces, and Venting Systems for Heat Producing Appliances.
RECOMMENDATION: Revise text to read as follows:
Chapter 7 Masonry Chimneys

7.1 General Requirements.
7.1 Support. Masonry chimneys shall be supported on properly designed foundations of masonry or reinforced portland or refractory cement concrete or on noncombustible material having a fire resistance rating of not less than 3 hours. *7.1.1 Provided each support shall be independent of the building construction and with the load transferred to the ground. 7.1.2 Corbeling. Individual and maximum projections of corbels in masonry chimneys shall comply with the requirements of this section. [See Figures 7.1.2(a), (b), (c), and (d).] Exception: 7.1.2.1 Corbeling limitations shall be permitted to be varied for engineered reinforced brick masonry construction. Figure 7.1.2(a) Corbels for supporting chimneys. [Existing Figure 4.1.2(a)] Figure 7.1.2(b) Corbels to change chimney direction. [Existing Figure 4.1.2(b)] Figure 7.1.2(c) Corbels to increase chimney wall thickness. [Existing Figure 4.1.2(c)] Figure 7.1.2(d) Corbels to support flue lining. [Existing Figure 4.1.2(d)] 7.1.2.2 Corbels supporting any point within a masonry chimney shall not exceed one-half (1/2) the individual masonry unit height or one-third (1/3) the thickness. A chimney flue shall not change in size or shape within 6 in. (152 mm) in thickness to form a maximum total projection of not more than One-half (1/2) the wall thickness. Exception: 7.1.2.3 Masonry chimney support shall be permitted to be formed by corbeling from a wall that is not less than 12 in. (305 mm) in thickness to form a maximum total projection of not more than One-half (1/2) the wall thickness. 7.1.2.4 Corbeling used to change the direction of a masonry chimney shall have a maximum offset so that the centerline of the upper flue does not fall beyond the center of the lower flue wall. The cross-sectional area of the flue shall not be reduced throughout the offset. 7.1.2.5 Corbeling used to increase the chimney wall thickness shall have a maximum total projection that does not exceed the thickness of the chimney wall. 7.1.2.6 Corbeled or solid masonry shall be provided in masonry chimneys to support the entire perimeter of single or separated flue liners. Exception: 7.1.2.7 Where a flue is constructed of two flue liners without a separation, three sides of each flue liner shall be supported entirely on corbeled masonry. 7.1.2.8 Corbels shall be made with solid units, and, where corbels are located on the walls of hollow masonry units, there shall be not less than three courses of solid masonry units below the corbels. 7.1.3 Change in Size or Shape of Flue at Combustible Members Not Permitted. A chimney flue shall not change in size or shape within 6 in. (152 mm) above or below any point where the chimney passes through combustible floor, ceiling, or roof components. 7.1.4 Cleanout Openings. 7.1.4.1 Cleanout openings or a means for cleaning shall be provided in all chimney flues. 7.1.4.2 Cleanout openings shall be equipped with ferrous metal, precast cement, or other approved noncombustible doors and frames arranged to remain tightly closed and secured when not in use. 7.1.4.3 Interior Cleanout Openings. The lower edge of a cleanout opening inside a building shall be a minimum of 16 in. (406 mm) above the lowest accessible floor level. 7.1.4.4 Exterior Cleanout Openings. The lower edge of a cleanout opening located outside a building shall be a minimum of 16 in. (406 mm) above grade, provided the cleanout opening is below the lowest chimney connector entrance. 7.1.4.5 Cleanout doors shall be permanently marked with the following message: “DO NOT OBSTRUCT. KEEP COMBUSTIBLE MATERIAL AT LEAST 18 in. (457 mm) AWAY FROM THIS DOOR,” or equivalent. Exception: 7.1.4.6 Listed cleanout doors shall be installed in accordance with the terms of their listing and the manufacturer’s instructions. 7.1.5 Chimney Flue. 7.1.5.1 The base of the chimney flue shall start at a point at least 6 in. (152 mm) but not more than 12 in. (305 mm) below the bottom edge of the cleanout door opening. 7.1.5.2 Any space within the chimney below the level of the flue base shall be filled with noncombustible masonry material, mortar, concrete, or sand and topped with a wash or cap that prevents the entry of moisture or creosote. 7.1.6 Firestopping. 7.1.6.1 All spaces between chimneys and the floors and ceilings through which the chimneys pass shall remain fully open but shall be firestopped with noncombustible material. 7.1.6.2 The firestopping of spaces between chimneys and wood joists, beams, or headers shall be of galvanized steel not less than 26 gauge [0.019 in. (0.483 mm)] thick or of noncombustible sheet material not more than 1/2 in. (12.7 mm) thick. 7.1.7 Smoke Test. Masonry chimneys shall be proved tight by a smoke test after erection and before being put into use. 7.1.8 Structural Design. 7.1.8.1 Masonry chimneys shall be designed, anchored, supported, and reinforced as required in this standard. 7.1.8.2 A chimney shall not support any structural load other than its own weight, unless designed to act as a supporting member. 7.1.8.3 Chimney design shall consider seismic and wind loading. 7.1.8.4 Masonry chimneys shall be permitted to be constructed as part of the masonry or reinforced concrete walls of buildings. 7.1.9 Thimbles. 7.1.9.1 Thimbles for chimneys or vent connectors shall be of fireclay (ASTM C 315, Standard Specification for Clay Flue Linings), galvanized steel of a minimum thickness of 24 gauge [0.024 in. (0.61 mm)], or material of equivalent durability. 7.1.9.2 Thimbles shall be installed without damage to the liner. 7.1.9.3 The thimble shall extend through the wall to, but not beyond, the inner face of the liner and shall be cemented firmly to masonry. 7.1.9.2.4 Thimbles shall be located to provide adequate pitch or rise of chimney or vent connectors. 7.1.9.5 Where the ceiling above the appliance is constructed of combustible material, the location of the thimble shall provide the minimum clearance required for the connector as specified in Section 9.5. 7.1.9.6 The installation of thimbles through walls or partitions constructed of combustible materials shall conform with the requirements of Section 9.7. 7.1.10 Relining. 7.1.10.1 Where masonry chimneys are relined, the liner shall be listed or of approved material that resists corrosion, softening, or cracking from flue gases at temperatures appropriate to the class of chimney service. 7.1.10.2 Listed liner systems shall be installed in accordance with the listing. 7.1.10.3 Approved materials shall be installed in accordance with Section 7.2. 7.1.10.4 The relined chimney shall meet the requirements of the class of chimney service. 7.1.11 Sizing.
7.1.11.1 Masonry chimneys serving appliances shall be sized and configured in accordance with the appliance manufacturers’ instructions, Section 9.4.4 or approved methods.

7.1.11.2 Masonry chimneys serving fireplaces shall be sized in accordance with the requirements of ASHRAE Handbook, HVAC Systems and Equipment (current edition), or other approved methods.

Exception 7.1.11.3 Masonry chimneys serving fireplaces that are a minimum of 8 ft. (2438 mm) in height above the top of the fireplace opening and are constructed with no offsets in the flue shall be permitted to be designed in accordance with the following:

1. Round chimney flues shall have a minimum net cross-sectional area of at least 1/10 the fireplace opening.
2. Square chimney flues shall have a minimum net cross-sectional area of at least 1/10 the fireplace opening.
3. Rectangular chimney flues with an aspect ratio of less than 2 to 1 shall have a minimum net cross-sectional area of at least 1/10 the fireplace opening.
4. Rectangular chimney flues with an aspect ratio of 2 to 1 or more shall have a minimum net cross-sectional area of at least 1/8 the fireplace opening.

7.2 Construction of Masonry Chimneys. Masonry chimneys shall be constructed as outlined in Table 7.2 and as detailed in this section.

7.2.1 Construction.

7.2.1.1 Masonry chimneys shall be constructed of:

1. Solid masonry or solid, waterproofed, modular concrete blocks in nominal thicknesses not less than those specified in Table 7.2, Column I, or
2. Reinforced portland or refractory cement concrete in actual thicknesses not less than those specified in Table 7.2, Column I, or
3. Rubble stone masonry in actual thicknesses not less than those specified in Table 7.2, Column II.

7.2.1.1.1 Masonry shall be laid with full, push-filled, head and bed mortar joints.

Exception No. 1 7.2.1.2 Reinforced masonry chimneys for residential-type appliances shall be permitted to be constructed of hollow masonry units not less than 6 in. (152 mm) nominal thickness, with cells fully filled with mortar.

Exception No. 2 7.2.1.3 Masonry chimneys for high-heat appliances shall be constructed with double walls of solid masonry or reinforced portland or refractory cement concrete.

7.2.1.3.1 Each wall shall be not less than 8 in. (203 mm) thick with an air space of not less than 2 in. (51 mm) between walls.

7.2.2 Chimney Lining.

7.2.2.1 Masonry chimneys shall be lined.

7.2.2.2 The selection of the lining material shall be appropriate for the class of chimney service and the type of appliance connected in accordance with the terms of the appliance listing and the manufacturer’s instructions.

7.2.2.3 Listed materials used as chimney linings shall be installed in accordance with the terms of their listings and the manufacturer’s instructions.

7.2.2.4 The materials specified in 7.2.2.3 through 7.2.2.6 shall be permitted for the indicated class of chimney service.

7.2.2.4.1 Low-, Medium-, and High-Heat Appliances (Table 2-2.1, Columns II, III, IV, and V). The following materials shall be permitted for low-, medium-, and high-heat appliances (Table 2-2.1, Columns II, III, IV, and V):

1. Clay flue lining complying with the requirements of ASTM C 315, Standard Specification for Clay Flue Linings, or the equivalent, as specified in Table 7.2, Columns III and IV.
2. Fireclay brick complying with the requirements of ASTM C 27, Standard Classification of Fireclay and High-Alumina Refractory Brick, or the equivalent, as specified in Table 7.2, Columns III and IV.

7.2.2.4.2 Residential-Type and Building Heating Appliances (Table 2.2.1, Columns I and II). The following materials shall be permitted for residential-type and building heating appliances (Table 2.2.1, Columns I and II):

1. Clay flue lining or fireclay brick complying with 7.2.2.1, as specified in Table 7.2, Columns III and IV.
2. Listed chimney lining systems

(3) Factory-built chimneys or chimney units listed for installation within masonry chimneys
(4) Other approved materials that resist corrosion, erosion, softening, or cracking from flue gases and condensate at temperatures up to 1800°F (982°C)

7.2.2.4.5 Category I Gas Appliances (Table 2.2.2, Column I). The following materials shall be permitted for Category I gas appliances (Table 2.2.2, Column I):

1. Chimney linings complying with 7.2.2.2
2. Chimney lining systems listed for use with listed gas appliances with draft hoods and other Category I appliances listed for use with Type B vents (See 7.2.2.7 for marking.)
3. Type B vents listed for installation within masonry chimneys (See 7.2.2.7 for marking.)

Table 7.2.2.2.2 Categories II, III, and IV Gas Appliances (Table 2.2.2, Column III). Special gas vents listed for installation within masonry chimneys shall be permitted. (See 7.2.2.7 for marking.)

7.2.2.4.6 Pellet Fuel-Burning Appliances (Table 2.2.2, Column V). The following materials shall be permitted for pellet-fuel-burning appliances (Table 2.2.2, Column V):

1. Chimney linings complying with 7.2.2.2
2. Pellet vents listed for installation within masonry chimneys (See 7.2.2.7 for marking.)

7.2.2.4.7 Listed or Approved Materials.

7.2.8.1 Other materials listed for installation within masonry chimneys for the class of chimney service and for the appliance type shall be permitted.

7.2.8.2 Other approved materials that resist corrosion, erosion, softening, or cracking from flue gases and condensate at temperatures appropriate for the class of chimney service and appliance type shall be permitted.

7.2.7.2 Notice of Usage.

7.2.9.1 Where a Type B gas vent, special gas vent, pellet vent, or other material not suitable for use under Columns I and II of Table 2.2.1 is used as a liner for a masonry chimney, the chimney shall be plainly and permanently identified by a label attached to the wall or ceiling or at another conspicuous location adjacent to the point where the connector enters the chimney.

7.2.9.2 The label shall read: “This (type of product) Is For (type or category of appliance) Appliances that Burn (type of fuel) Only. Do Not Connect Other Types of Appliances,” or Equivalent Language.

7.2.4.10 Fire Clay Flue Liners.

7.2.10.1 Fireclay flue liners shall be installed ahead of the construction of the chimney as it is carried up.

7.2.10.2 Liners shall be aligned and centered, and bedded one on the other in a medium-duty, non-water-soluble calcium aluminate refractory cement mixture, or its equivalent.

7.2.10.3 With close fitting joints, joints shall be left smooth on the inside.

7.2.10.4 Portland cement bonded mixtures shall not be used.

7.2.4.11 Fireclay Brick Flue Liners. Fireclay brick flue liners shall be installed laid in full-width refractory mortar as specified in Table 7.2, Column V, or the equivalent.

7.2.4.12 Fireclay Flue Lining for Residential and Low-Heat Masonry Chimneys.

7.2.12.1 Fireclay flue lining for residential and low-heat masonry chimneys shall be separated from the chimney wall by a minimum of 1/2 in. (12.7 mm) and a maximum of 4 in. (102 mm) of air space.

7.2.12.2 The air space shall not be filled, and only enough mortar shall be used to make a good joint and hold the liners in position.

Exception 7.2.12.3 Where masonry chimneys are lined with a listed chimney liner system, the system shall be installed in accordance with the listing.

7.2.6.13 Installation of Fireclay Flue Liners.

7.2.13.1 The fireclay flue liner shall start at or below the base of the chimney.
7.2.13.2 The lining shall be carried up as nearly vertically as possible, with a maximum slope no greater than 30 degrees from the vertical.

7.2.13.3 The lining shall extend for the entire height of the chimney to a level not less than 2 in. (51 mm) above the splay or wash.

7.2.13.4 The splay or wash shall be constructed to allow for unrestricted vertical movement of the flue lining due to thermal expansion without allowing the introduction of moisture into the chimney.

7.2.14 Multiple Flues

7.2.14.1 Where a chimney contains more than one flue, a separation shall be provided between adjacent flues.

7.2.14.2 The separation shall be constructed of solid masonry wythes (partitions) as follows:

- (1) not less than 4 in. (102 mm), nominal, in thickness or of
- (2) reinforced portland or refractory cement concrete not less than 4 in. (102 mm), actual, in thickness, and

7.2.14.2.1 The partitions shall be bonded or securely tied to the chimney walls.

Exception No. 1: Where two flues are used to vent a single fireplace or appliance, this separation provisions of 7.2.14.2 shall not be required.

Exception No. 2: Multiple flues in one chimney shall not be permitted for medium-heat appliances, high-heat appliances, or commercial and industrial incinerators.

Exception No. 3: For chimney liners that have been listed for use as multiple flues installed in accordance with the terms of the listing, this separation provisions of 7.2.14.2 separation shall not be required.

7.3 Clearance from Combustible Material

7.3.1 Minimum Air Space

7.3.1.1 The minimum air space clearance between interior masonry chimneys (where any portion of the chimney is located within the exterior wall of the building) and combustible materials shall be at least the distance specified in Table 7.2, Column VIII.

7.3.1.2 The minimum air space clearance between exterior masonry chimneys (where the chimney is located completely outside the exterior wall of the building, excluding the soffit or cornice area) and combustible material shall be at least the distance specified in Table 7.2, Column IX.

7.3.1.3 The air space shall not be filled;

A7.3.1.3 However, this does not eliminate the firestopping requirements in 7.1.6.

Exception No. 1: For residential and low-heat chimneys, noncombustible trim shall be permitted to be used to prevent the entry of debris into the air space.

Exception No. 2: Masonry chimneys for high heat appliances shall have sufficient clearance from buildings and structures to avoid overheating combustible material, to allow inspection and maintenance operations on the chimney, and to avoid the danger of burns to persons.

A7.3.1.5 Masonry chimneys for high heat appliances shall have sufficient clearance from buildings and structures to avoid overheating combustible material, to allow inspection and maintenance operations on the chimney, and to avoid the danger of burns to persons.

7.3.2 Listed Chimney Liners

Chimneys constructed with listed chimney liners shall be built with clearances in conformance with the listing of the liner system.

7.4 Masonry Chimneys for Incinerators

7.4.1 In addition to the requirements in Sections 7.1 through 7.3, masonry chimneys for incinerators shall meet the requirements of 7.4.4.1 through 7.4.4.2.

7.4.4.2 Chute-fed Incinerators

Chute-fed incinerators shall meet the requirements of NFPA 82, Standard on Incinerators and Waste and Linen Handling Systems and Equipment.

7.4.23 Commercial and Industrial Incinerators

Masonry chimneys for commercial and industrial incinerators shall be supported on properly designed foundations of:

- (1) masonry or
- (2) reinforced portland or refractory cement concrete or
- (3) noncombustible material having a fire resistance rating of not less than 3 hours, provided such supports are independent of the building construction and the load is transferred to the ground.

Exception 7.4.3.1 Chimneys shall be permitted to be supported on incinerator walls if the incinerator foundation and walls are built to support the load imposed. They shall be constructed to prevent excessive stress on the roof of the combustion chamber.

7.4.4 Spark Arresters

The terminus of the chimney for commercial and industrial incinerators shall be equipped with an approved spark arrester if the incinerator does not include effective means for arresting sparks and fly ash. (See NFPA 82, Standard on Incinerators and Waste and Linen Handling Systems and Equipment.)

Table 7.2

Delete Note 1.
Note 2: See 7.2.1.3 for construction of masonry chimneys for high-heat appliances.
Note 3: See 7.2.1.3 for construction of masonry chimneys for high-heat appliances.

7.7.3.2 Requirements for Type 1 gas-fired clothes dryer exhaust shall be in accordance with NFPA 54, National Fuel Gas Code.

3.2.3.4 Provision for makeup air shall be provided for Type 2 clothes dryers with a minimum free area of 440 ft² (465.5 m²) for each 1000 Btu/hr (1055 kj/hr) total input rating of the dryer(s) installed.

SUBSTANTIATION: With respect to the change to Section 7.7.3.2, NFPA 54 should be the preferred source for venting requirements for all gas dryers, not just Type 1. NFPA 54 actually has more detailed coverage for Type 2 dryers than it does for Type 1. With respect to the deletion of 7.7.3.4, if the first change is approved, this section is no longer needed as NFPA 54 contains this same language.

COMMITTEE ACTION: Accept

NUMBER OF COMMITTEE MEMBERS ELIGIBLE TO VOTE: 14

AFFIRMATIVE: 9

NOT RETURNED: 5 Rucker, Grisack, Schulz, Shiver, and Stone

VOTE ON COMMITTEE ACTION: 14

(RECOMMENDATION: Accept)

Log #10

211-35-(7-7.3.2 & 7-7.3.4): Accept


RECOMMENDATION: Revise text as follows:

7.3.2 Requirements for Type 1 gas-fired clothes dryer exhaust shall be in accordance with NFPA 54, National Fuel Gas Code.

3.2.3.4 Provision for makeup air shall be provided for Type 2 clothes dryers with a minimum free area of 440 ft² (465.5 m²) for each 1000 Btu/hr (1055 kj/hr) total input rating of the dryer(s) installed.

SUBSTANTIATION: With respect to the change to Section 7.7.3.2, NFPA 54 should be the preferred source for venting requirements for all gas dryers, not just Type 1. NFPA 54 actually has more detailed coverage for Type 2 dryers than it does for Type 1. With respect to the deletion of 7.7.3.4, if the first change is approved, this section is no longer needed as NFPA 54 contains this same language.

COMMITTEE ACTION: Accept

NUMBER OF COMMITTEE MEMBERS ELIGIBLE TO VOTE: 14

AFFIRMATIVE: 9

NOT RETURNED: 5 Rucker, Grisack, Schulz, Shiver, and Stone

VOTE ON COMMITTEE ACTION: 14

(RECOMMENDATION: Accept)

Log #9

211-36-(7-7.3.3): Accept


RECOMMENDATION: Revise text as follows:

7.7.3.3 Type 2 All clothes dryers shall be exhausted to the outside air.

SUBSTANTIATION: The requirement for exhausting to the outside air should apply to all dryers, not just Type 2. Clothes drying generates a great deal of water vapor which can be harmful to the building structure, and unhealthy for the occupants, if not properly vented to the outdoors.

COMMITTEE ACTION: Accept

NUMBER OF COMMITTEE MEMBERS ELIGIBLE TO VOTE: 14

AFFIRMATIVE: 9

NOT RETURNED: 5 Rucker, Grisack, Schulz, Shiver, and Stone

VOTE ON COMMITTEE ACTION: 14

(RECOMMENDATION: Accept)
8.1.4 Prohibited Uses. Unlisted metal chimneys shall not be used inside of ventilating ducts.

8.1.5 Clearances.

8.1.5.1 Unlisted metal chimneys shall have sufficient clearance from buildings and structures to avoid heating combustible material to a temperature in excess of 90°F (32°C) above ambient and to allow inspection and maintenance operations on the chimney.

8.1.5.2 They shall be located or shielded to avoid the danger of burns to persons.

8.1.6 Unlisted Metal Chimneys for Residential-Type or Low-Heat Appliances

8.1.6.1 Unlisted metal chimneys shall be supported on properly designed foundations of:

(1) masonry or

(2) reinforced portland or

(3) refractory cement concrete or

(4) noncombustible material having a fire resistance rating of not less than 3 hours, provided such supports are independent of the building construction and the load is transferred to the ground.

8.1.6.2 An unlisted metal chimney also can be supported at intervals by the building structure, in which case expansion joints shall be provided at each support level.

8.1.6.3 All joints shall be liquid-tight or of a design that allows liquid to drain to the interior of the chimney.

8.1.7 Unlisted metal chimneys serving residential-type or low-heat appliances and producing flue gases having a temperature below 350°F (177°C) at the entrance to the chimney at full load or partial load shall be:

(1) lined with acid- and condensate-resistant metal or refractory material, or

(2) constructed of suitable stainless steel, or otherwise protected to minimize or prevent condensation and corrosion damage.

8.1.8 Sizing. Unlisted metal chimneys shall be sized and configured in accordance with the appliance manufacturers’ instructions or approved methods.

8.2 Unlisted Metal Chimneys for Residential-Type or Low-Heat Appliances

8.2.1 Termination (Height).

8.2.1.1 Unlisted metal chimneys for residential-type or low-heat appliances shall extend:

(1) at least 3 ft. (.9 m) above the highest point at which they pass through the roof of a building and

(2) at least 2 ft. (.6 m) higher than any portion of a building within 10 ft. (3.1 m).

(3) [See Figures 4.2(a) and (b).]

Exception 8.2.1.2 The outlet of an unlisted metal chimney for residential-type and low-heat appliances equipped with a mechanical exhaust system shall be permitted to terminate at a location:

(1) not less than 3 ft. (.9 m) from an adjacent building or building opening and

(2) at least 10 ft. (3.1 m) above grade or walkways.

Table 8.1.2 Minimum Thickness of Sheet Steel Chimneys

<table>
<thead>
<tr>
<th>MSG No.</th>
<th>Minimum Thickness</th>
<th>Area</th>
<th>Equivalent Round Diameter</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>in.</td>
<td>mm</td>
<td>m^2</td>
</tr>
<tr>
<td>16</td>
<td>0.053</td>
<td>1.35</td>
<td>154</td>
</tr>
<tr>
<td>14</td>
<td>0.067</td>
<td>1.70</td>
<td>155 to 201</td>
</tr>
<tr>
<td>12</td>
<td>0.093</td>
<td>2.36</td>
<td>202 to 254</td>
</tr>
<tr>
<td>10</td>
<td>0.123</td>
<td>3.12</td>
<td>&gt; 254</td>
</tr>
</tbody>
</table>

NOTE: Regardless of minimum thickness specified in this table, the thickness of sheet metal shall be adequate to meet the requirements of 8.1.3.
8.2.1.2.3 In any case, the chimney shall be extended below grade extend at least 2 ft. (0.61 m) or more below the lowest chimney connector entrance and extend to a height of at least 25 ft. (7.6 m) above the highest chimney connector entrance.

8.3 Unlisted Metal Chimneys for Medium-Heat Appliances.

8.3.1 Construction. Unlisted metal chimneys serving medium-heat appliances as identified in Table 2-2.1, shall be:

1) lined with medium-duty firebrick (ASTM C 27, Standard Classification of Fireclay and High-Alumina Refractory Brick), or its equivalent,

2) laid in medium-duty refractory mortar (ASTM C 199, Standard Test Method for Pier Test for Refractory Mortars), or its equivalent.

8.3.1.1 The lining shall be at least 2 in. (64 mm) thick for chimneys having a diameter or greatest cross-sectional dimension of 18 in. (457 mm) or less.

8.3.1.2 The lining shall have a thickness of not less than 5 in. (144 mm) laid on a full-width bed for chimneys having a diameter or greatest cross-sectional dimension greater than 18 in. (457 mm).

8.3.1.3 The lining shall (1) start 2 ft. (0.61 m) or more below the lowest chimney connector entrance and (2) extend to a height of at least 25 ft. (7.6 m) above the highest chimney connector entrance.

8.3.1.3.1 Chimneys terminating 25 ft. (7.6 m) or less above a chimney connector entrance shall be lined to the top.

8.3.2 Termination (Height). Unlisted metal chimneys for medium-heat appliances shall extend not less than 10 ft. (3.1 m) higher than any portion of any building within 25 ft. (7.6 m).

8.3.3 Clearances.

8.3.3.1 Exterior.

8.3.3.1.1 Exterior unlisted metal chimneys used for medium-heat appliances as identified in Table 2-2.1 shall have a clearance of not less than 24 in. (610 mm) from a wall of wood frame construction and any combustible material.

8.3.3.1.2 Exterior unlisted metal chimneys over 18 in. (457 mm) in diameter shall have a clearance of not less than 4 in. (102 mm) from any building wall of other than wood frame construction.

8.3.3.1.3 Exterior unlisted metal chimneys 18 in. (457 mm) or less in diameter shall have a clearance of not less than 2 in. (51 mm) from a building wall of other than wood frame construction.

8.3.3.1.4 An uninsulated unlisted metal chimney erected on the exterior of a building shall not be installed less than 24 in. (610 mm) from any door or window or from any walkway.

Exception: Where the chimney is insulated in an approved manner to avoid the danger of burns to persons.

8.3.3.2 Interior.

8.3.3.2.1 Where an unlisted metal chimney extends through any story(ies) of a building above that in which the appliances connected to the chimney are installed, it shall be enclosed in those upper stories within a continuous enclosure constructed of noncombustible materials (see definition in Chapter 3). The enclosure shall comply with the following:

1) The enclosure shall extend from the ceiling of the appliance room to or through the roof so that it maintains the integrity of the fire separations required by the applicable building code provisions.

2) The enclosure walls shall have a fire resistance rating of not less than 1 hour where the building is less than four stories in height.

3) The enclosure walls shall have a fire resistance rating of not less than 2 hours where the building is four stories or more in height.

4) The enclosure walls shall provide a space on all sides of the chimney sufficient to allow inspection and repair, but it shall not be less than 12 in. (305 mm) under any circumstances.

5) The enclosure walls shall be without openings.

Exception: Where the chimney is insulated in an approved manner to avoid the danger of burns to persons.

8.3.3.2.2 Where an unlisted metal chimney serving only residential-type or low-heat appliances as identified in Table 2-2.1 is located in the same story of a building as that story in which the appliances connected thereto are located, it shall have a clearance of not less than 18 in. (457 mm) from a wall of wood frame construction and from any combustible material.

8.3.3.2.3 Interior unlisted metal chimneys over 18 in. (457 mm) in diameter shall have a clearance of not less than 4 in. (102 mm) from a building wall of other than wood frame construction.

8.3.3.2.4 Interior unlisted metal chimneys 18 in. (457 mm) or less in diameter shall have a clearance of not less than 2 in. (51 mm) from a building wall of other than wood frame construction.

8.3.3.2.5 Where an unlisted metal chimney serving only residential-type or low-heat appliances as identified in Table 2-2.1 passes through a roof constructed of combustible material, it shall be guarded by a ventilating thimble of galvanized steel or approved corrosion-resistant metal that is:

1) not less than 24 gauge [0.024 in. (0.61 mm)] in thickness and shall:

2) provide a clearance of not less than 9 in. (229 mm) from the chimney surface to the nearest combustibles;

3) extend not less than 9 in. (229 mm) below and 3 in. (76 mm) above the roof construction.

Exception: Where the chimney is insulated in an approved manner to avoid the danger of burns to persons.

8.3.3.2.6 Where combustible material in the roof construction is cut away to provide not less than 18 in. (457 mm) clearance on all sides of the chimney, using entirely noncombustible material to close such an opening, the requirements of 8.2.2.2.5 shall not apply.

8.3.3.2.6.1 The ventilating thimble shall be constructed of galvanized steel not less than 24 gauge [0.024 in. (0.61 mm)] in thickness and shall:

1) be constructed of galvanized steel not less than 24 gauge [0.024 in. (0.61 mm)] in thickness and shall:

2) provide a clearance of not less than 9 in. (229 mm) from the chimney surface to the nearest combustibles;

3) be at least 2 ft. (610 mm) above the lowest chimney connector entrance and extend to a height of at least 25 ft. (7.6 m) above the building.

8.3.3.2.6.2 The ventilating thimble shall have a thickness of not less than 6 in. (152 mm) from the chimney surface to the nearest combustibles.

8.3.3.2.6.3 The thimble shall provide a minimum 1 in. (25.4 mm) air space between the thimble wall and combustible material.
8.3.2.3 Where an unlisted metal chimney serving medium-heat appliances as identified in Table 8.2.1 is located in the same story of a building as that story in which the appliances connected thereto are located, it shall have a clearance of not less than 36 in. (914 mm) from a wall of wood frame construction and from any combustible material.

8.3.2.4 Interior unlisted metal chimneys over 18 in. (457 mm) in diameter shall have a clearance of not less than 4 in. (102 mm) from a building wall of other than wood frame construction.

8.3.2.5 Interior unlisted metal chimneys 18 in. (457 mm) or less in diameter shall have a clearance of not less than 2 in. (51 mm) from a building wall of other than wood frame construction.

8.4 Unlisted Metal Chimneys for High-Heat Appliances.

8.4.1 Construction.

8.4.1.1 Unlisted metal chimneys for high-heat appliances as identified in Table 8.2.1 shall be lined with high-duty fireclay brick (ASTM C 27, Standard Classification of Fireclay and High-Alumina Refractory Brick), or its equivalent, not less than 4 in. (102 mm) thick, laid on a full-width bed in high-duty refractory mortar (ASTM C 199, Standard Test Method for Pier Test for Refractory Mortars), or its equivalent.

8.4.1.2 The lining shall:
(1) start 2 ft. (0.61 m) or more below the lowest chimney connector entrance and shall
(2) extend to a height of at least 25 ft. (7.6 m) above the highest chimney connector entrance.

8.4.1.3 Chimneys terminating 25 ft. (7.6 m) or less above a chimney connector entrance shall be lined to the top.

8.4.2 Termination (Height). Unlisted metal chimneys for high-heat appliances shall extend not less than 20 ft. (6.1 m) higher than any portion of any building within 50 ft. (15.3 m).

8.4.4 Clearance from Combustible Material. Unlisted metal chimneys for high-heat appliances shall have sufficient clearance from buildings and structures to avoid heating combustible material to a temperature in excess of 60°F (16°C) above ambient and to allow inspection and maintenance operations on the chimney. They shall be located or shielded to avoid the danger of burns to persons.

SUBSTANTIATION: Editorially revise chapter to comply with NFPA Manual of Style. This is an editorial revision only no technical changes occur in this proposal. Technical changes have been made by other proposals. Comments on technical revisions should be addressed to the appropriate proposal.

COMMITTEE ACTION: Accept

VOTE ON COMMITTEE ACTION: AFFIRMATIVE: 9
NOT RETURNED: 5 Rucker, Grisack, Schulz, Shiver, and Stone

8.4.1.4.1 The hearth and the fireplace chamber and observe combustible materials such as wall framing or the underside of the fireplace mantel.

COMMITTEE STATEMENT: See Committee Action taken on 211-40 (Log #13).

NUMBER OF COMMITTEE MEMBERS ELIGIBLE TO VOTE: 14

8.5 Cleanout Openings.

8.5.1 Cleanout openings shall be equipped with ferrous metal, stainless steel, precast cement, or other approved noncombustible doors and frames arranged to remain tightly closed and secured when not in use.

SUBSTANTIATION: To provide additional guidance for cleaning accessibility.

COMMITTEE ACTION: Accept

VOTE ON COMMITTEE ACTION: AFFIRMATIVE: 9
NOT RETURNED: 5 Rucker, Grisack, Schulz, Shiver, and Stone

211-40-(8-2.1) : Accept in Principle


RECOMMENDATION: Insert a new section following Section 8.2.1.2 and renumber remaining sections:

8.2.1.3 All joints and intersections between the hearth extension/fireplace facing and the fire chamber (firebox) shall be fully sealed with medium-duty refractory mortar (ASTM C 1261, Standard Test Method for Pier Test for Refractory Mortars). Gaps or voids at supporting lintels, joints between steel fireplace units and the fireplace face or between the frames of dampers and the fireplace face shall be sealed with the same material or with a high temperature (2000°F service rating) insulating mortar.

COMMITTEE STATEMENT: Further clarifies where the joints are located and changes the ASTM standard number.

NUMBER OF COMMITTEE MEMBERS ELIGIBLE TO VOTE: 14

VOTE ON COMMITTEE ACTION: AFFIRMATIVE: 9
NOT RETURNED: 5 Rucker, Grisack, Schulz, Shiver, and Stone

211-41-(8-2.4) : Accept

SUBMITTER: Technical Committee on Chimneys, Fireplaces, and Vending Systems for Heat Producing Appliances.

RECOMMENDATION: Amend 8.2.4 as follows:

8.2.4 Accessibility. For cleaning purposes, means shall be provided for access to the venting area above and immediately behind any movable damper valve plate in masonry fireplaces and steel fireplace units by one of the following methods:
1. A damper plate that can be removed with common hand tools,
2. A clean-out opening located to provide access to the smoke chamber area.

8.2.5 Cleanout Openings. Cleanout openings shall be equipped with ferrous metal, stainless steel, precast cement, or other approved noncombustible doors and frames arranged to remain tightly closed and secured when not in use.

SUBSTANTIATION: To provide additional guidance for cleaning accessibility.

COMMITTEE ACTION: Accept

VOTE ON COMMITTEE ACTION: AFFIRMATIVE: 9
NOT RETURNED: 5 Rucker, Grisack, Schulz, Shiver, and Stone

211-42-(8-3.1) : Accept in Principle

SUBMITTER: Jeff Gitlin, Jeff Gitlin Chimney Sweep

RECOMMENDATION: Revise text as follows:

"Masonry fireplaces shall have hearth extensions of . . . noncombustible material . . . supported wholly by the chimney structure and with no combustible material. . . . thereof. The hearth extension shall be monolithic with the fireplace. Support for the hearth can be provided by a structural slab or corbeled brickwork. Wooden forms . . . shall be removed when the construction is complete."

SUBSTANTIATION: Most fireplace hearths are supported by wooden floor joists and have not had wooden forming removed. Hearths and fascia brick frequently separate from the firebox and leave combustible floor and
9.2 Connectors for residential-type appliances shall conform to the requirements of this chapter.

9.2.2.1 Appliances Installed in Attics. Vent connectors for listed gas appliances and appliances listed for use with Type B gas vents that are installed in attics shall:
1. be of Type B or Type L vent material or of listed vent connector material having at least an equivalent insulating value.
2. be not lighter than that designated for unlisted metal chimneys in Table 8.1.2 and of listed factory-built chimney material or of factory-built chimney material or of listed medium-heat chimney material or have an equivalent in resistance to heat and corrosion to high-duty fireclay brick (ASTM C 27, Standard Classification of Fireclay and High-Alumina Refractory Brick) not less than 4 in. (102 mm) thick.
3. be capable of withstanding the flue gas condensate and temperatures produced by the appliances and shall be of sufficient thickness as specified in Table 9.2.2.3 to withstand physical damage.

9.2.2 Connectors for residential-type appliances shall conform to the requirements of this chapter.

9.2.2.2 Appliances Not Installed in Attics.

9.2.2.2.1 Vent connectors for appliances that are listed for use with Type B gas vents and for appliances with draft hoods and equipped with listed conversion burners and that are not installed in attics shall be:
1. made of noncombustible, corrosion-resistant material
2. capable of withstanding the flue gas condensate and temperatures produced by the appliances
3. of sufficient thickness as specified in Table 9.2.2.3

9.2.3 Connectors for oil appliances, solid fuel-burning appliances, domestic-type incinerators, and gas appliances other than those specified in 9.2.2.1 and 9.2.2.2 shall be:
1. of factory-built chimney material,
2. Type L vent material,
3. steel pipe having resistance to corrosion and heat not less than that of galvanized pipe specified in Table 9.2.2.3.

### Table 9.2.2.3 Metal Thickness for Galvanized Steel Pipe Connectors

<table>
<thead>
<tr>
<th>Diameter of Connector</th>
<th>Galvanized Sheet Gauge No</th>
<th>Minimum Thickness</th>
</tr>
</thead>
<tbody>
<tr>
<td>in.</td>
<td>mm</td>
<td>in.</td>
</tr>
<tr>
<td>&lt;6</td>
<td>&lt;152</td>
<td>26</td>
</tr>
<tr>
<td>6 to 10</td>
<td>152 to 254</td>
<td>24</td>
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<td>&gt;10 to 16</td>
<td>&gt;254 to 406</td>
<td>22</td>
</tr>
<tr>
<td>&gt;16</td>
<td>&gt;406</td>
<td>16</td>
</tr>
</tbody>
</table>
9.5 Clearance.

9.5.1 Clearances from connectors to combustible material shall be in accordance with Table 9.5.1.1 and Figure 9.5.1.1.

9.5.1.1 Clearances from connectors to unprotected combustible material shall be in accordance with Table 9.5.1.1 and Figure 9.5.1.1.

9.6 Location. Where the connector used for a gas appliance having a draft hood or for Category I appliances is located in or passes through an attic, crawl space, or other cold area, that portion of the connector shall be of:

(1) listed Type B or Type L vent material or

(2) listed vent connector material having at least an equivalent insulating value.

9.7 Installation.

9.7.1 A connector to a masonry chimney shall:

(1) extend through the wall to the inner face or liner, but not beyond; and

(2) be firmly cemented to the masonry.

9.7.2 A chimney connector or vent connector shall not pass through any floor or ceiling or through a fire wall or fire partition.

9.7.3 Connectors for listed gas appliances with draft hoods, other listed Category I gas appliances (Table 2.2.2, Column I), and oil appliances listed for Type L vents (Table 2.2.2, Column III) shall be permitted to pass through walls or partitions constructed of combustible material provided:

(1) They are made of listed Type B or Type L vent material for gas appliances or of listed Type L vent material for oil appliances and are installed with not less than listed clearances to combustible material; or

(2) They are made of single-wall metal pipe and guarded by a ventilated metal thimble not less than 4 in. (102 mm) larger in diameter than the vent connector.

Table 9.5.1.2 Reduction of Connector Clearance with Specified Forms of Protection

9.7.4 Connectors for residential-type appliances (Table 4.2.2, Column I) shall be permitted to pass through walls or partitions constructed of combustible material if the connector either:

(1) listed for wall pass-through or

(2) routed through a device listed for wall pass-through and is installed in accordance with the listing.

9.7.5 Connectors for residential-type appliances (Table 4.2.2, Column I) with inside diameters less than or equal to 10 in. (254 mm) shall be permitted to pass through walls or partitions constructed of combustible material to a masonry chimney, provided the connector system selected or fabricated is installed in accordance with the conditions and clearances specified in Figure 9.7.5.

9.7.6 A connector for a medium- or high-heat appliance (Table 4.2.2, Columns IV and V) shall not pass through walls or partitions constructed of combustible material.

9.7.7 Connectors shall maintain a pitch or rise of at least 1/4 in./ft. (6.4 mm/.31 m) of horizontal length of pipe from the appliance to the chimney.

9.7.8 Connectors shall be installed to avoid sharp turns or other construction features that would create excessive resistance to the flow of flue gases.

9.7.9* A device, other than a damper, that obstructs the free flow of flue gas shall not be installed in a connector, chimney, or vent unless listed for such use. [For requirements regarding dampers, see Section 9.9.]

9.8* Connectors shall be supported securely and joints fastened using sheet metal screws, rivets, or other approved means.

9.10 The entire length of a connector shall be readily accessible for inspection, cleaning, and replacement.
9.11 Interconnection.

9.11.1 A connector serving a gas or oil appliance shall not be connected to a chimney flue serving a factory-built fireplace unless specifically listed for such installation.

Exception: Where the gas or oil appliance is listed for such installation and is installed in accordance with the listing.

9.11.2 A connector serving a gas or oil appliance shall be permitted to be connected to a masonry fireplace flue under the following conditions, provided:
   1) The fireplace opening is sealed or
   2) the chimney flue that vents the fireplace is permanently sealed below the connection.

Exception:

9.11.3 List gas or oil appliances shall be installed in accordance with their listing.

9.11.4 Solid fuel-burning appliances shall be connected to draft hoods, see NFPA 54, National Fuel Gas Code.

9.11.5 The installation of dampers on gas appliances shall be in accordance with NFPA 54, National Fuel Gas Code.

9.11.6 Draft hoods. For information concerning the use and installation of draft hoods, see NFPA 54, National Fuel Gas Code.

9.11.7 Draft Regulators.

9.11.8 Gas appliances connected to chimneys, other than those required to be installed with draft hoods by NFPA 54, National Fuel Gas Code, shall be permitted to be installed with draft regulators in accordance with the appliance manufacturer’s instructions.

9.11.9 Solid fuel-burning appliances shall be permitted to be installed with draft regulators to reduce draft intensity.

9.11.10 Such regulators shall be installed and set in accordance with the instructions furnished with the appliance or the draft regulator.

9.11.11 A barometric draft regulator, if used, shall be installed in the same room or enclosure as the appliance in such a manner that no difference in pressure between the air in the vicinity of the regulator and the combustion air supply will be permitted.

9.12 Interconnection.

9.12.1 Gas utilization appliances and appliances burning liquid fuel shall be permitted to be connected to one chimney flue through separate openings or shall be permitted to be connected through a single opening, provided such instructions specify the use of increased protection or greater clearances than specified in this chapter. This exception shall not apply to mobile home installations.

9.12.2 Interconnection of more than two appliances shall be in accordance with the manufacturer’s installation instructions if such instructions specify the use of increased protection or greater clearances than specified in this chapter. This exception shall not apply to mobile home installations.

9.12.3 This change is necessary to prevent the implication that the requirements of Chapter 9 apply only to unlisted appliances. The requirements of Chapter 9 are intended to apply to both listed and unlisted appliances, except where indicated.

COMMITTEE ACTION: Accept

NUMBER OF COMMITTEE MEMBERS ELIGIBLE TO VOTE: 14
AFFIRMATIVE: 9
NOT RETURNED: 5 Rucker, Grisack, Schulz, Shiver, and Stone

211-44-(9-1) : Accept


RECOMMENDATION: Revise text as follows:

9.1 Appliances. Solid fuel-burning appliances shall be listed and installed in accordance with the terms of their listing and this chapter.

Exception: Unlisted appliances approved by the authority having jurisdiction shall be installed as specified in this chapter. Such installations also shall be in accordance with the manufacturer’s installation instructions if such instructions specify the use of increased protection or greater clearances than specified in this chapter. This exception shall not apply to mobile home installations.

COMMITTEE ACTION: Accept

NUMBER OF COMMITTEE MEMBERS ELIGIBLE TO VOTE: 14
AFFIRMATIVE: 9
NOT RETURNED: 5 Rucker, Grisack, Schulz, Shiver, and Stone

211-45-(9-2.4) : Accept in Principle

SUBMITTER: Robert Bourke

RECOMMENDATION: Revise to read: 9.2.4 Solid fuel-burning appliances shall not be installed in any residential or commercial garage.

COMMITTEE ACTION: Accept in Principle

Do not add commercial, instead delete the word “residential”

COMMITTEE STATEMENT: Instead of adding text it is more clear to delete residential to clarify that these units should not be installed in any garages.

NUMBER OF COMMITTEE MEMBERS ELIGIBLE TO VOTE: 14
AFFIRMATIVE: 9
NOT RETURNED: 5 Rucker, Grisack, Schulz, Shiver, and Stone

211-46-(9-4.1.1) (New) : Accept

SUBMITTER: Technical Committee on Chimneys, Fireplaces, and Venting Systems for Heat Producing Appliances

RECOMMENDATION: Add a new 9.4.1.1

Galvanized steel pipe shall not be used for solid fuel burning appliances.

COMMITTEE ACTION: Accept

NUMBER OF COMMITTEE MEMBERS ELIGIBLE TO VOTE: 14
AFFIRMATIVE: 9
NOT RETURNED: 5 Rucker, Grisack, Schulz, Shiver, and Stone
**NFPA 211 — November 2002 ROP — Copyright, 2002 NFPA**

211-47-(9-4.4) : Accept in Principle

**SUBMITTER:** Ben Weathersby, Hearth Products Association

**RECOMMENDATION:** Revise text as follows:

9.4.4* Flue Cross-Sectional Area. For residential-type solid fuel-burning appliances, the cross-sectional area of the flue shall not be more than three times the cross-sectional area of the appliance flue collar, unless allowed by the appliance manufacturer. The cross-sectional area of the flue shall not be larger than the maximum cross-sectional flue area required by the appliances manufacturer. If the manufacturer does not specify maximum cross-sectional flue area, the cross-sectional area of the flue shall not be more than three times the cross-sectional area of the appliance flue collar.

**SUBSTANTIATION:** This language clarifies flue size requirements by referring to the possibility of divergent manufacturer requirements. It helps prevent the erroneous invoking of the current default 3 times rule and strengthens the position taken in A.9.4.4 and A.9.4.5(2).

**COMMITTEE ACTION:** Accept in Principle

**COMMITTEE STATEMENT:** See Committee Action taken on 211-48 (Log #CP22).

**NUMBER OF COMMITTEE MEMBERS ELIGIBLE TO VOTE:** 14

**VOTE ON COMMITTEE ACTION:**

**AFFIRMATIVE:** 9

**NOT RETURNED:** 5 Rucker, Grisack, Schulz, Shiver, and Stone

(2) The cross-sectional area of the flue liner is no smaller than the cross-sectional area of the flue collar of the appliance, unless otherwise specified by the appliance manufacturer.

(3) The cross-sectional area of the flue liner is no more than 50 percent larger than the cross-sectional area of the flue collar of the appliance.

(3)* The cross-sectional area of the flue is no larger than the maximum cross-sectional flue area required by the appliance manufacturer.

**COMMITTEE ACTION:** Accept in Principle

**COMMITTEE STATEMENT:** See Committee Action taken on 211-49 (Log #CP23).

**NUMBER OF COMMITTEE MEMBERS ELIGIBLE TO VOTE:** 14

**VOTE ON COMMITTEE ACTION:**

**AFFIRMATIVE:** 9

**NOT RETURNED:** 5 Rucker, Grisack, Schulz, Shiver, and Stone

(2) The cross-sectional area of the flue liner is no smaller than the cross-sectional area of the flue collar of the appliance, unless otherwise specified by the appliance manufacturer.

(3) The cross-sectional area of the flue liner is no more than 50 percent larger than the cross-sectional area of the flue collar of the appliance.

**COMMITTEE ACTION:** Accept in Principle

**COMMITTEE STATEMENT:** See Committee Action taken on 211-49 (Log #CP23).

**NUMBER OF COMMITTEE MEMBERS ELIGIBLE TO VOTE:** 14

**VOTE ON COMMITTEE ACTION:**

**AFFIRMATIVE:** 9

**NOT RETURNED:** 5 Rucker, Grisack, Schulz, Shiver, and Stone

(3)* The cross-sectional area of the flue is no larger than the maximum cross-sectional flue area required by the appliance manufacturer.

**COMMITTEE ACTION:** Accept in Principle

**COMMITTEE STATEMENT:** See Committee Action taken on 211-49 (Log #CP23).

**NUMBER OF COMMITTEE MEMBERS ELIGIBLE TO VOTE:** 14

**VOTE ON COMMITTEE ACTION:**

**AFFIRMATIVE:** 9

**NOT RETURNED:** 5 Rucker, Grisack, Schulz, Shiver, and Stone

211-51-(9-4.5(2)) : Accept in Principle

**SUBMITTER:** Ben Weathersby, Hearth Products Association

**RECOMMENDATION:** Revise text as follows:

9.4.5 Connection to Masonry Fireplaces. (2) The cross-sectional area of the flue is no smaller than the cross-sectional area of the flue collar of the appliance, unless otherwise specified by the appliance manufacturer.

**SUBSTANTIATION:** This language is proposed to be consistent with the proposed change to 9.4.4.

**COMMITTEE ACTION:** Accept in Principle

**COMMITTEE STATEMENT:** See Committee Action taken on 211-49 (Log #CP23).

**NUMBER OF COMMITTEE MEMBERS ELIGIBLE TO VOTE:** 14

**VOTE ON COMMITTEE ACTION:**

**AFFIRMATIVE:** 9

**NOT RETURNED:** 5 Rucker, Grisack, Schulz, Shiver, and Stone

211-51-(9-5.1.2.2) : Accept

**SUBMITTER:** James P. Brewer, Magic Sweep Corp./Rep. National Chimney Sweep Guild

**RECOMMENDATION:** Revise text as follows:

9.5.1.2.2 Room heaters, fireplace stoves, room heater/fireplace stoves combinations, or ranges that are set on legs or pedestals providing 2 in. to 6 in. (51 mm to 152 mm) of ventilated open space beneath the fire chamber or base of the appliance shall be permitted to be placed on floors of combustible construction, provided the floor under the appliance is protected with one course of hollow masonry units not less than 4 in. (102 mm) nominal in thickness. The masonry units shall be laid with ends unsealed and joints matched in such a way as to provide a free circulation of air through the core spaces of the masonry. The top surface of the masonry shall be covered with sheet metal not less than 0.024 gauge [0.61 mm]. The floor protection shall extend not less than 18 in. (457 mm) beyond the appliance on all sides.

**SUBSTANTIATION:** This small change will allow the use of commonly available bricks for the construction of hearths.

**COMMITTEE ACTION:** Accept

**COMMITTEE STATEMENT:**

**NUMBER OF COMMITTEE MEMBERS ELIGIBLE TO VOTE:** 14

**VOTE ON COMMITTEE ACTION:**

**AFFIRMATIVE:** 9

**NOT RETURNED:** 5 Rucker, Grisack, Schulz, Shiver, and Stone

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10.4 Termination (Height).

10.4.1 Type B gas vents shall be used to vent only listed gas appliances with draft hoods and other Category I gas appliances listed for use with Type B gas vents.

10.4.1.1 Type B gas vents shall not be used for venting the following:

(1) Vented wall furnaces listed for use with Type BW gas vents only
(2) Incinerators
(3) Appliances that can be converted readily to the use of solid or liquid fuels
(4) Combination gas/oil-burning appliances
(5) Appliances listed for use with chimneys only
(6) Listed Categories II, III, and IV gas appliances

10.4.1.2 All vents shall terminate above the roof surface.

10.4.1.3 Vents installed with a listed cap shall terminate in accordance with the manufacturer's instructions.

10.4.2 Type BW vents shall be used only with listed vented gas wall furnaces having a capacity not greater than that of the listed Type BW gas vent.

10.4.3 Natural draft gas vents serving vented wall furnaces shall terminate at an elevation not less than 12 ft. (3.7 m) above the bottom of the furnace.

10.4.4 Vents passing through roofs shall extend through the roof flashing.

10.4.5 Mechanical draft systems shall not be required to comply with 10.4.1 and 10.4.3, provided they comply with the following:

(a) The exit terminal of a mechanical draft system other than a direct vent appliance (sealed combustion system appliance) shall be located in accordance with the following:
   - Not less than 3 ft. (0.91 m) above any forced air inlet located within 10 ft. (3 m)
   - Not less than 4 ft. (1.2 m) below, 4 ft. (1.2 m) horizontally from, or 1 ft. (0.3 m) above any door, window, or gravity air inlet into any building
   - Not less than 2 ft. (0.61 m) from an adjacent building and not less than 7 ft. (2.1 m) above grade where located adjacent to public walkways

(b) The exit terminal shall be so arranged that flue gases are not directed so that they jeopardize people, overheat combustible structures, or enter buildings.

10.5 Notice of Usage.

10.5.1 In those localities where solid and liquid fuels are used extensively, gas vents shall be plainly and permanently identified by a label attached to the wall or ceiling at a point where the connector enters the building.

10.5.2 Where a Type B gas vent, Special Gas Vent, or pellet vent is used as the liner for a masonry chimney, the chimney shall be plainly and permanently identified by a label attached to the point where the connector enters the chimney and that reads as follows: "This Chimney Liner Is for (name type; category of appliance) Appliances That Burn (type of fuel) Only. Do Not Connect Other Types of Appliances."

10.6 Installation.

10.6.1 Type B, Type BW, and Type L vents shall be listed and installed in full compliance with the terms of their listing and the manufacturer's installation instructions.

10.6.2 Vents installed through insulation or areas to be insulated shall be separated by a physical barrier to establish and maintain the minimum air space clearance required by the vent manufacturer.

10.6.3 Vents that pass through the floors of buildings requiring the protection of vertical openings shall be enclosed within an approved enclosure.

10.6.3.1 The enclosure walls shall have a fire resistance rating of not less than 1 hour where a vent as described in 10.6.3 is located in a building less than four stories in height.

10.6.3.2 The enclosure walls shall have a fire resistance rating of not less than 2 hours where a vent as described in 10.6.3 is located in a building four or more stories in height.

10.6.4 Unlisted single-wall metal pipe shall be installed as specified in 10.6.4.1 through 10.6.4.3.

10.6.4.1 Unlisted single-wall metal pipe shall be installed with minimum clearances from combustible material as follows:

(a) Unlisted gas appliances without draft hoods — 18 in. (457 mm)
(b) Unlisted gas appliances equipped with draft hoods — 9 in. (229 mm)
(c) Boilers and furnaces equipped with listed conversion gas burners and with draft hoods — 9 in. (229 mm)
(d) Lined gas appliances with draft hoods and other Category I gas appliances listed for use with Type B vents — 6 in. (152 mm)

Exception: Residential incinerators.

10.6.4.2 Where a single-wall metal pipe passes through an exterior wall constructed of combustible material, it shall be guarded protected at the point of

above the highest connected appliance outlet.

(See 10.4.3 and 10.7.2)

Exception: As provided in 10.4.3 and 10.7.2.
passage by a ventilating metal thimble not smaller than the following:

Exception: (1) Where all combustible material in the wall is cut away from the pipe a sufficient distance to provide the clearance required by 10.6.4.1 from such pipe to combustible material, with entirely noncombustible material used to close such an opening.

(2) For listed gas-burning appliances with draft hoods and other Category I gas appliances listed for use with Type B vents, the thimble shall be 4 in. (102 mm) larger in diameter than the pipe.

Exception No. 1: Residential incinerators.

Exception No. 2: Where there is a run of not less than 6 ft. (1.8 m) of pipe in the open between the draft hood outlet or flue collar and the thimble, the thimble shall be permitted to be 2 in. (51 mm) larger in diameter than the pipe.

For unlisted gas-burning appliances with draft hoods, the thimble shall be 6 in. (152 mm) larger in diameter than the pipe.

10.7.2.4.6. Exception: This clearance shall be permitted to be reduced where the combustible material is protected in accordance with Table 10.5.1.2

10.7.3 Clothes Dryers.

10.7.3.1 All dryers, dryers expelling lint or their ducts shall be provided with a lint collector.

Exception: Where the dryer is so equipped.

10.7.3.2 Requirements for Type 1 gas-fired clothes dryer exhaust shall be in accordance with NFPA 54, National Fuel Gas Code.

10.7.3.3 Type 2 clothes dryers shall be exhausted to the outside air.

10.7.3.4 Provision for makeup air shall be provided for Type 2 clothes dryers, with a minimum free area of 1 in² (6.452 mm²) for each 1000 Btu/hr (1055 kJ/hr) total input rating of the dryer(s) installed.

10.7.3.5 A clothes dryer exhaust duct shall not be connected into any chimney, vent connector, vent, chimney, or vent.

10.7.3.6 Ducts for exhausting clothes dryers shall not be put together with sheet metal screws or other fastening means that extend into the duct, thereby catching lint and reducing the efficiency of the exhaust.

10.7.3.7 Exhaust ducts for Type 2 clothes dryers shall be constructed of sheet metal or other noncombustible material.

10.7.3.8 Type 2 clothes dryers shall be exhausted to the outside air.

10.7.3.9 Where ducts pass through walls, floors, or partitions, the space around the duct shall be sealed with noncombustible material.

10.7.3.10 Multiple installations of Type 1 and Type 2 clothes dryers shall be made in a manner to prevent adverse operation due to back pressures that might be created in the exhaust.

10.7.3.11 Common exhaust vents that pass through floors of buildings requiring the protection of vertical openings shall be enclosed with approved approved walls having a fire resistance rating of not less than

1. (1) 1 hour where such chimneys are located in a building less than four stories in height, and

(2) not less than 2 hours where such chimneys are located in a building four or more stories in height.

10.7.4 Equipment with Integral Vents. Gas utilization appliances incorporating integral venting means shall be considered properly vented where installed in accordance with the terms of their listing.

SUBSTANTIATION: Editorially revise chapter to comply with NFPA Manual of Style. This is an editorial revision only no technical changes occur in this proposal. Technical changes have been made by other proposals. Comments on technical revisions should be addressed to the appropriate proposal.

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11.2.1.1.6 The lintel spanning the fireplace shall be designed and constructed to support safely the additional concentrated load transferred by the member.

11.2.1.6 Where unlined, the smoke chamber wall thickness shall be not less than 8 in. (203 mm).

11.2.1.8 Where unlined, the smoke chamber wall thickness shall be not less than 8 in. (203 mm).

11.2.1.9 The smoke chamber height shall not be greater than the inside width of the fireplace room opening.

11.2.1.10 The smoke chamber depth shall not be greater than the depth of the fireplace fire chamber, as shown in See Figure 11.2.1.5.

11.2.1.11 The inner surfaces of the smoke chamber shall be smooth and not inclined more than 45 degrees from vertical.

11.2.1.12 Masonry fireplaces shall be provided with chimneys designed and constructed in accordance with the requirements for construction of masonry chimneys (see Chapter 11).

11.2.2 Steel Fireplace Units.

11.2.2.2 An air chamber shall be installed with masonry to provide a total thickness that the back side of the steel fireplace unit of not less than 8 in. (203 mm). Where unlined, the smoke chamber wall thickness shall be not less than 8 in. (203 mm).

11.2.2.2.1 Not less than 4 in. (102 mm) of the back side shall be solid masonry.

11.2.2.2.3 Listed firebox liners shall be installed in accordance with the requirements for construction of masonry chimneys (see Chapter 11).

11.2.2.4 Warm-air ducts employed with steel fireplace units of the circulating air type shall be constructed of metal or masonry.

11.2.3 Clearances.

11.2.3.1 All wood beams, joists, studs, and other combustible material shall have a clearance to masonry fireplaces of:

(a) not less than 2 in. (51 mm) from the front faces and sides of masonry fireplaces

(b) not less than 4 in. (102 mm) from the back faces of masonry fireplaces, as shown in Figure 11.2.3.1.

Figure 11.2.3.1 Firepace clearance to combustible material.

11.2.3.2 Spaces between headers or trimmers of combustible material and masonry fireplaces shall be firestopped with noncombustible material.

11.2.3.3 The material used for firestopping shall be:

(a) a noncombustible material with a fire resistance rating of not less than 2 hours

11.2.3.4 Figure 11.2.3.3 shows the type of firestopping material used.

Figure 11.2.3.3 Firepace clearance to combustible material. [Existing Figure 8.2.3.3]
11.5 Combustion Air Ducts.

11.5.1 Combustion air ducts shall be installed in accordance with this section.

Exception: W1 11.5.1 Commercial and industrial installations other than those covered by NFPA 86, Standard for Fuel Oils, shall be permitted to bypass the requirements of W1 11.5.1.5 when the authority having jurisdiction determines that it is safe to do so.

11.5.2 Where required by the authority having jurisdiction, combustion air ducts shall be installed in accordance with this section.

Exception: W1 11.5.2 Unlisted accessories that are acceptable to the authority having jurisdiction shall be permitted to be installed as approved and in accordance with the manufacturer’s installation instructions.

11.5.3 Where the fireplace opening is 6 ft. (0.56 m) or larger, the hearth extension shall extend at least 20 in. (508 mm) in front of the facing material and extend at least 12 in. (305 mm) beyond each side of the fireplace opening. (See Figure 11.3.2.)

11.3.2 Where the fireplace opening is 6 ft. (0.56 m) or larger, the hearth extension shall extend at least 20 in. (508 mm) in front of the facing material and extend at least 8 in. (203 mm) beyond each side of the fireplace opening, as shown in (See Figure 11.3.2).

11.5.4 Where the fireplace opening is 6 ft. (0.56 m) or larger, the hearth extension shall extend at least 16 in. (406 mm) in front of the facing material and extend at least 8 in. (203 mm) beyond each side of the fireplace opening. (See Figure 11.3.2.)

11.5.5 Where a fireplace is elevated above or overhangs a floor, the hearth extension also shall extend over the area under the fireplace.

11.4 Accessories. Such accessories as fireplace accessories shall be installed and in accordance with the terms of their listing or listing.

Exception: Unless specifically listed for such use.

11.5.2.1 Combustion air ducts shall extend as directly as practicable from the outdoors (inlet) to a termination outside the fire chamber (outlet).

11.5.2.2 Combustion air ducts shall extend as directly as practicable from the outdoors (inlet) to a termination outside the fire chamber (outlet).

11.5.2.3 Combustion air ducts shall extend directly as practicable from the outdoors (inlet) to a termination outside the fire chamber (outlet).

11.5.2.4 Combustion air ducts shall be constructed of (1) masonry; or (2) galvanized steel with a thickness not less than 26 gauge [0.019 in. (0.483 mm)], or (3) other approved noncombustible material and shall be equipped with a damper that is capable of being fully closed.

11.5.2.5 Combustion air ducts that terminate outside the fire chamber, within a 6 ft. (1.8 m) radius, shall comply with this section.

11.5.2.6 Combustion air ducts that extend from the fire chamber, within a 6 in. (152 mm) radius, shall comply with this section.

11.5.2.7 Combustion air ducts that extend from the fire chamber, within a 6 in. (152 mm) radius, shall comply with this section.

11.5.2.8 Combustion air ducts that terminate outside the fire chamber, within a 6 ft. (1.8 m) radius, shall comply with this section.

11.5.2.9 Combustion air ducts that extend from the fire chamber, within a 6 in. (152 mm) radius, shall comply with this section.

11.5.2.10 Combustion air ducts that terminate outside the fire chamber, within a 6 ft. (1.8 m) radius, shall comply with this section.

11.5.2.11 Combustion air ducts that extend from the fire chamber, within a 6 in. (152 mm) radius, shall comply with this section.

11.5.2.12 Combustion air ducts that terminate outside the fire chamber, within a 6 ft. (1.8 m) radius, shall comply with this section.

11.5.2.13 Combustion air ducts that extend from the fire chamber, within a 6 in. (152 mm) radius, shall comply with this section.

11.5.2.14 Combustion air ducts that terminate outside the fire chamber, within a 6 ft. (1.8 m) radius, shall comply with this section.

11.5.2.15 Combustion air ducts that extend from the fire chamber, within a 6 in. (152 mm) radius, shall comply with this section.

11.5.2.16 Combustion air ducts that terminate outside the fire chamber, within a 6 ft. (1.8 m) radius, shall comply with this section.
A.12.3 Solid fuel-burning appliances shall be installed in a location and manner so as to provide adequate ventilation and combustion air supply to allow satisfactory combustion of fuel, proper chimney draft, and maintenance of safe temperatures. Where buildings are so tight that normal infiltration does not provide the necessary air, outside air shall be introduced.

12.4 Chimney Connections and Usage.

12.4.1 Chimney Connection. All solid fuel-burning appliances shall be connected to chimneys in accordance with Chapter 65.

12.4.1.1 The chimney provided shall be in accordance with Table 65.2.1.

12.4.2 Clearance. The clearance of chimney connectors to combustible material shall be as specified in accordance with Table 69.5.1.1.

12.4.3 Inspection and Cleaning Access. Connectors and chimneys for solid fuel-burning appliances shall be designed, located, and installed to allow easy access for internal inspection and cleaning.

12.4.4* Flue Cross-sectional Area. For residential-type solid fuel-burning appliances, the cross-sectional area of the flue shall not be less than the cross-sectional area of the appliance flue collar.

12.4.4.1 The cross-sectional area of the flue shall not be more than three times the cross-sectional area of the appliance flue collar.

12.4.5 Connection to Masonry Fireplaces. A solid fuel-burning appliance such as a stove or insert shall be permitted to use a masonry fireplace flue where the following conditions are met:

   Exception: Listed fireplace accessories shall be permitted to use a masonry fireplace flue:

   (1) There is a connector that extends from the appliance to the flue liner.

   (2) * The cross-sectional area of the flue is no more than three times the cross-sectional area of the flue collar of the appliance.

   (3) If the appliance vents directly through the chimney wall above the smoke chamber, there shall be a noncombustible seal below the entry point of the connector.

   (4) The installation shall be such that the chimney system can be inspected and cleaned.

   (5) Means shall be provided to prevent dilution of combustion products in the chimney flue with air from the habitable space.

12.4.6 Existing Flue Use. Another solid fuel-burning appliance shall not be installed using an existing flue serving a factory-built fireplace unless the appliance is specifically listed for such installation.

12.5 Mounting.

12.5.1 Mounting for Residential-Type Appliances.

12.5.1.1 General Requirements.

12.5.1.1.1 Residential-type solid fuel-burning appliances that are tested and listed by a recognized testing laboratory for installation on floors constructed of combustible materials shall be placed on floors in accordance with the requirements of the listing and conditions of approval.

12.5.1.2* Such appliances. Appliances that are not listed by a recognized testing laboratory shall be provided with floor protection in accordance with the provisions of 12.5.1.2 or 12.5.1.3.

   Exception: 12.5.1.1.3 Residential-type solid fuel-burning appliances shall be permitted to be placed without floor protection in any of the following manners:

   (e1) On concrete bases adequately supported on compacted soil, crushed rock, or gravel

   (e2) On concrete slabs or masonry arches that do not have combustible materials attached to the underside

   (e3) On approved assemblies constructed of only noncombustible materials and having a fire resistance rating of not less than 2 hours, with floors constructed of noncombustible material

   (e4) On properly stabilized ground that can support the load of the appliance

12.5.1.1.4 Any floor assembly, slab, or arch shall extend not less than 18 in. (457 mm) beyond the appliance on all sides.

12.5.1.1.5 In lieu of the requirements for floor protection specified herein, a floor protector listed by a recognized testing laboratory and installed in accordance with the installation instructions shall be permitted to be employed.

12.5.1.1.6 Concrete bases, concrete slabs, masonry arches, and floor-ceiling assemblies and their supports shall be designed and constructed to support the appliances.

12.5.1.2 Room Heaters, Fireplace Stoves, Room Heater/Fireplace Combinations, and Ranges.

12.5.1.2.1 Room heaters, fireplace stoves, room heater/fireplace stove combinations, or ranges that are set on legs or pedestals that provide not less than 6 in. (152 mm) of ventilated open space beneath the fire chamber or base of the appliance shall be permitted to be placed on floors of combustible construction, provided the floor under the appliance is:

   (1) protected with closely spaced solid masonry units not less than 2 in. (51 mm) in thickness.

   (2) The top surface of the masonry shall be covered with sheet metal not less than 24 gauge [0.024 in. (0.61 mm)].

   (3) The floor protection shall extend not less than 18 in. (457 mm) beyond the appliance on all sides.

12.5.1.2.2 Room heaters, fireplace stoves, room heater/fireplace stove combinations, or ranges that are set on legs or pedestals providing 2 in. to 6 in. (51 mm to 153 mm) of ventilated open space beneath the fire chamber or base of the appliance shall be permitted to be placed on floors of combustible construction, provided:

   (1) the floor under the appliance is protected with one course of hollow masonry units not less than 4 in. (102 mm) in thickness.

   (2) The masonry units shall be laid with ends unsealed and joints matched in such a way as to provide a free circulation of air through the core spaces of the masonry.

   (3) The top surface of the masonry shall be covered with sheet metal not less than 24 gauge [0.024 in. (0.61 mm)].

   (4) The floor protection shall extend not less than 18 in. (457 mm) beyond the appliance on all sides.

12.5.1.2.3 Room heaters, fireplace stoves, room heater/fireplace stove combinations, or ranges with legs or pedestals that provide not less than 2 in. (51 mm) of ventilated open space beneath the fire chamber or base of the appliance shall not be placed on floors of combustible construction.

12.5.1.3 Furnaces and Boilers.

12.5.1.3.1 Furnaces or boilers with legs or pedestals that provide not less than 6 in. (153 mm) of ventilated open space beneath the fire chamber or base of the appliance shall be permitted to be placed on floors of combustible construction, provided the floor under the appliance is:

   (1) protected with one course of hollow masonry units not less than 4 in. (102 mm) in thickness.

   (2) The masonry units shall be laid with ends unsealed and joints matched in such a way as to provide a free circulation of air through the core spaces of the masonry.

   (3) The top surface of the masonry shall be covered with steel plate not less than 3/16 in. (4.8 mm) in thickness.

   (4) The floor protection shall extend not less than 18 in. (457 mm) beyond the appliance on all sides.

12.5.1.3.2 Furnaces or boilers that are set on legs or pedestals that provide 2 in. to 6 in. (51 mm to 153 mm) of ventilated open space beneath the fire chamber or base of the appliance shall be permitted to be placed on floors of combustible construction, provided:

   (1) protected with two courses of hollow masonry units, each not less than 4 in. (102 mm) in thickness.

   (2) The masonry units shall be laid with ends unsealed and joints matched in such a way as to provide a free circulation of air through the core spaces of the masonry.

   (3) The top surface of the masonry shall be covered with steel plate not less than 3/16 in. (4.8 mm) in thickness.

   (4) The floor protection shall extend not less than 18 in. (457 mm) beyond the appliance on all sides.

12.5.1.3.3 Furnaces or boilers with legs or pedestals that provide less than 2 in. (51 mm) of ventilated open space beneath the fire chamber or base of the appliance shall not be placed on floors of combustible construction.

12.5.2 Mounting for Low-Heat Nonresidential Appliances.

12.5.2.1 Low-heat nonresidential solid fuel-burning appliances that have been tested and listed by a recognized testing laboratory for placement on floors constructed with a combustible material shall be placed on floors in accordance with the requirements of the listing and conditions of approval.
12.5.2.1.1 Such appliances shall not be listed by a recognized testing laboratory. Appliances that are not listed by a recognized testing laboratory shall be provided with floor protection in accordance with the provisions of 12.5.2.2 or 12.5.2.4.

Exception 12.5.2.2.2 Low-heat nonresidential solid fuel-burning appliances shall be permitted to be placed without floor protection in any of the following manners:
(a) On floors constructed of noncombustible materials and having a fire resistance rating of not less than 2 hours; this construction shall extend not less than 18 in. (457 mm) beyond the appliance on all sides.
(b) On concrete bases adequately supported on compacted soil, crushed rock, or gravel.
(c) On properly stabilized ground that can support the load of the appliance.

12.5.2.2 Concrete bases, concrete slabs, and floors shall be designed and constructed to support the appliances.

12.5.2.3 Low-heat nonresidential solid fuel-burning appliances that are set on legs or pedestals that provide not less than 18 in. (457 mm) of ventilated open space beneath the fire chamber or base of the appliance shall be permitted to be placed on floors of combustible construction, provided the floor under the appliance is
(1) protected with one course of hollow masonry units not less than 4 in. (102 mm) in thickness.
(2) The masonry units shall be laid with ends unsealed and joints matched in such a way as to provide free circulation of air through the core spaces of the masonry.
(3) The top surface of the masonry shall be covered with a steel plate not less than 3/16 in. (4.8 mm) in thickness.
(4) The floor protection shall extend not less than 18 in. (457 mm) beyond the appliance on all sides.

12.5.2.4 Low-heat nonresidential solid fuel-burning appliances that are set on legs or pedestals that provide not less than 6 in. (153 mm) to 24 in. (610 mm) of ventilated open space beneath the fire chamber or base of the appliance shall be permitted to be placed on floors of combustible construction, provided:
(1) The floor under the appliance is protected with two courses of hollow masonry units, each not less than 4 in. (102 mm) in thickness.
(2) The masonry units shall be laid with ends unsealed and joints matched in such a way as to provide free circulation of air through the core spaces of the masonry.
(3) The top surface of the masonry shall be covered with a steel plate not less than 3/16 in. (4.8 mm) in thickness.
(4) The floor protection shall extend not less than 18 in. (457 mm) beyond the appliance on all sides.

12.5.2.5 Low-heat nonresidential solid fuel-burning appliances with legs or pedestals that provide not less than 6 in. (153 mm) of ventilated open space beneath the fire chamber or base of the appliance shall not be placed on floors of combustible construction.

12.5.3 Mounting for Medium-Heat Nonresidential Appliances.

12.5.3.1 Medium-heat nonresidential solid fuel-burning appliances that have been tested and listed by a recognized testing laboratory for placement on floors constructed with a combustible material shall be placed on floors in accordance with the requirements of the listing and conditions of approval.

12.5.3.1.1 Such appliances that are not listed by a recognized testing laboratory shall be provided with floor protection in accordance with the provisions of 12.5.3.3 or 12.5.3.4.

Exception 12.5.3.1.2 Medium-heat nonresidential solid fuel-burning appliances shall be permitted to be placed without floor protection in any of the following manners:
(a) On concrete bases adequately supported on compacted soil, crushed rock, or gravel.
(b) On floors constructed of noncombustible materials and having a fire resistance rating of not less than 2 hours; this construction shall extend not less than 3 ft. (0.9 m) beyond the appliance on all sides and 8 ft. (2.45 m) beyond the front or side where ashes are removed.
(c) On properly stabilized ground that can support the load of the appliance.

12.5.3.2 Concrete bases, concrete slabs, and floors shall be designed and constructed to support the appliances.

12.5.3.3 Medium-heat nonresidential solid fuel-burning appliances that are set on legs or pedestals that provide not less than 24 in. (610 mm) of ventilated open space beneath the fire chamber or base of the appliance shall be permitted to be placed on floors of combustible construction, provided the floor under the appliance is
(1) protected with one course of hollow masonry units not less than 4 in. (102 mm) in thickness.
(2) The masonry units shall be laid with ends unsealed and joints matched in such a way as to provide a free circulation of air through the core spaces of the masonry.
(3) The top surface of the masonry shall be covered with a steel plate not less than 3/16 in. (4.8 mm) in thickness.
(4) The floor protection shall extend not less than 3 ft. (0.9 m) beyond the appliance on all sides and 8 ft. (2.45 m) beyond the front or side where ashes are removed.

12.5.3.4 Medium-hear nonresidential solid fuel-burning appliances that are set on legs or pedestals that provide not less than 18 in. (457 mm) of ventilated open space beneath the fire chamber or base of the appliance shall be permitted to be placed on floors of combustible construction, provided:
(1) The floor under the appliance is protected with two courses of hollow masonry units, each not less than 4 in. (102 mm) in thickness.
(2) The masonry units shall be laid with ends unsealed and joints matched in such a way as to provide a free circulation of air through the core spaces of the masonry.
(3) The top surface of the masonry shall be covered with a steel plate not less than 3/16 in. (4.8 mm) in thickness.
(4) The floor protection shall extend not less than 3 ft. (0.9 m) beyond the appliance on all sides and 8 ft. (2.45 m) beyond the front or side where ashes are removed.

12.5.3.5 Medium-hear nonresidential solid fuel-burning appliances with legs or pedestals that provide less than 18 in. (457 mm) of ventilated open space beneath the fire chamber or base of the appliance shall not be placed on floors of combustible construction.

12.5.4 Mounting of High-Heat Nonresidential Appliances.

12.5.4.1 High-heat nonresidential solid fuel-burning appliances shall be placed in one of the following manners:
(a) On concrete bases adequately supported on compacted soil, crushed rock, or gravel.
(b) On floors constructed of noncombustible materials and having a fire resistance rating of not less than 2 hours; this construction shall extend not less than 10 ft. (3.1 m) beyond the appliance on all sides and not less than 30 ft. (9.2 m) beyond the front or side where hot products are removed.
(c) On properly stabilized ground that can support the load of the appliance.

12.5.4.2 Concrete bases and floors shall be designed and constructed to support the appliances.

12.5.4.3 High-hear nonresidential solid fuel-burning appliances shall not be placed on floors of combustible construction.

12.6 Clearances from Solid Fuel-Burning Appliances.

12.6.1 Solid fuel-burning appliances shall be installed so that their use cannot create a hazard to persons or property. The clearance shall be not less than specified in Table 12.6.1.

Exception No. 1: 12.6.1.1 Appliances listed for installation with clearances less than specified in Table 12.6.1 shall be permitted to be installed in accordance with the terms of their listing and the manufacturer’s instructions.

Exception No. 2: 12.6.1.2 Heating furnaces and boilers and water heaters specifically listed for installation in spaces such as alcoves shall be permitted to be so installed in accordance with the terms of their listing, provided the specified clearance is maintained regardless of whether the enclosure is of combustible or noncombustible material.

12.6.1.3 These clearances shall apply to appliances installed in rooms that are large in comparison with the size of the appliances. For reduced clearances, see Table 12.6.2.

Table 12.6.1 Standard Clearances for Solid Fuel-Burning Appliances

12.6.2 Clearance Reduction.

12.6.2.1 Clearances from listed and unlisted solid fuel-burning appliances to combustible material shall be permitted to be reduced if the combustible material is protected as described in Table 12.6.2.1 and in Figures 12.6.2.1(a) through (d).

12.6.2.1.1 Unless the appliance is specifically listed for lesser clearance, the clearance after After-reduction, clearance shall not be less than
(1) 12 in. (305 mm) to combustible walls and (2) not less than 18 in. (457 mm) to combustible ceilings.

Exception: Appliances listed for installation with a clearance of less than 12 in. (305 mm) to a combustible wall or less than 18 in. (457 mm) to a combustible ceiling shall be installed in accordance with the terms of their listing and the manufacturer’s instructions.
Table 12.6.2.1 Reduction of Appliance Clearance with Specified Forms of Protection

<table>
<thead>
<tr>
<th>Section</th>
<th>Description</th>
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<tbody>
<tr>
<td>12.6.2.1(a)</td>
<td>Clearance reduction system — fastener location. [Existing Figure 9.6.2.1(a)]</td>
</tr>
<tr>
<td>12.6.2.1(b)</td>
<td>Distance to combustible wall/floor. [Existing Figure 9.6.2.1(b)]</td>
</tr>
<tr>
<td>12.6.2.1(c)</td>
<td>Masonry clearance reduction system. [Existing Figure 9.6.2.1(c)]</td>
</tr>
<tr>
<td>12.6.2.1(d)</td>
<td>Fastener detail. [Existing Figure 9.6.2.1(d)]</td>
</tr>
<tr>
<td>12.6.2.1(e)</td>
<td>Wall protection using materials in Table 12.6.2.1. [Existing Figure 9.6.2.1(e)]</td>
</tr>
<tr>
<td>12.6.2.1(f)</td>
<td>Ceiling protection using materials in Table 12.6.2.1. [Existing Figure 9.6.2.1(f)]</td>
</tr>
</tbody>
</table>

12.6.2 Clearances from solid fuel-burning appliances to combustible material shall be permitted to be reduced, provided the combustible material is protected by an engineered protection system acceptable to the authority having jurisdiction.

12.6.2.1.1 Engineered systems installed for the protection of combustible material shall reduce the temperature of such materials to 90°F (50°C) rise above ambient.

12.6.2.2 System design shall be based on applicable heat transfer principles, taking into account:
1. the geometry of the system,
2. the heat loss characteristics of the structure behind the combustible material, and
3. the possible abnormal operating conditions of the heat-producing sources.

12.6.2.3 Clearances from solid fuel-burning appliances to combustible material shall be permitted to be reduced by the use of materials or products listed for protection purposes.

12.6.2.3.1 Materials and products listed for the purpose of reducing clearance to combustibles shall be installed in accordance with the conditions of the listing and the manufacturer’s instructions.

12.6.2.4 For clearance reduction systems using an air space between the combustible wall and the wall protector, adequate air circulation shall be provided by one of the following methods as shown in Figure 12.6.2.4.

Figure 12.6.2.4 Air circulation methods.

12.6.2.4.1 Adequate air circulation shall be permitted to be provided by leaving all edges of the wall protector open with at least 1 in. (25.4 mm) air gap.

12.6.2.4.2 If the wall protector is mounted on a single flat wall away from corners, adequate air circulation shall be permitted to be provided by leaving only the bottom and top edges or only the side and top edges open with at least 1 in. (25.4 mm) air gap.

12.6.2.4.3 Wall protectors that cover two walls in a corner shall be open at the bottom and top edges with at least 1 in. (25.4 mm) air gap.

12.6.2.5 All clearances shall be measured from the outer surface of the combustible material to the nearest point on the surface of the solid fuel-burning appliance, disregarding any intervening protection applied to the combustible material.

12.6.2.6 All clearances provided between solid fuel-burning appliances and combustible materials shall be large enough to maintain sufficient clearances between chimney connectors and combustible material as required in Section 60.5.

12.7 Accessories. Factory-built accessories for solid fuel-burning appliances such as heat exchangers, stove mats, floor pads, and protection shields shall be listed and shall be installed in accordance with the terms of their listing.

Exception—

12.7.1 Unlisted accessories that are acceptable to the authority having jurisdiction shall be permitted to be installed in accordance with the approval of the authority having jurisdiction and the appliance and accessory manufacturers’ installation instructions.

SUBSTANTIATION: Editorially revise chapter to comply with NFPA Manual of Style. This is an editorial revision only no technical changes occur in this proposal. Technical changes have been made by other proposals. Comments on technical revisions should be addressed to the appropriate proposal.

COMMITTEE ACTION: Accept

NUMBER OF COMMITTEE MEMBERS ELIGIBLE TO VOTE: 14

VOTE ON COMMITTEE ACTION:

AFFIRMATIVE: 9

NOT RETURNED: 5 Rucker, Grisack, Schulz, Shiver, and Stone
Table 14.3 shall not be required to comply with the minimum levels of inspection set forth in this chapter.

14.1.2 However, defects that are observed during the course of such work shall be reported to the property owner, occupant, or responsible party.

14.2 Inspection Definitions.

14.2.1 See Accessible.

14.2.2 See Accessible, Readily.

14.2.3 See Non-Accessible, Concealed.

14.3 Type of Inspection. The scope of the inspection, the areas of the chimney examined, and the degree of invasiveness of the inspection shall be appropriate for the conditions giving rise to the inspection.

Table 14.3 Selection of Inspection Type

14.3.1 The type of inspection shall be determined in accordance with Table 14.3.

14.3.1.1 The type of inspection performed shall be based on the circumstances that give rise to the inspection.

14.3.1.2 For situations shown in the Circumstances row of Table 14.3, the minimum level of inspection shall be that indicated by column in which the situation is found.

14.3.1.3 For situations not shown in the Circumstances row, the type of inspection shall be based on the descriptions in the Indications row.

14.3.2.5 Nothing shall prevent the examination of all or part of the chimney at a higher level than the minimum indicated by Table 14.3, Selection of Inspection Types.

14.3.5.1 Partial examination of the chimney at a higher level shall not require that the entire inspection be conducted at the higher level.

14.4* Level I Inspections. A Level I inspection shall be utilized when verification of the suitability of the chimney for continued service, under appropriate for the conditions giving rise to the inspection.

14.5* Level II Inspections. A Level II inspection is indicated when verification of the suitability of the chimney for new or changed conditions of service is needed or when a Level I inspection is not sufficient to determine the serviceability of the chimney is needed.

14.5.1 Circumstances. A Level II inspection shall be conducted under the following circumstances:

14.5.1.1 Upon addition or removal of one or more connected appliances or upon replacement of an appliance with one or more of dissimilar type, input rating, or efficiency.

14.5.1.2 Prior to relining of a flue or replacement of flue lining, in accordance with 14.2.2.10.

14.5.1.3 Upon sale or transfer of the property.

14.5.1.4 At other times as indicated in Section 14.4.

14.4.2.5 The connected appliance or appliances, their chimney connectors, and surroundings shall be examined for proper clearances, floor mounting and protection, damage or deterioration, and observable evidence of operating malfunction.

14.4.2.6 Chimney connectors shall be examined for proper support and fastening of joints, pitch, and securement to the chimney.

14.4.2.7* Internal surfaces of fireplaces and smoke chambers shall be examined for damage and deterioration, freedom from combustible deposits, and evidence of operating malfunction.

14.4.2.7.1 Fireplace inserts, stoves, or accessories shall be removed from the fireplace as necessary to permit such examination.

14.4.2.7.2 The means of connecting a fireplace insert or stove to the chimney flue shall be examined for compliance with 912.4.5.

14.4.2.7.3* Fireplace inserts, stoves, or accessories shall not be required to be removed when the venting system can be thoroughly cleaned without such removal.

14.5* Prior to relining of a flue or replacement of flue lining, in accordance with 14.2.1.10.

14.5.1.4 Upon sale or transfer of the property.

14.5.1.5 At other times as indicated in Section 14.4.

14.5.2 Scope and Access. Level II inspections shall include all accessible portions of the chimney exterior and interior, including:

1. areas within accessible attics,

2. crawl spaces, and

3. basements, and

4. accessible portions of the appliance and chimney connection.

14.5.2.1 The inspection shall include examination of all areas covered in 14.4.2 for Level I inspections.

14.5.2.2 All areas of the chimney and its surroundings that can be accessed without the removal or destruction of permanently attached portions of the chimney or building structure shall be inspected.

14.5.2.2.1 The inspection shall include examination of locations within attics, crawl spaces, and basements that can be accessed through doors, hatches, or other openings that do not require removal of permanently attached parts of the building.

14.5.2.3 The inspection shall include examination of accessible areas of all chimney flues and the internal surfaces of all flue liners incorporated within the chimney.

14.5.2.3.1 Video scanning equipment or other means shall be used as necessary to observe these areas.

14.5.2.4 The inspection shall include verification of proper clearances from the chimney to combustibles at all locations that can be accessed as described in 14.4.2.2.2.

14.5.2.5 The inspection shall include evaluation of proper type of flue lining material and flue sizing for the type and input rating of the connected appliances.
14.5.2.5.1 Sizing of flues for solid fuel-burning and pellet fuel-burning equipment shall be in accordance with this standard.

14.5.2.5.2 Sizing of flues for gas appliances shall be in accordance with NFPA 54, National Fuel Gas Code.

14.5.2.5.3 Sizing of flues for liquid fuel appliances shall be in accordance with NFPA 31, Installation of Oil-Burning Equipment.

14.6 Level III Inspections. A Level III inspection shall be utilized for concealed areas.

14.6.1 A Level III inspection shall be required only for those areas suspected of malfunction or damage that cannot be properly evaluated by a Level I or Level II inspection.

14.6.2 Circumstances. A Level III inspection shall be conducted under the following circumstances.

14.6.2.1 Where necessary for the investigation of a building or chimney fire, weather or seismic event, or other incident known to have caused damage to the chimney or building.

14.6.2.2 Where a hazard detected or suspected as the result of Level I or II inspection cannot be fully evaluated without access to concealed areas.

14.6.2.3 At other times as indicated in Section 14.6.

14.6.2 Scope and Access. A Level III inspection shall include examination of concealed areas of the chimney suspected of damage or malfunction.

14.6.2.1 The inspection shall include examination of all areas covered in 14.4.2 for Level I inspections and in 14.5.2 for Level II inspections.

14.6.2.2 Examination of the chimney shall include concealed areas that can be accessed only by removal or destruction of permanently attached portions of the chimney or building structure, as necessary to determine compliance with this standard.

SUBSTANTIATION: Editorially revise chapter to comply with NFPA Manual of Style. This is an editorial revision only no technical changes be accessed only by removal or destruction of permanently attached portions of the chimney or building.

COMMITTEE ACTION: Accept

NUMBER OF COMMITTEE MEMBERS ELIGIBLE TO VOTE: 14

VOTE ON COMMITTEE ACTION:

AFFIRMATIVE: 9

NOT RETURNED: 5 Rucker, Grisack, Schulz, Shiver, and Stone

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211-62-(A-11-5): Accept


RECOMMENDATION: Modify items 22 and 23 in the list of items for a Level II inspection as follows:

(22) Combustion air supplied for fireplaces as required in accordance with Section 8.5

(23) Condition of outside air inlets, outlets, ducting in accordance with Section 8.5.

SUBSTANTIATION: The determination of combustion air for appliances is not a part of a chimney inspection, but checking the combustion air supply of the fireplace would be.

COMMITTEE ACTION: Accept

NUMBER OF COMMITTEE MEMBERS ELIGIBLE TO VOTE: 14

VOTE ON COMMITTEE ACTION:

AFFIRMATIVE: 9

NOT RETURNED: 5 Rucker, Grisack, Schulz, Shiver, and Stone

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211-63-(A-11-5): Accept


RECOMMENDATION: Revise text as follows:

When conducting a Level II inspection on any type of factory-built chimney or appliance, the inspector should attempt to locate the product installation instructions from the building owner or occupant before review prior to completing the inspection.

SUBSTANTIATION: The term “attempt to locate” is vague and easily misunderstood in the field. Does this mean that the inspector should search the property for the instructions, call the manufacturer or distributor, etc.? The product installation instructions must be located in the field. It is not the inspector’s responsibility to locate the product installation instructions. The product installation instructions must be located in the field. It is not the inspector’s responsibility to locate the product installation instructions.

COMMITTEE ACTION: Accept

NUMBER OF COMMITTEE MEMBERS ELIGIBLE TO VOTE: 14

VOTE ON COMMITTEE ACTION:

AFFIRMATIVE: 9

NOT RETURNED: 5 Rucker, Grisack, Schulz, Shiver, and Stone

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211-64-(Entire Document): Accept

SUBMITTER: Technical Committee on Chimneys, Fireplaces, and Venting Systems for Heat Producing Appliances,

RECOMMENDATION: Restructure entire document to comply with the NFPA Manual of Style as follows:

1. Chapter 1 to contain administrative text only.
2. Chapter 2 to contain only referenced publications cited in the mandatory portions of the document.
3. Chapter 3 to contain only definitions.
4. All mandatory sections of the document must be evaluated for usability, adoptability, and enforceability language. Generate necessary committee proposals.
5. Appendices restructured and renamed as “Annexes.”


COMMITTEE ACTION: Accept

NUMBER OF COMMITTEE MEMBERS ELIGIBLE TO VOTE: 14

VOTE ON COMMITTEE ACTION:

AFFIRMATIVE: 9

NOT RETURNED: 5 Rucker, Grisack, Schulz, Shiver, and Stone

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