

CITY OF HARRISBURG ORDINANCE #2021-19,  
TO ADOPT THE 2021 IMC & IFGC WITH LOCAL AMENDMENTS,  
FOR CHAPTER 9.06 OF THE REVISED MUNICIPAL ORDINANCES

BE IT ORDAINED by the City Council of the City of Harrisburg as follows:

**ARTICLE I – PURPOSE AND JURISDICTION**

**SECTION 1 – PURPOSE.**

Ordinance #2021-19 is an ordinance to amend Chapter 9.06 of the Revised Municipal Ordinances of the City of Harrisburg by adopting the 2021 edition of the International Mechanical and Fuel Gas Codes with local amendments. The City Council of the City of Harrisburg has deemed these regulations and controls to be reasonable and reasonably related to the purpose of promoting the health, safety, and general welfare of the City of Harrisburg.

**SECTION 2 – JURISDICTION.**

This Ordinance shall govern all territory within the statutory jurisdiction of the City of Harrisburg, South Dakota.

**SECTION 3 – SEVERABILITY AND SEPARABILITY.**

Should any Article, Section, Subsection, or Provision of this Ordinance be found to be or declared invalid or unconstitutional by a court of competent jurisdiction, such decision shall not affect the validity or constitutionality of the Ordinance as a whole or any part thereof, other than the portion so declared to be invalid or unconstitutional.

**ARTICLE II – REPLACEMENT OF CHAPTER 9.06, MECHANICAL AND FUEL GAS CODES**

**Chapter 9.06 Mechanical and Fuel Gas Codes**

**9.06.01. Adopted.**

The City Council hereby adopts the International Mechanical Code, 2021 Edition, including Appendix A, and the International Fuel Gas Code, 2021 Edition, including Appendices A, B, and C, as published by the International Code Council, Inc. for regulating the design, construction, quality of materials, erection, installation, alteration, repair, location, relocation, replacement, addition to, use, or maintenance of heating, ventilation, cooling, refrigeration, incinerators, or other miscellaneous heat producing appliances in the City, and for providing for performance of inspections and collection of fees therefore. The minimum mechanical standards referenced in the International Mechanical Code and the International Fuel Gas Code shall be applied to any permit issued after December 31, 2021. A copy of this Code shall be kept on file in the office of the Building Official.

**9.06.02. Local amendments, additions, and deletions to the 2018 International Mechanical and Fuel Gas Codes.**

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The following sections and subsections of the mechanical code adopted in this Ordinance shall be amended, added, or deleted as follows. All other sections or subsections of the 2021 International Mechanical Code shall remain as originally published.

**101.1 Title.** These regulations shall be known as the Mechanical Code of the City of Harrisburg, and shall be referred to herein as “this code”.

**101.2 Scope.** This code shall regulate the design, installation, maintenance, alteration and inspection of mechanical systems that are permanently installed and utilized to provide control of environmental conditions and related processes within buildings. This code shall also regulate those mechanical systems, system components, equipment and appliances specifically addressed herein. The installation of fuel gas distribution piping and equipment, fuel gas-fired appliances and fuel gas-fired appliance venting systems shall be regulated by the International Fuel Gas Code.

**Exceptions:**

1. Detached one- and two-family dwellings and multiple single-family dwellings (town houses) not more than three stories high with separate means of egress and their accessory structures shall comply with the International Residential Code.
2. Mechanical systems in existing buildings undergoing repair, alterations or additions, and change in occupancy shall be permitted to comply with the International Existing Building Code.

**103.1 Creation of agency.** Building services is hereby created and the official in charge thereof shall be known as the Building Official. The function of the agency shall be the implementation, administration, and enforcement of the provisions of this code.

**103.2 Appointment.** Not adopted by the City.

**104.8 Liability.** The Building Official, member of the board of appeals, or employee charged with the enforcement of this code, while acting for the City in good faith and without malice in the discharge of the duties required by this code or other pertinent law or ordinance, shall not thereby be rendered liable personally, and is hereby relieved from personal liability for any damage accruing to persons or property as a result of an act or by reason of an act or omission in the discharge of official duties.

This code shall not be construed to relieve or lessen the responsibility of any person owning, operating, or controlling any building or structure for any damages to persons or property caused by defects, nor shall the city, or its officers and employees, be held as assuming any such liability by reason of the inspections authorized by this code or any permits or certificates issued under this code.

**104.8.1 Legal defense.** Any suit instituted against any officer or employee, because of an act performed by that officer or employee in the lawful discharge of

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duties and under the provisions of this code, shall be afforded all the protection provided by the City's insurance pool and immunities and defenses provided by other applicable state and federal laws and be defended by the legal representative of the City until the final termination of the proceedings. The Building Official or any subordinate shall not be liable for costs in an action, suit, or proceeding that is instituted in pursuance of the provisions of this code.

**106.1.1 Annual permit.** Not adopted by City.

**106.1.2 Annual permit records.** Not adopted by City.

**108.2 Required inspections and testing.** It shall be the duty of the mechanical contractor, or his designated mechanic doing the work authorized by a permit, to notify the mechanical inspector that such work is ready for inspection. The Building Official may require that every request for inspection be filed at least one working day before such inspection is desired.

The mechanical inspector, upon notification from the permit holder or the permit holder's agent, shall make the following inspections and other such inspections as necessary, and shall either release that portion of the construction or shall notify the permit holder or the permit holder's agent of violations that must be corrected. The holder of the permit shall be responsible for the scheduling of such inspections.

1. Underground inspection shall be made after trenches or ditches are excavated and bedded, piping installed, and before backfill is put in place. When excavated soil contains rocks, broken concrete, frozen chunks, and other rubble that would damage or break the piping or cause corrosive action, clean backfill shall be on the job site.
2. Rough-in inspection shall be made after the roof, framing, fireblocking, and bracing are in place and all ducting and other components to be concealed are complete, and prior to the installation of wall or ceiling membranes.
3. Final inspection shall be made upon completion of the mechanical system.

**Exception:** Ground-source heat pump loop systems tested in accordance with Section 1210.10 shall be permitted to be backfilled prior to inspection.

The requirements of this section shall not be considered to prohibit the operation of any heating equipment or appliances installed to replace existing heating equipment or appliances serving an occupied portion of a structure provided that a request for inspection of such heating appliances has been filed with the department not more than 48 hours after such replacement work is placed into operation or substantially completed, and before any portion of such equipment or appliances is concealed by any permanent portion of the structure.

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**109.2 Schedule of permit fees.** Where work requires a permit, a fee for each permit shall be paid as required. The fees for mechanical work shall be adopted by resolution by the City Council.

**109.3 Permit valuations.** Not adopted by the City.

**109.4 Work commencing before permit issuance.** Any person who commences work on a mechanical system before obtaining the necessary permits shall be subject to a Late Application Fee established by resolution by the City Council that shall be in addition to the required permit fees.

**109.6 Fee refunds.** The Building Official shall authorize the refunding of fees.

**114.1 General.** In order to hear and decide appeals of orders, decisions, or determinations made by the Building Official relative to the application and interpretation of this code, the City Planning Commission hereby assumes the duties of the Board of Appeals for this code. All decisions and findings of the Board shall be final and shall be rendered in writing to the appellant with a duplicate copy to the Building Official.

**114.2 Limitations on authority.** An application for appeal shall be based on a claim that the true intent of this code or the rules legally adopted hereunder have been incorrectly interpreted, the provisions of this code do not fully apply, or an equally good or better form of construction is proposed. If the appeal is based on a claim that an equally good or better form of construction was improperly denied, the appellant must submit the alternate material, design, or method of construction they are proposing. The appellant also has the burden to demonstrate to the Board that the alternative method or material that they are proposing is an equally good or better form of construction. The Board shall not have authority to waive the requirements of the International Mechanical Code as adopted by the City.

**114.3 Qualifications.** Not adopted by the City.

**114.3 Open hearing.** All hearings before the Board shall be open to the public. The appellant, the appellant's representative, the Building Official, any member of the City's staff, or any person whose interests are affected shall be given an opportunity to be heard.

**114.4 Administration.** Not adopted by the City.

**114.4 Submission of appeals.** All appeals must be submitted in writing to the Building Official within ten days of the order, decision, or determination of the Building Official that is being appealed. Once the appeal is received by the Building Official, he shall place the appeal on the Commission's next regular meeting agenda that is more than seven days (inclusive) from the date of receipt of the appeal.

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**115.4 Violation penalties.** Persons who shall violate a provision of this code or shall fail to comply with any of the requirements thereof or who shall erect, install, alter, or repair mechanical work in violation of the approved construction documents or directive of the Building Official, or of a permit or certificate issued under the provisions of this code, shall be guilty of an ordinance violation, which is a Class 2 Misdemeanor. Each day that a violation continues after due notice has been served shall be deemed a separate offense.

**201.3 Terms defined in other codes.** Where terms are not defined in this code and are defined in the International Building Code, International Residential Code, International Existing Building Code, NFPA 70, International Fire Code, International Fuel Gas Code, or the State Plumbing Code, such terms shall have meanings ascribed to them as in those codes.

**301.2 Energy utilization.** Heating, ventilating, and air-conditioning systems of all structures may be designed and installed for efficient utilization of energy in accordance with the International Energy Conservation Code.

**301.11 Plumbing connections.** Potable water supply and building drainage system connections to equipment and appliances regulated by this code shall be in accordance with the Plumbing Code adopted by the State of South Dakota.

**304.10 Clearances from grade.** Equipment and appliances installed at grade level shall be supported on a level concrete slab or other approved material extending not less than 1½ inches above adjoining grade or shall be suspended not less than 6 inches above adjoining grade. Such support shall be in accordance with the manufacturer's installation instructions.

**304.11 Guards.** Leave section as is but remove **Exception**.

**306.2 Appliances in rooms.** Rooms containing appliances shall be provided with a door and an unobstructed passageway to the service area of the appliance measuring not less than 36" wide and 80" high.

**Exception:** Within a dwelling unit, appliances installed in a compartment, alcove, basement or similar space shall be accessed by an opening or door and an unobstructed passageway measuring not less than 24" wide and large enough to allow removal of the largest appliance in the space, provided that a level service space of not less than 30" deep and the height of the appliance, but not less than 30", is present at the front or service side of the appliance with the door open.

**306.5 Equipment and appliances on roofs or elevated structures.** Where equipment requiring access or appliances are located on an elevated structure or the roof of a building such that personnel will have to climb higher than 16 feet above grade or floor level to access such equipment or appliances, an interior or exterior means of access shall be provided. Such access shall not require climbing over

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obstructions greater than 30 inches in height or walking on roofs having a slope greater than 4 units vertical in 12 units horizontal (33 percent slope). Such access shall not require the use of portable ladders. Where access involves climbing over parapet walls, the height shall be measured to the top of the parapet wall.

Permanent ladders installed to provide the required access shall comply with the following minimum design criteria:

1. The side railing shall extend above the parapet or roof edge not less than 30 inches.
2. Ladders shall have rung spacing not to exceed 14 inches on center. The uppermost rung shall be a maximum of 24 inches below the upper edge of the roof hatch, roof or parapet, as applicable.
3. Ladders shall have a toe spacing not less than 6 inches deep.
4. There shall be a minimum of 18 inches between rails.
5. Rungs shall have a minimum 0.75-inch diameter and be capable of withstanding a 300-pound load.
6. Ladders over 30 feet in height shall be provided with offset sections and landings capable of withstanding 100 pounds per square foot. Landing dimensions shall be not less than 18 inches and not less than the width of the ladder served. A guard rail shall be provided on all open sides of the landing.
7. Climbing clearance. The distance from the centerline of the rungs to the nearest permanent object on the climbing side of the ladder shall not be less than 30 inches measured perpendicular to the rungs. This distance shall be maintained from the point of ladder access to the bottom of the roof hatch. A minimum clear width of 15 inches shall be provided on both sides of the ladder measured from the midpoint of and parallel with the rungs except where cages or wells are installed.
8. Landing required. The ladder shall be provided with a clear and unobstructed bottom landing area having a minimum dimension of 30 inches by 30 inches centered in front of the ladder.
9. Ladders shall be protected against corrosion by approved means.
10. Access to ladders shall be provided at all times.
11. Exterior access may be by means of a ladder which need not extend closer than 8 feet to finished grade.
12. When a new hatch is being used to access equipment or appliances on a roof or elevated structure, the handle or release must be on the same side of the roof hatch as the ladder or within 18 inches of the ladder.

Catwalks installed to provide the required access shall be not less than 24 inches wide and shall have railings as required for service platforms.

**Exception:** This section shall not apply to Group R-3 occupancies.

**306.5.1 Sloped roofs.** Where appliances, equipment, fans or other components that require service are installed on a roof having a slope of greater than three units vertical in 12 units horizontal (25% slope) and having an edge more than 30 inches above

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grade at such edge, a level platform shall be provided on each side of the appliance or equipment to which access is required for service, repair or maintenance. The platform shall be not less than 30 inches in any dimension and shall be provided with guards. The guards shall extend not less than 42 inches above the platform, shall be constructed so as to prevent the passage of a 21-inch-diameter sphere and shall comply with the loading requirements for guards specified in the International Building Code. Access shall not require walking on roofs having a slope greater than four units vertical in 12 units horizontal (33% slope). Where access involves obstructions greater than 30 inches in height, such obstructions shall be provided with ladders installed in accordance with Section 306.5 or stairways installed in accordance with the requirements specified in the International Building Code in the path of travel to and from appliances, fans or equipment requiring service.

**312.1 Load calculations.** When deemed necessary by the mechanical inspector, heating and cooling system design loads for the purpose of sizing systems, appliances, and equipment shall be determined in accordance with the procedures described in the ASHRAE/ACCA Standard 183. Alternatively, design loads shall be determined by an approved equivalent computation procedure, using the design parameters specified in Chapter 3 of the International Energy Conservation Code.

**401.4 Intake opening location.** Air intake openings shall comply with all of the following:

1. Intake openings shall be located a minimum of 10 feet from lot lines or buildings on the same lot.
2. Mechanical and gravity outdoor air intake openings shall be located not less than 10 feet from any hazardous or noxious contaminant source, such as vents, streets, alleys, parking lots and loading docks, except as specified in Item 3 or Section 501.3.1. Outdoor air intake openings shall be permitted to be located less than 10 feet horizontally from streets, alleys, parking lots and loading docks provided that the openings are located not less than 25 feet vertically above such locations. Where openings front on a street or public way, the distance shall be measured from the centerline of the street or public way.
3. Intake openings shall be located not less than 3 feet below contaminant sources where such sources are located within 10 feet of the opening. Separation is not required between intake air openings and living space exhaust air openings of an individual dwelling unit or sleeping unit where an approved factory-built intake/exhaust combination fitting is used to separate the air streams in accordance with the manufacturer's instructions.
4. Intake openings on structures in flood hazard areas shall be at or above the elevation required by Section 1612 of the International Building Code for utilities and attendant equipment.

**403.3.2 Group R-2, R-3, and R-4 occupancies, three stories and less.** The design of local exhaust systems and ventilation systems for outdoor air in Group R-2, R-3, and R-4 occupancies three stories and less in height above grade plane shall comply with Sections 403.3.2.1 through 403.3.2.5.

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**Exceptions:**

1. A bathroom exhaust fan shall operate continuously at a minimum rate of 20 cfm. A 6-inch round passive makeup air shall be provided. If opening directly into the occupied space, such opening shall not decrease the comfort conditions of the occupied space. Such opening may also be used to provide combustion air for fuel-fired appliances if sized and designed for combustion air purposes. If opening into the mechanical room, permanent openings shall be provided between the mechanical room and occupied space to provide a path of travel for the air. The exhaust fan shall be located in the bathroom farthest away from the source of makeup air and shall be rated for 0.8 sones or less.
2. A 4-inch round fresh air duct connected to the return side of the air handler. The duct shall be insulated to a minimum R-6 and shall connect to the return trunk duct within 8 feet of the air handler duct connection, not above a finished ceiling.

**Table 403.3.2.3 Minimum Required Local Exhaust Rates for Group R-2, R-3, and R-4 Occupancies.** Remove Kitchens Area to be Exhausted.

**501.3.1 Location of exhaust outlets.** The termination point of exhaust outlets and ducts discharging to the outdoors shall be located with the following minimum distances:

1. For ducts conveying explosive or flammable vapors, fumes or dusts: 30 feet from property lines; 10 feet from operable openings into buildings; 6 feet from exterior walls and roofs; 30 feet from combustible walls and operable openings into buildings which are in the direction of the exhaust discharge; and 10 feet above adjoining grade.
2. For other product-conveying outlets: 10 feet from the property lines; 3 feet from exterior walls and roofs; 10 feet from operable openings into buildings; 10 feet above adjoining grade.
3. For all environmental air exhaust: 3 feet from property lines; 3 feet from operable openings into buildings for all occupancies other than Group U, and 10 feet from mechanical air intakes. Such exhaust shall not be considered hazardous or noxious. Separation is not required between intake air openings and living space exhaust air openings of an individual dwelling unit or sleeping unit there an approved factory-built intake/exhaust combination termination fitting is used to separate the air streams in accordance with the manufacturer's instructions.

**Exceptions.**

1. Bathroom exhaust fans serving individual dwelling units or sleeping units in Group R occupancies may be 3 feet from property lines, operable openings, and mechanical air intakes.



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2. Minimum clearances between the exhaust and intake openings of an HRV/ERV system shall be in accordance with the manufacturer's installation instructions.
4. Exhaust outlets serving structures in flood hazard areas shall be installed at or above the elevation required by Section 1612 of the International Building Code for utilities and attendant equipment.
5. For specific systems see the following sections:
  - 5.1. Clothes dryer exhaust, Section 504.4.
  - 5.2. Kitchen hoods and other kitchen exhaust equipment, Sections 506.3.13, 506.4 and 506.5.
  - 5.3. Dust stock and refuse conveying systems, Section 511.2.
  - 5.4. Subslab soil exhaust systems, Section 512.4.
  - 5.5. Smoke control systems, Section 513.10.3.
  - 5.6. Refrigerant discharge, Section 1105.7.
  - 5.7. Machinery room discharge, Section 1105.6.1.

**504.4 Exhaust installation.** Dryer exhaust ducts for clothes dryers shall terminate on the outside of the building not less than 5 feet from any intake opening and shall be equipped with a backdraft damper. Screens shall not be installed at the duct termination. Ducts shall not be connected or installed with sheet metal screws or other fasteners that will obstruct the exhaust flow. Clothes dryer exhaust ducts shall not be connected to a vent connector, vent or chimney. Clothes dryer exhaust ducts shall not extend into or through ducts or plenums. Clothes dryer exhaust ducts shall be sealed in accordance with Section 603.9.

**508.1.1 Makeup air temperature.** The temperature of makeup air shall not be more than 10°F below the temperature of the air in the conditioned space.

**Exceptions:**

1. Makeup air that is part of the air-conditioning system.
2. Makeup air that does not decrease the comfort conditions of the occupied space.

**512.2 Materials.** Subslab soil exhaust system duct material shall be air duct material listed and labeled to the requirements of UL 181 for Class 0 air ducts, or any of the following piping materials that comply with the Plumbing Code as building sanitary drainage and vent pipe: cast iron; galvanized steel; brass or copper pipe; copper tube of a weight not less than that of copper drainage tube, Type DWV; and plastic piping.

**512.5 Identification.** Not adopted by the City.

**602.2.1.1 Wiring.** Combustible electrical wires and cables and optical fiber cables exposed within a plenum shall be listed as having a maximum peak optical density of 0.50 or less, an average optical density of 0.15 or less, and a maximum flame spread distance of 5 feet or less when tested in accordance with NFPA 262 or shall be installed in metal raceways or metal sheathed cable. Combustible optical fiber

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and communication raceways exposed within a plenum shall be listed as having a maximum peak optical density of 0.5 or less, an average optical density of 0.15 or less, and a maximum flame spread distance of 5 feet or less when tested in accordance with ANSI/UL 2024. Only plenum-rated wires and cables be installed in plenum-rated raceways.

**Exception:** Alternate wiring systems located within a plenum serving an information technology equipment room are allowed per NFPA 70.

**603.2 Duct sizing.** Ducts installed within a single dwelling unit shall be sized in accordance with ACCA Manual D or other approved methods. Ducts installed within all other buildings may be sized in accordance with the ASHRAE Handbook of Fundamentals or other equivalent computation procedure.

**603.6.1.1 Duct length.** Flexible air ducts shall be limited to 14 feet in length.

**603.6.2 Flexible air connectors.** Not adopted by the City.

**603.6.2.1 Connector length.** Not adopted by the City.

**603.6.2.2 Connector penetration limitations.** Not adopted by the City.

**603.6.3 Air temperature.** The design temperature of air to be conveyed in flexible air ducts shall be less than 250°F.

**603.6.4 Flexible air duct clearance.** Flexible air ducts shall be installed with a minimum clearance to an appliance as specified in the appliance manufacturer's installation instructions.

**603.8.2 Sealing.** Ducts shall be sealed, secured and tested prior to concrete encasement or direct burial.

**603.9 Joints, seams and connections.** All longitudinal and transverse joints, seams and connections in metallic and nonmetallic ducts shall be constructed as specified in SMACNA HVAC Duct Construction Standards—Metal and Flexible and NAIMA Fibrous Glass Duct Construction Standards. All joints, longitudinal and transverse seams and connections in ductwork outside the building thermal envelope, all return ducts located within 10 feet of any appliance or all return ducts within a mechanical room, and all supply main trunk ducts and branch duct connections to the main trunk ducts shall be securely fastened and sealed with welds, gaskets, mastics (adhesives), mastic-plus-embedded-fabric systems, liquid sealants or tapes. Tapes and mastics used to seal fibrous glass ductwork shall be listed and labeled in accordance with UL 181A and shall be marked "181 A-P" for pressure-sensitive tape, "181 A-M" for mastic, or "181 A-H" for heat-sensitive tape. Tapes and mastics used to seal metallic and flexible air ducts and flexible air connectors shall comply with UL 181B and shall be marked "181 B-FX" for pressure-sensitive tape or "181 B-M" for mastic. Duct

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connections to flanges of air distribution system equipment shall be sealed and mechanically fastened. Mechanical fasteners for use with flexible nonmetallic air ducts shall comply with UL 181B and shall be marked "181 B-C." Closure systems used to seal metal ductwork shall be installed in accordance with the manufacturer's instructions

**Exception:** For ducts having a static pressure classification of less than 2 inches of water column, additional closure systems shall not be required for continuously welded joints and seams and locking-type joints and seams. This exception shall not apply to snap lock and button-lock type joints and seams located outside of conditioned spaces.

**606.4.1 Supervision.** The duct smoke detectors shall be connected to a fire alarm system where a fire alarm system is required by Section 907.2 of the International Fire Code. The actuation of a duct smoke detector shall activate a visible and audible supervisory signal at a constantly attended location. In facilities that are required to be monitored by a supervising station, duct smoke detectors shall report only as a supervisory signal, not as a fire alarm. Duct smoke detectors installed more than 10 feet above a finished floor, above a ceiling, or on a rooftop shall be installed with remote test/indicators in an approved location below and in proximity to the unit served.

**Exceptions:**

1. The supervisory signal at a constantly attended location is not required where the duct smoke detector activates the building's alarm-indicating appliances.
2. In occupancies not required to be equipped with a fire alarm system, actuation of a smoke detector shall activate a visible and audible signal in an approved location. Duct smoke detector trouble conditions shall activate a visible or audible signal in an approved location and shall be identified as air duct detector trouble.

**607.5.2 Fire barriers.** Ducts and air transfer openings that penetrate fire barriers shall be protected with listed fire dampers installed in accordance with their listing. Ducts and air transfer openings shall not penetrate enclosures for interior exit stairways and ramps and exit passageways except as permitted by Section 1023.5 and 1024.6, respectively, of the International Building Code.

**Exception:** Fire dampers are not required at penetrations of fire barriers where any of the following apply:

1. Penetrations are tested in accordance with ASTM E119 or UL 263 as part of the fire-resistance-rated assembly.
2. Ducts are used as part of an approved smoke control system in accordance with Section 513 and where the fire damper would interfere with the operation of the smoke control system.

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3. Such walls are penetrated by fully ducted HVAC systems, have a required fire-resistance rating of 1 hour or less, are in areas of other than Group H and are in buildings equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2 of the International Building Code. For the purposes of this exception, a fully-ducted HVAC system shall be a duct system for the structure's HVAC system. Such a duct system shall be constructed of sheet steel not less than 26 gage thickness and shall be continuous from the air-handling appliance or equipment to the air outlet and inlet terminals. Flexible air ducts shall be permitted in a fully ducted system, limited to the following installations:
  - 3.1 Nonmetallic flexible ducts that connect a duct to an air handling unit or equipment located within a mechanical room in accordance with Section 603.9.
  - 3.2 Nonmetallic flexible air ducts in accordance with Section 603.6.1 that connect an overhead metal duct to a ceiling diffuser where the metal duct and ceiling diffuser are located within the same room.

**607.5.3 Fire partitions.** Ducts and air transfer openings that penetrate fire partitions shall be protected with listed fire dampers installed in accordance with their listing.

**Exception:** In occupancies other than Group H, fire dampers are not required where any of the following apply:

1. Corridor walls in buildings equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2 or the International Building Code and the duct is protected as a through penetration in accordance with Section 714 of the International Building Code.
2. The partitions are tenant partitions in covered and open mall buildings where the walls are not required by provisions elsewhere in the International Building Code to extend to the underside of the floor or roof sheathing, slab, or deck above.
3. The duct system is constructed of approved materials in accordance with Section 603 and the duct penetrating the wall complies with all of the following requirements:
  - 3.1 The duct shall not exceed 100 square inches.
  - 3.2 The duct shall be constructed of steel not less than 0.0217 inch in thickness.
  - 3.3 The duct shall not have openings that communicate the corridor with adjacent spaces or rooms.
  - 3.4 The duct shall be installed above a ceiling.
  - 3.5 The duct shall not terminate at a wall register in the fire-resistance-rated wall.
  - 3.6 A minimum 12-inch-long by 0.060-inch steel retaining angles. The retaining angles shall be secured to the sleeve and the wall with #10 screws. The annular space between the steel sleeve and the wall opening shall be filled with rock (mineral) wool batting on all sides.

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4. Such walls are penetrated by ducted HVAC systems, have a required fire-resistance rating of 1 hour or less, and are in areas of other than Group H and are in buildings equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2 of the International Building Code. For the purposes of this exception, a ducted HVAC system shall be a duct system for conveying supply, return, or exhaust air as part of the structure's HVAC system. Such a duct system shall be constructed of sheet steel not less than 26 gage in thickness and shall be continuous from the air-handling appliance or equipment to the air outlet and inlet terminals. Flexible air ducts shall be permitted in a fully-ducted system, limited to the following installations:
  - 4.1 Nonmetallic flexible ducts that connect a duct to an air handling unit or equipment located within a mechanical room in accordance with Section 603.9.
  - 4.2 Nonmetallic flexible air ducts in accordance with 603.6.1 that connect an overhead metal duct to a ceiling diffuser where the metal duct and ceiling diffuser are located within the same room.

**9.06.03. Local amendments, additions, and deletions to the 2021 International Fuel Gas Code.** The following sections and subsections of the fuel gas code adopted in this Ordinance shall be amended, added, or deleted as follows. All other sections or subsections of the 2021 International Fuel Gas Code shall remain as originally published.

**101.1 Title.** These regulations shall be known as the Fuel Gas Code of the City of Harrisburg, South Dakota, hereinafter referred to as "this code."

**101.2 Scope.** This code shall apply to the installation of fuel gas piping systems, fuel gas appliances, gaseous hydrogen systems, and related accessories in accordance with Sections 101.2.1 through 101.2.5.

**Exceptions:**

1. Detached one- and two-family dwellings and multiple single-family dwellings (town houses) not more than three stories high with separate means of egress and their accessory structures shall comply with this code or the International Residential Code.
2. Fuel gas systems in existing buildings undergoing repair, alterations or additions, and change of occupancy shall be permitted to comply with the International Existing Building Code.

**103.1 Creation of agency.** Building services is hereby created and the official in charge thereof shall be known as the Building Official. The function of the agency shall be the implementation, administration, and enforcement of the provisions of this code.

**103.2 Appointment.** Not adopted by the City.

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**103.4 Liability.** The Building Official, member of the board of adjustment, or employee charged with the enforcement of this code, while acting for the City in good faith and without malice in the discharge of the duties required by this code or other pertinent law or ordinance, shall not thereby be rendered liable personally, and is hereby relieved from all personal liability for any damage accruing to persons or property as a result of an act or by reason of an act or omission in the discharge of official duties.

This code shall not be construed to relieve or lessen the responsibility of any person owning, operating, or controlling any building or structure for any damages to persons or property caused by defects, nor shall the city, or its officers and employees, be held as assuming any such liability by reason of the inspections authorized by this code or any permits or certificates issued under this code.

**104.8.1 Legal defense.** Any suit or criminal complaint instituted against any officer or employee, because of an act or omission performed by that officer or employee in the lawful discharge of duties and under the provisions of this code shall be afforded all the protection provided by the City's insurance pool and immunities and defenses provided by other applicable state and federal laws and defended by the legal representative of the City until the final termination of the proceedings. The Building Official or any subordinate shall not be liable for costs in an action, suit, or proceeding that is instituted in pursuance of the provisions of this code.

**109.2.1 Fee schedule.** The fees for work shall be as adopted by resolution by the City Council.

**109.3 Permit valuations.** Not adopted by the City.

**109.4 Work commencing before permit issuance.** Any person who commences work on an installation before obtaining the necessary permits may be subject to a Late Application Fee established by resolution by the City Council that shall be in addition to the required permit fees.

**109.6 Refunds.** The Building Official shall authorize the refunding of fees.

**112.2 Required inspections and testing.** It shall be the duty of the mechanical contractor, or his designated mechanic, doing the work authorized by a permit to notify the mechanical inspector that such work is ready for inspection. The building official may require that every request for inspection be filed at least one working day before such inspection is desired.

The mechanical inspector, upon notification from the permit holder or the permit holder's agent, shall make the following inspections and other such inspections as necessary, and shall either release that portion of the construction or notify the permit holder or the permit holder's agent of violations that are required to be corrected. The holder of the permit shall be responsible for scheduling such inspections.

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1. Underground inspection shall be made after trenches or ditches are excavated and bedded, piping is installed, and before backfill is put in place. When excavated soil contains rocks, broken concrete, frozen chunks, and other rubble that would damage or break the piping or cause corrosive action, clean backfill shall be on the job site.
2. Rough-in inspection shall be made after the roof, framing, fireblocking, and bracing are in place and components to be concealed are complete, and prior to the installation of wall or ceiling membranes.
3. Final inspection shall be made upon completion of the installation.

The requirements of this section shall not be considered to prohibit the operation of any heating appliance installed to replace existing heating appliance serving an occupied portion of a structure in the event a request for inspection of such heating appliance has been filed with the department not more than 48 hours after replacement work is placed into operation or substantially completed, and before any portion of such appliance is concealed by any permanent portion of the structure.

**113.1 General.** In order to hear and decide appeals of orders, decisions, or determinations made by the Building Official relative to the application and interpretation of this code, the City Planning Commission hereby assumes the responsibilities of the Board of Appeals for this code. All decisions and findings of the Board shall be final and shall be rendered in writing to the appellant with a duplicate copy to the Building Official.

**113.2 Limitations on authority.** An application for appeal shall be based on a claim that the true intent of this code or the rules legally adopted hereunder have been incorrectly interpreted, the provisions of this code do not fully apply, or an equally good or better form of construction is proposed. If the appeal is based on a claim that an equally good or better form of construction was improperly denied, the appellant must submit the alternate material, design, or method of construction they are proposing. The appellant also has the burden to demonstrate to the Board that the alternative method or material that they are proposing is an equally good or better form of construction. The Board shall not have authority to waive the requirements of the International Fuel Gas Code as adopted by the City.

**113.3 Qualifications.** Not adopted by the City.

**113.3 Open hearing.** All hearings before the Board shall be open to the public. The appellant, the appellant's representative, the Building Official, any member of the City's staff, or any person whose interests are affected shall be given an opportunity to be heard.

**113.4 Administration.** Not adopted by the City.

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**113.4 Submission of appeals.** All appeals must be submitted in writing to the Building Official within ten days of the order, decision, or determination of the Building Official that is being appealed. Once the appeal is received by the Building Official, he shall place the appeal on the Commission's next regular meeting agenda that is more than seven days (inclusive) from the date of receipt of the appeal.

**115.4 Violation penalties.** Persons who shall violate a provision of this code or shall fail to comply with any of the requirements thereof or who shall erect, install, alter, or repair mechanical work in violation of the approved construction documents or directive of the Building Official, or of a permit or certificate issued under the provisions of this code, shall be guilty of an ordinance violation, which is a Class 2 Misdemeanor. Each day that a violation continues after due notice has been served shall be deemed a separate offense.

**201.3 Terms defined in other codes.** Where terms are not defined in this code and are defined in the International Building Code, International Residential Code, International Existing Building Code, NFPA 70, International Fire Code, International Mechanical Code, or State Plumbing Code, such terms shall have meanings ascribed to them as in those codes.

**301.6 Plumbing connections.** Potable water supply and building drainage system connections to appliances regulated by this code shall be in accordance with the Plumbing Code adopted by the State of South Dakota.

**304.6 Outdoor combustion air.** Outdoor combustion air shall be provided through opening(s) to the outdoors in accordance with Section 304.6.1, 304.6.2, or 304.6.3. The minimum dimension of air openings shall be not less than 3 inches.

**304.6.3 Alternate combustion air sizing.** As an alternate, the net free area of openings, ducts, or plenums supplying air to an area containing gas- and oil-burning appliances shall be in accordance with CSA B149.1:20, Natural Gas and Propane Installation Code, published by the Canadian Standards Association (CSA).

The combustion air duct is required to be upsized one diameter size when a dryer is installed in the same room as the combustion air.

**305.1 General.** Equipment and appliances shall be installed as required by the terms of their approval in accordance with the conditions of listing, the manufacturer's instructions, and this code. Manufacturer's installation instructions shall be available on the job site at the time of inspection. Where a code provision is less restrictive than the conditions of the listing of the equipment or appliance or the manufacturer's installation instructions, the conditions of the listing and the manufacturer's installation instructions shall apply.



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After completion of the installation, all safety and operating controls and venting shall be tested before placing the burner in service in accordance with the manufacturer's installation instructions. The following requirements need to be recorded and affixed to the inside of the gas train access panel:

1. The rate of flow of the gas or fuel shall be adjusted to within plus or minus 5 percent of the required Btu/hr rating at the manifold pressure specified by the manufacturer. When the prevailing pressure is less than the manifold pressure specified, the rates shall be adjusted at the prevailing pressure.
2. The gas inlet pressure per the manufacturer's installation settings.
3. The temperature rise across the heat exchanger per the manufacturer's installation settings.
4. The static pressure of the supply and return ducts per the manufacturer's installation settings.

Unlisted appliances approved in accordance with Section 301.3 shall be limited to uses recommended by the manufacturer and shall be installed in accordance with the manufacturer's instructions, the provisions of this code, and the requirements determined by the building official.

**305.7 Clearances from grade.** Equipment and appliances installed at grade level shall be supported on a level concrete slab or other approved material extending not less than 1½ inches above adjoining grade or shall be suspended not less than 6 inches above adjoining grade. Such support shall be in accordance with the manufacturer's installation instructions.

**306.2 Appliances in rooms.** Rooms containing appliances shall be provided with a door and an unobstructed passageway to the service area of the appliance measuring not less than 36 inches wide and 80 inches high.

**Exception:** Within a dwelling unit, appliances installed in a compartment, alcove, basement or similar space shall be provided with access by an opening or door and an unobstructed passageway measuring not less than 24 inches wide and large enough to allow removal of the largest appliance in the space, provided that a level service space of not less than 30 inches deep and the height of the appliance, but not less than 30 inches, is present at the front or service side of the appliance with the door open.

**306.5 Equipment and appliances on roofs or elevated structures.** Where equipment requiring access or appliances are located on an elevated structure or the roof of a building such that personnel will have to climb higher than 16 feet above grade or floor level to access such equipment or appliances, an interior or exterior means of access shall be provided. Such access shall not require climbing over obstructions greater than 30 inches in height or walking on roofs having a slope greater than 4 units vertical in 12 units horizontal (33% slope). Such access shall not require the use of portable ladders. Where access involves climbing over parapet

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walls, the height shall be measured to the top of the parapet wall. Permanent ladders  
installed to provide the required access shall comply with the following minimum  
design criteria:

1. The side railing shall extend above the parapet or roof edge not less than 30 inches.
2. Ladders shall have rung spacing not to exceed 14 inches on center. The uppermost rung shall be not more than 24 inches below the upper edge of the roof hatch, roof or parapet, as applicable.
3. Ladders shall have a toe spacing not less than 6 inches deep.
4. There shall not be less than 18 inches between rails.
5. Rungs shall have a diameter not less than 0.75-inch and be capable of withstanding a 300-pound load.
6. Ladders over 30 feet in height shall be provided with offset sections and landings capable of withstanding 100 pounds per square foot. Landing dimensions shall be not less than 18 inches and not less than the width of the ladder served. A guard rail shall be provided on all open sides of the landing.
7. Climbing clearance. The distance from the centerline of the rungs to the nearest permanent object on the climbing side of the ladder shall be a minimum of 30 inches measured perpendicular to the rungs. This distance shall be maintained from the point of ladder access to the bottom of the roof hatch. A minimum clear width of 15 inches shall be provided on both sides of the ladder measured from the midpoint of and parallel with the rungs except where cages or wells are installed.
8. Landing required. The ladder shall be provided with a clear and unobstructed bottom landing area having a minimum dimension of 30 inches by 30 inches centered in front of the ladder.
9. Ladders shall be protected against corrosion by approved means.
10. Access to ladders shall be provided at all times.
11. Exterior access may be by means of a ladder which need not extend closer than 8 feet to finished grade.
12. When a new hatch is being used to access equipment or appliances on a roof or elevated structure, the handle or release must be on the same side of the roof hatch as the ladder or within 18 inches of the ladder.

Catwalks installed to provide the required access shall be not less than 24 inches wide and shall have railings as required for service platforms.

**Exception:** This section shall not apply to Group R-3 occupancies.

**306.5.1 Sloped roofs.** Where appliances, equipment, fans or other components that require service are installed on a roof having a slope of greater than 3 units vertical in 12 units horizontal (25% slope) and having an edge more than 30 inches above grade at such edge, a level platform shall be provided on each side of the appliance or equipment to which access is required for service, repair or maintenance. The platform shall be not less than 30 inches in any dimension and

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shall be provided with guards. The guards shall extend not less than 42 inches above the platform, shall be constructed so as to prevent the passage of a 21-inch-diameter sphere and shall comply with the loading requirements for guards specified in the International Building Code. Access shall not require walking on roofs having a slope greater than 4 units vertical in 12 units horizontal (33% slope). Where access involves obstructions greater than 30 inches in height, such obstructions shall be provided with ladders installed in accordance with Section 306.5 or stairways installed in accordance with the requirements specified in the International Building Code in the path of travel to and from appliances, fans or equipment requiring service.

**306.6 Guards.** Guards shall be provided where various components that require service and roof hatch openings are located within 10 feet of a roof edge or open side of a walking surface and such edge or open side is located more than 30 inches above the floor, roof, or grade below. The guard shall extend not less than 30 inches beyond each end of components that require service and each end of the roof hatch parallel to the roof edge. The top of the guard shall be located not less than 42 inches above the elevated surface adjacent to the guard. The guard shall be constructed so as to prevent the passage of a 21-inch-diameter sphere and shall comply with the loading requirements for guards specified in the International Building Code.

**404.2 CSST.** CSST piping systems shall be installed in accordance with the terms of their approval, the conditions of listing, the manufacturer's instructions, and this code.

The piping located on the exterior extending from the gas meter to the inside of the structure shall be a metallic pipe in compliance with Section 403.3. The entrance into the structure shall be provided with the appropriate transition flange where an alternate gas piping material is utilized on the inside of the structure.

**404.3 Prohibited locations.** Piping shall not be installed in or through a ducted supply, return or exhaust, or a clothes chute, chimney or gas vent, dumbwaiter or elevator shaft.

**404.6 Piping through foundation walls.** Underground piping, where installed through the outer foundation or basement wall of a building shall be encased in a protective sleeve or protected by an approved device or method. The space between the gas piping and the sleeve and between the sleeve and the wall shall be sealed to prevent the entry of gas and water.

**404.12 Minimum burial depth.** Underground piping systems shall be installed with a minimum depth of 12 inches below grade. The minimum depth shall be increased to 18 inches if external damage to the piping or tubing from external forces is likely to result. Where a minimum of 12 inches of depth cannot be provided, the pipe shall be installed in conduit or bridged (shielded).

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**409.1.2 Prohibited locations.** Shutoff valves shall be prohibited in concealed locations, furnace plenums, and accessible spaces between a fixed ceiling and a dropped ceiling unless serving a gas appliance installed in that space.

BE IT FURTHER ORDAINED by the City Council of the City of Harrisburg that this Ordinance shall become effective in accordance to law.

CITY OF HARRISBURG

ATTEST:

Mayor Derick Wenck

Finance Officer Mary McClung

(SEAL)

First Reading: November 2, 2021

Second Reading: November 16, 2021

Notice of Adoption Published: November 25, 2021 and December 2, 2021

Effective: January 1, 2022