

CITY OF HARRISBURG ORDINANCE #2021-17,  
TO ADOPT THE 2021 IRC WITH LOCAL AMENDMENTS,  
FOR CHAPTER 9.04 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 #2021-17 is an ordinance to amend Chapter 9.04 of the Revised Municipal Ordinances of the City of Harrisburg by adopting the 2021 edition of the International Residential Code 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 9.04, RESIDENTIAL BUILDING CODE**

**9.04 Residential Code**

**9.04.01. Adopted.**

The City Council hereby adopts Chapters 1 through 24 and 44 plus Appendices AE, AH, AM, and AQ of the International Residential Code, 2021 Edition as published by the International Code Council, Inc. as the residential building code of the City for regulating the design, construction, quality of materials, erection, installation, alteration, movement, repair, equipment, use and occupancy, location, removal, and demolition of detached one- and two-family dwellings and town houses not more than three stories in height with a separate means of egress and their accessory

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structures, and provides for the issuance of permits and the collection of fees therefore. The minimum building standards in the 2021 edition of the International Residential Code and amendments thereto shall be applied to any building permit issued after December 31, 2021.

**9.04.02. Local amendments, additions, and deletions to the 2021 International Residential Code.**

The following sections and subsections of the residential building code adopted in this Ordinance shall be amended, added, or not adopted as follows. All other sections or subsections of the 2021 International Residential Code shall remain as originally published.

**R101.1 Title.** These provisions shall be known as the Residential Code for One- and Two-family Dwellings of the City of Harrisburg and shall be cited as such and will be referred to herein as “this code”.

**R101.2 Scope.** The provisions of this code shall apply to the construction, alteration, movement, enlargement, replacement, repair, equipment, use and occupancy, location, removal and demolition of detached one- and two-family dwellings and townhouses not more than three stories above grade plane in height with a separate means of egress and their accessory structures.

**Exception 1:** The following shall be permitted to be constructed in accordance with this code where provided with an automatic fire sprinkler system complying with Section P2904:

1. A care facility with five or fewer persons receiving custodial care within a dwelling unit.
2. A care facility with five or fewer persons receiving medical care within a dwelling unit.
3. A care facility for five or fewer persons receiving care that are within a single-family dwelling.

**Exception 2:** The following shall be permitted to be constructed in accordance with this code. A fire sprinkler system if installed may be in accordance with Section P2904:

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1. Live/work units located in townhouses and complying with the requirements of Section P2904.
2. Owner-occupied lodging houses with five or fewer guestrooms.

**Exception 3:** Existing buildings undergoing repair, alteration, or additions, and change of occupancy may be permitted to comply with the International Existing Building Code.

**R103.1 Enforcement agency.** Building services is hereby created and the official in charge thereof shall be known as the Building Official.

**R103.2 Appointment.** Not adopted by the City.

**R104.8 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 civilly or criminally liable personally and is hereby relieved from personal liability for any damage accruing to persons or property as a result of any act or by reason of an act or omission in the discharge of official duties.

This code shall not be construed to relieve from 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 code enforcement agency or the City 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.

**R104.8.1 Legal defense.** Any suit or criminal complaint instituted against an officer or employee because of an act 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 any immunities and defenses provided by other applicable state and federal law and defended by legal representative of the City until the final termination of the proceedings. The Building Official or any subordinate shall not be liable for cost in any action, suit or proceeding that is instituted in pursuance of the provisions of this code.

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**R105.1 Required.** Any owner or owner's authorized agent who intends to construct, enlarge, alter, repair, move, demolish or change the occupancy of a building or structure, or to erect, install, enlarge, alter, repair, remove, convert or replace any electrical, gas, mechanical, or plumbing system, the installation of which is regulated by this code, or to cause any such work to be performed, shall first make application to the Building Official and obtain the required permit. The Building Official may exempt permits for minor work.

**R105.2 Work exempt from permit.** Exemption from the permit requirements of this code shall not be deemed to grant authorization for any work to be done in any manner in violation of the provisions of this code or any other laws or ordinances of this City. Permits shall not be required for the following:

1. Retaining walls that are not over four feet in height measured from the bottom of the footing to the top of the wall, unless supporting a surcharge.
2. Water tanks supported directly upon grade if the capacity does not exceed five thousand gallons and the ratio of height to diameter or width does not exceed two to one.
3. Walks and driveways not more than thirty inches above grade and not over any basement or story below.
4. Painting, papering, tiling, carpeting, cabinets, counter tops, and similar finish work.
5. Replacement of exterior siding or trim.
6. Replacement of doors or windows when the door or window opening remains unchanged.
7. Prefabricated swimming pools which are less than twenty-four inches deep that are installed entirely above ground.
8. Swings and other playground equipment.
9. Window awnings supported by an exterior wall which do not project more than fifty-four inches from the exterior wall and do not require additional support.
10. Dumpsters.
11. Gutters, downspouts, and storm windows.

**Gas:**

1. Portable heating, cooking or clothes drying appliances.

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2. Replacement of any minor part that does not alter approval of equipment or make such equipment unsafe.
3. Portable-fuel-cell appliances that are not connected to a fixed piping system and are not interconnected to a power grid.

**Mechanical:**

1. Portable heating appliances.
2. Portable ventilation appliances.
3. Portable cooling units.
4. Steam, hot- or chilled-water piping within any heating or cooling equipment regulated by this code.
5. Replacement of any minor part that does not alter approval of equipment or make such equipment unsafe.
6. Portable evaporative coolers.
7. Self-contained refrigeration systems containing 10 pounds or less of refrigerant or that are actuated by motors of 1 horsepower (746 W) or less.
8. Portable-fuel-cell appliances that are not connected to a fixed piping system and are not interconnected to a power grid.

**R106.1.6 Additional building plan information required.** Building plans for new dwelling units shall indicate the location of the electric breaker box for the dwelling unit.

**R106.1.7 Energy efficiency.** Construction documents for detached one- and two-family dwelling and townhomes shall be provided with the intended R-value for the ceilings, walls, floors, basement walls (if finished), slab perimeter R-value and depth, and crawl space walls.

**R106.1.8 Foundation reinforcement.** Construction for detached one- and two-family dwellings and town houses shall be provided with the intended reinforcement of foundation walls referenced in Tables R404.1.1(2), R404.1.1(3), and R404.1.1(4) for reinforced masonry foundation walls; Tables R404.1.2(2), R404.1.2(3), R404.1.2(4), and R404.1.1(8) for flat concrete foundation walls; Tables 404.1.2(5) and R404.1.2(6) for waffle-grid basement walls; and Table R404.1.2(7) for screed-grid basement walls where the

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foundation wall exceeds the provisions for plain masonry and concrete foundation walls.

**R106.2 Site plan or plot plan.** The construction documents submitted with the application for a new home or townhome building permit shall be accompanied by a site plan showing the size and location of new construction and existing structures on the site, distances from lot lines, corner pin elevations, and minimum ground elevation (MGEs) which designates the elevation of the top of the black dirt under the grass, or the top of the landscape rock or other landscape material at the lowest exposed part of the house.

**R106.3.1 Approval of construction documents.** When the Building Official issues a permit, the construction documents shall be submitted and reviewed. One set of construction documents so reviewed shall be retained by the Building Official. The other set shall be returned to the Applicant, shall be kept at the site of work, and shall be open to inspection by the Building Official or his designee.

**R108.2 Schedule of permit fees.** On buildings, structures, gas, mechanical, or alterations requiring a permit, a fee for each permit shall be paid as required, in accordance with the fee schedule adopted by resolution by the City Council.

**R108.6 Work commencing before permit issuance.** Any person who commences work requiring a permit on a building, structure, gas, or mechanical system before obtaining the necessary permit(s) 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. Legal and/or civil proceedings may also be commenced by the City.

**R109.1.1 Footing inspection.** Inspection of the footings shall be made after poles or piers are set or trenches or basement areas are excavated and any required forms erected and any required reinforcing steel is in place and supported prior to the placing of concrete. The footing inspection shall include excavations for thickened slabs intended for the support of bearing walls, partitions, structural supports, or equipment and special requirements for wood foundations.

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**R109.1.3 Floodplain inspections.** For construction in flood hazard areas as established by the Flood Damage Prevention Ordinance, upon placement of the lowest floor, including basement, and prior to further vertical construction, the floodplain administrator shall require submission of documentation, prepared and sealed by a registered design professional, of the elevation of the lowest floor, including basement, required in the Flood Damage Prevention Ordinance.

**R109.1.6.1 Elevation documentation.** If located in a flood hazard area, the documentation of elevations required in Section R322.1.10 shall be submitted to the floodplain administrator prior to the final inspection.

**R110.1 Use and occupancy.** A building or structure shall not be used or occupied in whole or in part, and a change of occupancy or change of use of a building or structure or portion thereof shall not be made until the Building Official has issued a certificate of occupancy therefor as provided herein and final inspections have been obtained from the mechanical and building inspectors of the City. Issuance of a certificate of occupancy shall not be construed as an approval of a violation of the provisions of this code or of other ordinances of the City. Certificates presuming to give authority to violate or cancel the provisions of this code or other ordinances of the City shall not be valid.

**Exceptions:**

1. Certificates of occupancy are not required for work exempt from permits under Section R105.2.
2. Accessory buildings or structures.

**R110.6 Placards.** Placards or inspection record tags placed on the job by the inspectors to indicate approval of the work inspected shall not be removed, except when authorized by the Building Official.

**R112.1 Designation of Board of Appeals.** 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 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.

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**R112.2 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 have no authority relative to the interpretation of the administrative provisions of this code nor shall the Board be empowered to waive the requirements of this code.

**R112.3 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 Planning Commission's next regular meeting agenda that is more than seven days (inclusive) from the date of receipt of the appeal.

**R112.4 Appeal hearings.** 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.

**SECTION R202 DEFINITIONS** The definitions of accessory structure and townhouse are changed as follows:

**ACCESSORY STRUCTURE.** A structure not over one story in height, detached from a principal building, located on the same lot as the principal building, and customarily incidental and subordinate to the principal building, such as a detached garage or storage shed. An accessory building does not include any dwelling unit(s) or living quarters.

**TOWNHOUSE.** A single-family dwelling unit constructed in a group of two or more attached units, with each unit located on a separate lot, in which each unit extends from foundation to roof and with a yard or public way on at least two



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sides, no unit is located over another unit, and each unit is separated from any other unit by one or more vertical, unpierced, common, fire-resistant walls. Also known as single-family attached dwellings or zero lot line homes.

**Table R301.2 Climatic and Geographic Design Criteria**, is hereby amended by inserting the following information into the table:

Ground Snow Load: 40 psf;  
Wind speed: 112 mph;  
Topographic Effects: no;  
Special Wind Region: no;  
Wind-borne Debris Zone: no;  
Seismic Design Category: A;  
Weathering: Severe;  
Frost line depth: 42";  
Termite: Slight to moderate;  
Ice Barrier Underlayment Required: Yes;  
Flood Hazards: The City of Harrisburg entered the NFIP on 4/2/2008; the FIS and FIRM panels 0154C and 0162C became effective on 4/2/2008;  
Air Freezing Index: 3000;  
Mean Annual Temp: 46°F.

**Manual J Design Criteria**, is hereby amended by inserting the following information into the table:

Elevation: 1418 FASL;  
Altitude correction factor: 0.95;  
Coincident wet bulb: 72° F;  
Indoor winter design dry-bulb temperature: 70° F;  
Outdoor winter design dry-bulb temperature: -11° F;  
Heating temperature difference: 81° F;  
Latitude: 43° N;  
Daily range: M;  
Indoor summer design relative humidity: 50% relative humidity;  
Indoor summer design dry-bulb temperature: 75° F;  
Outdoor summer design dry-bulb temperature: 90°F;

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Cooling temperature difference: 15° F.

**Table R301.5 Minimum Uniformly Distributed Live Loads** is hereby amended by changing the “Sleeping rooms” use to “Rooms” and the uniform load for this use from 30 psf to 40 psf.

**Table R302.1(1) Exterior Walls** is hereby amended to change the “Minimum Fire Separation Distance” for Exterior Wall Projections on line 4 (Fire Resistance Rated) from 5 to 3 feet and on line 5 (Not fire-resistance rated) from 5 to 3 feet.

**R302.2.2 Common walls.** Common walls separating townhouses shall be assigned a fire-resistance rating in accordance with Item 1 or 2 and shall be rated for fire exposure from both sides. Common Walls shall extend to and be tight against the exterior sheathing of the exterior walls, or the inside face of exterior walls without stud cavities, and the underside of the roof sheathing. The common wall shared by two townhouse units shall be constructed without mechanical equipment, ducts or vents, other than water-filled fire sprinkler piping, in the cavity of the common wall. Electrical installations shall be in accordance with the State Electrical Code. Penetrations of the membrane of common walls for electrical outlet boxes shall be in accordance with Section 302.4. Plumbing installations shall be in accordance with the State Plumbing Code. Membrane or through penetrations of common walls for plumbing systems shall be in accordance with Section 302.4.

1. Where an automatic sprinkler system in accordance with Section P2904 is provided, the common wall shall be not less than a 1-hour fire-resistance-rated wall assembly tested in accordance with ASTM E119, UL 263, or Section 703.3.2.2 of the 2021 IBC.
2. Where an automatic sprinkler system in accordance with Section P2904 is not provided, the common wall shall be not less than a 2-hour fire-resistance-rated wall assembly tested in accordance with ASTM E119, UL 263, or Section 703.3.2.2 of the 2021 IBC.

**Exception:** Common walls are permitted to extend to and be tight against the inside of the exterior walls if the cavity between the end of the common wall and the exterior sheathing is filled with a minimum of two 2” nominal thickness wood studs.

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**R302.2.3 Continuity.** The fire-resistance-rated wall or assembly separating townhouse units shall be continuous from the foundation to the underside of the roof sheathing, deck or slab. The fire-resistance rating shall extend the full length of the wall or assembly, including wall extensions through and separating attached enclosed accessory structures.

Exterior walls that extend beyond an adjacent structure that has a fire separation distance less than 5 feet to a common property line shall have not less than a one-hour fire rating with exposure from both sides with no openings allowed therein.

Projections such as a deck that have a fire separation distance of less than 3 feet to a common property line shall have a 1-hour fire rating with exposure from both sides with no openings allowed therein that extends at least 30 inches above the projection.

**R302.3 Two-family dwellings.** Dwelling units in two-family dwellings shall be separated from each other by wall and floor assemblies having not less than a one-hour fire-resistance rating where tested in accordance with ASTM E119, UL 263, or Section 703.2.2 of the 2021 IBC. Such separation shall be provided regardless of whether a lot line exists between the two dwelling units or not. Fire-resistance-rated floor/ceiling and wall assemblies shall extend to and be tight against the exterior wall, and wall assemblies shall extend from the foundation to the underside of the roof sheathing.

**Exception:** A fire-resistance rating of ½ hour shall be permitted in building equipped throughout with an automatic sprinkler system installed in accordance with Section P2904.

**R302.13 Fire Protection of Floors.** Not adopted by the City.

**R303.5.1 Intake openings.** Mechanical and gravity outdoor air intake openings shall be located not less than 10 feet from any hazardous or noxious contaminant, such as vents, chimneys, plumbing vents, streets, alleys, parking lots, and loading docks. For the purpose of this section, the exhaust

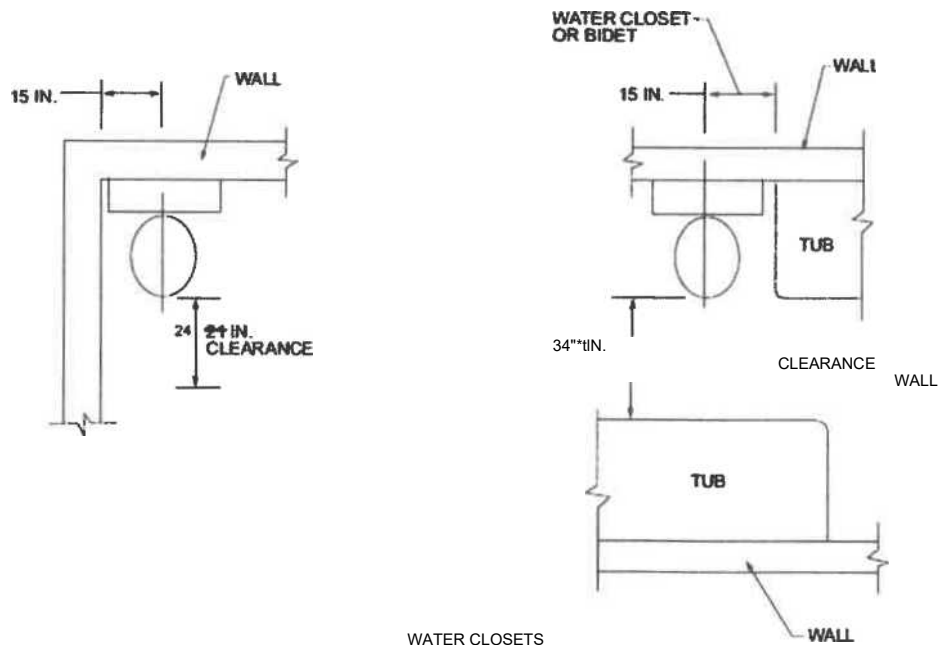
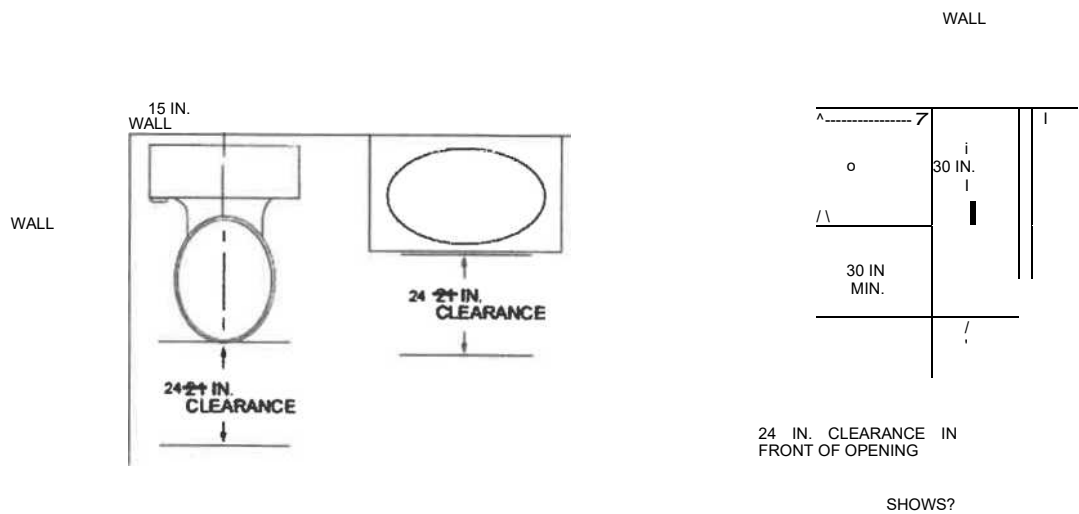
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from dwelling unit toilet rooms, bathrooms and kitchens shall not be considered as hazardous or noxious.

**Exceptions:**

1. The 10-foot separation is not required where the intake opening is located 3 feet or greater below the contaminant source.
2. Vents and chimneys serving fuel-burning appliances shall be terminated in accordance with the applicable provisions of Chapters 18 and 24.
3. Clothes dryer exhaust ducts shall be terminated in accordance with Section M1502.3.
4. For equipment replacements on existing structures, gravity outdoor intake openings for combustion air shall be located a minimum of 3 feet from any hazardous or noxious contaminant.

**R307.1 Space required.** Fixtures shall be spaced in accordance with Figure R307.1:



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**R308.4.2 Glazing adjacent to doors.** Glazing in an individual fixed or operable panel adjacent to a door shall be considered to be a hazardous location where the bottom exposed edge of the glazing is less than 60 inches above the floor or walking surface and it meets either of the following conditions:

1. Where the glazing is within 24 inches of either side of the door in the plane of the door in a closed position.
2. Where the glazing is on a wall perpendicular to the plane of the door in a closed position and within 24 inches of the hinge side of an in-swinging door.

**Exceptions:**

1. Decorative glazing.
2. Where there is an intervening wall or other permanent barrier between the door and the glazing.
3. Where access through the door is to a closet or storage area 3 feet or less in depth.
4. Glazing that is adjacent to the fixed panel of patio doors.

**R309.5 Fire sprinklers.** Not adopted by the City.

**R310.2.1 Minimum size.** Emergency escape and rescue openings shall have a net clear opening of not less than 5.0 square feet.

**R310.2.3 Maximum height from floor.** Emergency escape and rescue openings shall have the bottom of the clear opening not greater than 48 inches above the floor.

**R310.4.2 Ladder and steps.** Area wells with a vertical depth greater than 48 inches shall be equipped with a permanently affixed ladder or steps. The ladder or steps shall not be obstructed by the emergency escape and rescue opening where the window or door is in the open position. Ladders or steps required by this section shall not be required to comply with Sections R311.7.

**R311.3.1 Floor elevations at the required egress doors.** Landings or floors at the required egress door shall not be more than 1½ inches lower than the top of the threshold.

**Exception:** The landing or floor on the exterior side shall not be more than 8 inches below the top of the threshold, provided the door does not swing over the landing or floor.

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When exterior landings or floors serving the required egress door are not at grade, they shall be provided with access to grade by means of a ramp in accordance with Section R311.8 or a stairway in accordance with Section R311.7.

**R311.3.2 Floor elevations for other exterior doors.** Doors other than the required egress door shall be provided with landings or floors not more than 8 inches below the top of the threshold.

**Exception:** A top landing is not required where a stairway of not more than two risers is located on the exterior side of the door, provided the door does not swing over the stairway.

**R311.7.5.1 Risers.** The maximum riser height shall be not more than 8 inches. The riser shall be measured vertically between leading edges of the adjacent treads. The greatest riser height within any flight of stairs shall not exceed the smallest by more than  $\frac{3}{8}$  inch. Risers shall be vertical or sloped from the underside of the nosing of the tread above at an angle not more than 30° from the vertical. Open risers are permitted.

**Exceptions:**

1. The opening between adjacent treads is not limited on spiral stairways.
2. The riser height of spiral stairways shall be in accordance with Section R311.7.10.1.

**R311.7.8 Handrails.** Handrails shall be provided on not less than one side of each flight of stairs with four or more risers.

**Exception:** When the landing at the top of the stair is not required to have a guardrail.

**R311.7.8.4 Continuity.** Handrails for stairways shall extend for the full length of the flight from a point directly above the top riser of the flight to a point directly above the lowest riser of the flight. Handrail ends shall be returned toward a wall, guard walking surface continuous to itself, or terminate to a post.

**Exceptions:**

1. Handrails shall be permitted to be interrupted by a newel post at a turn.
2. The use of a volute, turnout, starting easing or starting newel shall be allowed over the lowest tread and over the top landing.

**R311.7.8.5 Grip-size.** All required handrails shall be of one of the following types or provide equivalent graspability.

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Type I. Handrails with a circular cross section shall have an outside diameter of not less than 1¼ inches and not greater than 2 inches. If the handrail is not circular, it shall have a perimeter dimension of not less than 4 inches and not greater than 6¼ inches with a cross section dimension of not more than 2¼ inches. Edges shall have a radius of not less than 0.01 inch.

Type II. Handrails with a perimeter greater than 6¼ inches shall have a graspable finger recess area on both sides of the profile. The finger recess shall begin within a distance of ¾ inch measured vertically from the tallest portion of the profile and achieve a depth of not less than 5/16 inch within ⅞ inch below the widest portion of the profile. This required depth shall continue for not less than ⅜ inch to a level that is not less than 1¾ inches below the tallest portion of the profile. The width of the handrail above the recess shall be not less than 1¼ inches and not more than 2¾ inches. Edges shall have a radius of not less than of 0.01 inch.

**Exception:** Exterior stairs are allowed to have a horizontal 2X member to form a 1½ inch graspable dimension in lieu of the above-referenced perimeter dimensions.

**R312.1.3 Opening limitations.** Required guards shall not have openings from the walking surface to the required guard height which allow passage of a sphere 5 inches in diameter.

**Exception:** The triangular openings at the open side of stair, formed by the riser, tread and bottom rail of a guard, shall not allow passage of a sphere 6 inches in diameter.

**R312.2.1 Window opening height.** In dwelling units, where the bottom of the clear opening of an operable window opening is located less than 24 inches above the finished floor and greater than 72 inches above the finished grade or other surface below on the exterior of the building, the operable window shall comply with one of the following:

1. Operable window openings will not allow a 5-inch diameter sphere to pass through where the openings are in their largest opened position.
2. Operable windows are provided with window opening control devices or fall prevention devices that comply with ASTM F2090.

**R313.1 Townhouse automatic fire sprinkler systems.** Not adopted by the City.

**R313.1.1 Design and installation.** When an automatic sprinkler system for townhouses is installed, it shall be designed and installed in accordance with Section P2904 or NFPA 13D.

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**R313.2 One- and two-family dwellings automatic fire systems.** Not adopted by the City.

**R313.2.1 Design and installation.** When an automatic sprinkler system is installed, it shall be designed and installed in accordance with Section P2904 or NFPA 13D.

**R314.2.2 Alterations, repairs, and additions.** Where alterations, repairs, or additions requiring a permit occur with a valuation of more than \$1,000, the individual dwelling unit shall be equipped with smoke alarms located as required for new dwellings.

**Exceptions:**

1. Work involving the exterior surfaces of dwellings, such as the replacement of roofing or siding, the addition or replacement of windows or doors, or the addition of a porch or deck.
2. Installation, alteration, or repairs of plumbing or mechanical systems.

**R314.3 Location.** Smoke alarms shall be installed in the following locations:

1. In each sleeping room.
2. Outside each separate sleeping area in the immediate vicinity of the bedrooms.
3. On each additional story of the dwelling, including basements and habitable attics but not including crawl spaces and uninhabitable attics. In dwellings or dwelling units with split levels and without an intervening door between the adjacent levels, a smoke alarm installed on the upper level shall suffice for the adjacent lower level provided that the lower level is less than one full story below the upper level.
4. Not less than 3 feet horizontally from the door or opening of a bathroom that contains a bathtub or shower unless this would prevent placement of a smoke alarm required by this section.
5. In the hallway and in the room open to the hallway in dwelling units where the ceiling height of a room open to a hallway serving bedrooms exceeds that of the hallway by 24 inches or more.

**Exception.** Hallways less than 4 feet in length are allowed to omit the smoke detector within the hallway adjacent to the bedrooms.

**R314.4 Interconnection.** Where more than one smoke alarm is required to be installed within an individual dwelling unit in accordance with Section R314.3, the alarm devices shall be interconnected in such a manner that the actuation of one alarm will activate all of the alarms in the individual dwelling unit. Physical interconnection of smoke alarms shall not be required where listed wireless alarms are installed and all alarms sound upon activation of one alarm.



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**Exception:** Interconnection of smoke alarms in existing areas shall not be required where alterations or repairs do not result in removal of interior wall or ceiling finishes exposing the structure, unless there is an attic, crawl space or basement available that could provide access for interconnection without the removal of interior finishes.

**R315.2.2 Alterations, repairs and additions.** Where alterations, repairs, or additions requiring a permit occur with a valuation of more than \$1000, the individual dwelling unit shall be equipped with carbon monoxide alarms located as required for new dwellings.

**Exceptions:**

1. Work involving the exterior surfaces of dwellings, such as the replacement of roofing or siding, or the addition or replacement of windows or doors, or the addition of a porch or deck.
2. Installation, alteration, or repairs of plumbing systems.
3. Installation, alteration, or repairs of mechanical systems that are not fuel fired.

**R326.3 Story above grade plane.** A habitable attic shall be considered a story above grade plane.

**Exceptions:** A habitable attic shall not be considered to be a story above grade plane provided that the habitable attic meets all of the following:

1. The aggregate area of the habitable attic is either of the following:
  - 1.1. Not greater than one-third of the floor area of the story below.
  - 1.2. Not greater than one-half of the floor area of the story below where the habitable attic is located within a dwelling unit equipped with a fire sprinkler system in accordance with Section P2904.
2. The occupiable space is enclosed by the roof assembly above, knee walls, if applicable, on the sides, and the floor-ceiling assembly below.
3. The floor of the habitable attic does not extend beyond the exterior walls of the story below.

**R403.1.4.1 Frost protection.** Except where otherwise protected from frost, foundation walls, piers and other permanent supports of buildings and structures shall be protected from frost by one or more of the following methods:

1. Extended below the frost line specified in Table R301.2.
2. Constructing in accordance with Section R403.3

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3. Constructing in accordance with ASCE 32
4. Erected on solid rock.

Footings shall not bear on frozen soil unless the frozen condition is permanent.

**Exceptions:**

1. Protection of freestanding accessory structures with an area of 1,500 square feet or less of light-frame construction, with an eave height of 10 feet or less shall not be required.
2. Protection of freestanding accessory structures with an area of 400 square feet or less, of other than light-frame construction, with an eave height of 10 feet or less shall not be required.

**R502.3.1 Sleeping areas and attic joists.** Table R502.3.1(1) shall be used to determine the maximum allowable span of floor joists that support sleeping areas and attics that are accessed by means of a fixed stairway in accordance with Section R311.7, provided that the design live load does not exceed 40 pounds per square foot and the design dead load does not exceed 20 pounds per square foot. The allowable span of ceiling joists that support attics used for limited storage or no storage shall be determined in accordance with Section R802.5.

**R506.2.3 Vapor retarder.** A minimum 6-mil vapor retarder conforming to ASTM E1745 Class A requirements with joints lapped not less than 6 inches shall be placed between the concrete floor slab and the base course or the prepared subgrade where a base course does not exist.

**Exception:** The vapor retarder is not required for the following:

1. Garages, utility buildings, and other unheated accessory structures.
2. For unheated storage rooms having an area less than 70 square feet and carports.
3. Driveways, walks, patios, and other flatwork not likely to be enclosed and heated at a later date.
4. Where approved by the building official, based on local site conditions.

**R507.3 Footings.** Decks shall be supported on concrete footings or other approved structural systems designed to accommodate all loads in accordance with Section R301. Deck footings shall be sized to carry the imposed loads from the deck structure to the ground as shown in Figure R507.3.

**Exception:** Decks not supported by a dwelling need not be provided with footings that extend below the frost line.

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**R602.10.1.2 Location of braced wall lines and permitted offsets.** Each braced wall line shall be located such that no more than two-thirds of the required braced wall panel length is located to one side of the braced wall line. Braced wall panels shall be permitted to be offset not more than 4 feet from the designated braced wall line. Braced wall panels parallel to a braced wall line shall be offset not more than 4 feet from the designated braced wall line location as shown in Figure R602.10.1.1.

Exterior wall parallel to a braced wall line shall be offset not more than 4 feet from the designated braced wall line location as shown in Figure R602.10.1.1.

Interior walls used as bracing shall be offset not more than 4 feet from a braced wall line through the interior of the building as shown in Figure R602.10.1.1.

**Exception:** The offset out-of-plane may exceed 4 feet and the out-to-out offset dimension may exceed 8 feet if the area of the offset is less than 200 square feet.

**R602.12 Simplified wall bracing.** Buildings meeting all of the conditions listed below shall be permitted to be braced in accordance with this section as an alternate to the requirements of Section R602.10. The entire building shall be braced in accordance with this section; the use of other bracing provisions of R602.10, except as specified herein, shall not be permitted.

1. There shall be no more than three stories above the top of a concrete or masonry foundation or basement wall. Permanent wood foundations shall not be permitted.
2. Floors shall not cantilever more than 24 inches beyond the foundation or bearing wall below.
3. Wall height shall not be greater than 12 feet.
4. The building shall have a roof eave-to-ridge height of 20 feet or less.
5. Exterior walls shall have gypsum board with a minimum thickness of ½ inch installed on the interior side fastened in accordance with Table R702.3.5.
6. The structure shall be located where the basic wind speed is less than or equal to 130 mph, and the Exposure Category is B or C.
7. The structure shall be located in Seismic Design Category A, B or C for detached one- and two-family dwellings or Seismic Design Category A or B for town houses.
8. Cripple walls shall not be permitted in three-story buildings.

**R806.2 Minimum vent area.** The minimum net free ventilating area shall be 1/150 of the area of the vented space.

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**Exception:** The minimum net free ventilation area shall be 1/300 of the vented space provided one or more of the following conditions are met:

1. In Climate Zones 6, 7, and 8, a Class I or II vapor retarder is installed on the warm-in-winter side of the ceiling.
2. Not less than 40% and not more than 50% of the required ventilating area is provided by ventilators located in the upper portion of the attic or rafter space. Upper ventilators shall be located not more than 3' below the ridge or highest point of the space, measured vertically. The balance of the required ventilation provided shall be located in the bottom  $\frac{1}{3}$  of the attic space. Where the location of wall or roof framing members conflicts with the installation of upper ventilators, installation more than 3' below the ridge or highest point of the space shall be permitted.

**N1101.2 (R101.3) Intent.** This chapter shall regulate the design and construction of buildings for the effective use and conservation of energy over the useful life of each building. Additions, alterations, renovations, or repairs to an existing building, building system, or portion thereof may conform to the provisions of this code as they relate to new construction without requiring the unaltered portion(s) of the existing building or building system to comply with this code. This chapter is intended to provide flexibility to permit the use of innovative approaches and techniques to achieve this objective. This chapter is not intended to abridge safety, health, or environmental requirements contained in other applicable codes or ordinances.

**N1101.13 (R401.2) Application.** Not adopted by the City.

**N1101.14 (R401.3) Certificate.** Not adopted by the City.

**Table N1102.1.3 (R402.1.3) Insulation Minimum R-Values and Fenestration Requirements by Component** <sup>a</sup> Amend the following portions of the table:

Climate Zone 6  
Fenestration U-Factor <sup>b,i</sup>: 0.32  
Skylight <sup>b</sup> U-Factor: 0.55  
Glazed Fenestration SHGC <sup>b,e</sup>: NR  
Ceiling R Value <sup>k</sup>: 49  
Wood Frame Wall R-Value <sup>g</sup>: 20 or 13+5h  
Mass Wall R-Value <sup>h,i</sup>: 15/19  
Floor R-Value <sup>j</sup>: 30  
Basement <sup>c,g</sup> Wall R-Value: 10/13  
Slab <sup>d</sup> R-Value: 10, 4 ft  
Crawl Space <sup>c,g</sup> Wall R-Value: 10/13  
Amend footnotes:

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c. add to footnote: “10/13” means R-10 continuous insulation on the interior or exterior of the home or R-13 cavity insulation on the interior of the basement wall. “15/19” means R-15 continuous insulation on the interior or exterior of the home or R-19 cavity insulation on the interior of the basement wall. Alternatively, compliance with 15/19 shall be R-13 cavity insulation on the interior of the basement wall plus R-5 continuous insulation on the interior or exterior of the home.

Add footnote j: Alternatively, insulation sufficient to fill the framing cavity providing not less than an R-value of R-19.

Add footnote k: The minimum R-value for ceilings is further based on a minimum 6-inch heel height to allow the ceiling insulation to extend over the top plate.

**N1102.2.8.1 (R402.2.8.1) Basement wall insulation installation.** Where basement walls are insulated, the insulation shall be installed from the top of the basement wall down to 10 feet below grade or to the basement floor, whichever is less.

**Exception:** Exterior basement walls of enclosed mechanical rooms.

**N1102.4.1.2 (R402.4.1.2) Testing.** Not adopted by the City.

**N1102.4.1.3 (R402.4.1.3) Leakage rate.** Not adopted by the City.

**N1102.4.4 (R402.4.4) Rooms containing fuel-burning appliances.** Not adopted by the City.

**N1102.4.6 (R402.4.6) Electrical and communication outlet boxes (air-sealed boxes).** Not adopted by the City.

**N1103.3.1 (R403.3.1) Ducts located outside conditioned space.** Supply and return ducts located outside conditioned space shall be insulated to an R-value of not less than R-8 for ducts 3 inches in diameter and larger and not less than R-6 for ducts smaller than 3 inches in diameter.

**N1103.3.5 (R403.3.5) Duct testing (Mandatory).** Not adopted by the City.

**N1103.5 (R403.5) Service hot water systems.** Energy conservation measures for service hot water systems shall be in accordance with the State Plumbing Code.

**N1103.6.3 (R403.6.3) Testing.** Not adopted by the City.

**N1104.1 (R404.1) Lighting equipment.** Not adopted by the City.

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**N1109.2 (R501.2) Compliance.** Additions, alterations, repairs, or changes of occupancy to or relocation of, an existing building, building system, or portion thereof may comply with Section N1110, N1111, N1112, or N1113 respectively, in this code. Changes where unconditioned spaces is changed to conditioned space shall comply with Section N1110.

**N1110.1 (R502.1) General.** Additions to an existing building, building system, or portion thereof may conform to the provisions of this chapter as they relate to new construction without requiring the unaltered portion of the existing building or building system to comply with this chapter. Additions shall not create an unsafe or hazardous condition or overload existing building systems. An addition shall be deemed to comply with this chapter where the addition alone complies, where the existing building and addition comply with this chapter as a single building, or where the building with the addition does not use more energy than the existing building. Additions shall be in accordance with Section N1110.2 or N1110.3.

**N1111.1 (R503.1) General.** Alterations to any building or structure may comply with the requirements of the code for new construction, without requiring the unaltered portions of the existing building or building system to comply with this chapter. Alterations shall be such that the existing building or structure is no less conforming with the provisions of this chapter than the existing building or structure was prior to the alteration.

Alterations to an existing building, building system, or portion thereof may conform to the provisions of this chapter as they relate to new construction without requiring the unaltered portions of the existing building or building system to comply with this chapter. Alterations shall not create an unsafe or hazardous condition or overload existing building systems. Alterations shall be such that the existing building or structure uses no more energy than the existing building or structure prior to the alteration. Alterations to existing buildings shall comply with Sections N1111.1.1 through N1111.1.4.

**N1112.1 (R504.1) General.** Buildings, structures, and parts thereof may be repaired in compliance with Section N1109.3 and this section. Work on nondamaged components necessary for the required repair of damaged components shall be considered part of the repair and shall not be subject to the requirements for alterations in this chapter. Routine maintenance required by Section N1109.3, ordinary repairs exempt from permit, and abatement of wear due to normal service conditions shall not be subject to the requirements for repairs in this section.

**N1113.1 (R505.1) General.** Any space that is converted to a dwelling unit or portion thereof from another use or occupancy may comply with this chapter.

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**Exception.** Where the simulated performance option in Section N1105 is used to comply with this section, the annual energy cost of the proposed design is permitted to be 110 percent of the annual energy cost allowed by Section N1105.2.

**M1305.1.3.1 Ground clearance.** Equipment and appliances supported from the ground shall be level and firmly supported on a concrete slab or other approved material extending not less than 1½ inches above the adjoining ground. Such support shall be in accordance with the manufacturer's installation instructions. Appliances suspended from the floor shall have a clearance of not less than 6 inches from the ground.

**M1305.1.3.3 Electrical requirements.** A luminaire controlled by a switch located at the required passageway opening and a receptacle outlet shall be installed at or near the appliance location in accordance with the State Electrical Code. Exposed lamps shall be protected from damage by location or lamp guards.

**M1502.4.2 Duct installation.** Exhaust ducts shall be supported at 4-foot intervals and shall be secured in place. The insert end of the duct shall extend into the adjoining duct or fitting in the direction of airflow. Exhaust duct joints shall be sealed in accordance with Section M1601.4.1. Ducts shall not be joined with screws or similar fasteners that protrude into the inside of the duct. Where dryer exhaust ducts are enclosed in wall or ceiling cavities, such cavities shall allow the installation of the duct without deformation.

**M1504.2 Duct Size.** Add a new table **Duct Size**:

Fan airflow rating (CFM):	0-80	Minimum duct diameter (inches):	4
	81-125		5
	126-200		6
	201-300		7
	Over 300		8

**M1504.3 Exhaust openings.** Air exhaust openings shall terminate as follows:

1. Not less than 3 feet from property lines.
2. Not less than 3 feet from gravity air intake openings, operable windows, and doors.
3. Not less than 10 feet from mechanical air intake openings except where the exhaust opening is located not less than 3 feet above the air intake opening. Openings shall comply with Sections R303.5.2 and R303.6.

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4. Minimum clearance between the exhaust and intake openings of an HRV/PRV system shall be in accordance with the manufacturer's installation instructions.

**M1505.4 Whole-house mechanical ventilation system.** Whole-house mechanical ventilation systems shall be designed in accordance with Sections M1505.4.1 through M1505.4.4.

**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 outdoor 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 duct within 8 feet of the air handler connection, not above a finished ceiling.

**Table M1505.4.4 Minimum Required Local Exhaust Rates for One- and Two-Family Dwellings.** Remove Kitchens Area to be Exhausted.

**Section M1506. Subslab Soil Exhaust Systems.**

**M1506.1 General.** When a subslab soil exhaust system is provided, the duct shall conform to the requirements of this section.

**M1506.2 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.

**M1506.3 Grade.** Exhaust system ducts shall not be trapped and shall have a minimum slope of  $\frac{1}{8}$  unit vertical in 12 units horizontal (1 percent slope).

**M1506.4 Termination.** Subslab soil exhaust system ducts shall extend through the roof and terminate at least 6 inches above the roof and at least 10 feet from any operable openings or air intake.



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**M1506.5 Identification.** Subslab soil exhaust ducts shall be permanently identified within each floor level by means of a tag, stencil or other approved marking.

**M1601.1.1 Above-ground duct systems.** Above-ground duct systems shall conform to the following:

1. Equipment connected to duct systems shall be designed to limit discharge air temperature to not greater than 250°F.
2. Factory-made ducts shall be listed and labeled in accordance with UL 181 and installed in accordance with the manufacturer's instructions. Flexible air ducts shall be limited in length to 14 feet. Flexible air connectors are not allowed.
3. Fibrous glass duct construction shall conform to the SMACNA Fibrous Glass Duct Construction Standards or NAIMA Fibrous Glass Duct Construction Standards.
4. Field-fabricated and shop-fabricated metal and flexible duct constructions shall conform to the SMACNA HVAC Duct Construction Standards—Metal and Flexible except as allowed by Table M1601.1.1. Galvanized steel shall conform to ASTM A653, except that sheet steel and strip used for duct, connectors, and round duct shall be G40 galvanized steel of lock-forming quality.
5. Use of gypsum products to construct return air ducts or plenums is permitted, provided that the air temperature does not exceed 125°F and exposed surfaces are not subject to condensation.
6. Duct systems shall be constructed of materials having a flame spread index not greater than 200.
7. Stud wall cavities and the spaces between solid floor joists to be used as air plenums shall comply with the following conditions:
  - 7.1. These cavities or spaces shall not be used as a plenum for supply air.
  - 7.2. These cavities or spaces shall not be part of a required fire-resistance-rated assembly.
  - 7.3. Stud wall cavities shall not convey air from more than one floor level.
  - 7.4. Stud wall cavities and joist space plenums shall be isolated from adjacent concealed spaces by tight-fitting fire-blocking in accordance with Section R302.11. Fireblocking materials used for isolation shall comply with Section R302.11.1.

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7.5 .Stud wall cavities in the outside walls of building envelope assemblies shall not be utilized as air plenums.

8. Volume dampers, equipment and other means of supply, return and exhaust air adjustment used in system balancing shall be provided with access.

**M1601.1.2 Underground duct systems.** Underground duct systems shall be constructed of approved concrete, clay, metal or plastic. The maximum design temperature for systems utilizing plastic duct and fittings shall be 150°F. Metal ducts shall be protected from corrosion in an approved manner or shall be completely encased in concrete not less than 2" thick. Nonmetallic ducts shall be installed in accordance with the manufacturer's instructions. Plastic pipe and fitting materials shall conform to cell classification 12454-B of ASTM D1248 or ASTM D1784 and external loading properties of ASTM D2412. Ducts shall slope to a drainage point that has access. Ducts shall be sealed, secured and tested prior to encasing the ducts in concrete or direct burial. Metallic ducts having an approved protective coating and nonmetallic ducts shall be installed in accordance with the manufacturer's instructions.

**M1601.4.1 Joints, seams and connections.** 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. 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 "181A-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 BM" for mastic. Duct 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 181B-C. Crimp joints for round metallic ducts shall have a contact lap of not less than 1 inch and shall be mechanically fastened by means of not less than three sheet-metal screws or rivets equally spaced around the joint.

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Closure systems used to seal metal ductwork shall be installed in accordance with the manufacturer's instructions.

**Exceptions:**

1. Spray polyurethane foam shall be permitted to be applied without additional joint seals.
2. Where a duct connection is made that is partially without access, three screws or rivets shall be equally spaced on the exposed portion of the joint so as to prevent a hinge effect.
3. 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 that are located outside of conditioned spaces.

**M1601.4.4 Support.** Factory-made ducts listed in accordance with UL 181 shall be supported in accordance with the manufacturer's installation instructions. Field- and shop-fabricated fibrous glass ducts shall be supported in accordance with the SMACNA Fibrous Glass Duct Construction Standards or the NAIMA Fibrous Glass Duct Construction Standards. Field- and shop-fabricated metal and flexible ducts shall be supported in accordance with the SMACNA HVAC Duct Construction Standards—Metal and Flexible. Metal ducts shall be supported by ½-inch-wide 18-gage, 1-inch-wide 24-gage, or 1 1/2-inch-wide 26-gage metal straps or 12-gage galvanized wire at intervals not exceeding 10 feet or other approved means.

**G2402.3 (201.3) Terms defined in other codes.** Where terms are not defined in this code and are defined in the International Building Code, International Fire Code, NFPA-70, International Mechanical Code, International Fuel Gas Code, or State Plumbing Code, such terms shall have meanings ascribed to them as in those codes.

**G2407.6 (304.6) Outdoor combustion air.** Outdoor combustion air shall be provided through opening(s) to the outdoors in accordance with Section G2407.6.1, or G2407.6.2, or G2407.6.3. The minimum dimension of air openings shall be not less than 3 inches.

Combustion air intake opening shall be located a minimum of 3 feet from a gas meter.

**G2407.6.3 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).

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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.

**G2408.1 (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.

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 G2404.3 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.

**G2408.4 (305.7) Clearance 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 supports shall be installed in accordance with the manufacturer's instructions.

**G2410.2 (309.2) Connections.** Electrical connections between appliances and the building wiring, including the grounding of the appliances, shall conform to the State Electric Code.

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**G2415.2 (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 G2414.3. 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.

**G2415.3 (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.

**G2415.6 (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.

**G2415.12 (404.12) Minimum burial depth.** 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).

**G2415.12.1 (404.12.1) Individual outdoor appliances.** Not adopted by the City.

**G2420.1.2 (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.

***Part VII—Plumbing.*** The following chapters are not adopted by the City: Chapter 25—Plumbing Administration; Chapter 26—General Plumbing Requirements; Chapter 27—Plumbing Fixtures; Chapter 28—Water Heaters; Chapter 29—Water Supply and Distribution, except Section P2904 Dwelling Unit Fire Sprinkler Systems; Chapter 30—Sanitary Drainage; Chapter 31—Vents; Chapter 32—Traps; and Chapter 33—Storm Drainage.

The provisions of the State Plumbing Code shall apply to the installation, alterations, repairs, and replacement of plumbing systems, including equipment, appliances, fixtures, and appurtenances, and where connected to a water or sewage system for 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.

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**Part VIII—Electrical.** The following chapters are not adopted by the City: Chapter 34—General Requirements; Chapter 35—Electrical Definitions; Chapter 36—Services; Chapter 37—Branch Circuit and Feeder Requirements; Chapter 38—Wiring Methods; Chapter 39—Power and Lighting Distribution; Chapter 40—Devices and Luminaires; Chapter 41—Appliance Installation; Chapter 42—Swimming Pools; Chapter 43—Class 2 Remote-Control, Signaling, and Power-Limited Circuits.

The provisions of the State Electrical Code shall apply to the installation, alteration, repair, relocation, replacement, addition to, use, or maintenance of any electrical system, apparatus, wiring, or equipment for electrical, light, heat, power, fire alarms, and associate controls for 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.

**AM Home Day Care (Title).** Amend the title to change “R-3 Occupancy” to “Residential Occupancy”.

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