

ORDINANCE NO. \_\_\_\_\_

1 AN ORDINANCE amending Chapter 20.10 of the Lincoln Municipal Code, the  
 2 Lincoln Residential Building Code, by amending Section 20.10.710 to include Chapters 13, 14, 15,  
 3 16, 17 and 18 of the International Residential Code, as amended by this ordinance, as part of the  
 4 Lincoln Residential Building Code; and repealing Section 20.10.710 of the Lincoln Municipal Code  
 5 as hitherto existing.

6 BE IT ORDAINED by the City Council of the City of Lincoln, Nebraska:

7 Section 1. That Section 20.10.710 of the Lincoln Municipal Code be amended to  
 8 read as follows:

9 **20.10.710 Chapters ~~12~~ 19 through 42 of the International Residential Code Deleted.**

10 Chapters ~~12, 13, 14, 15, 16, 17, 18,~~ 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33,  
 11 34, 35, 36, 37, 38, 39, 40, 41, and 42 of the International Residential Code are hereby deleted.

12 Section 2. That Chapter 20.10 of the Lincoln Municipal Code be amended by adding  
 13 a new section numbered 20.10.720 to read as follows:

14 **20.10.720 Section M1305.1.1 Amended; Central Furnaces.**

15 Section M1305.1.1 of the International Residential Code is amended to read as follows:

16 **M1305.1.1 Central furnaces.** Central furnaces within compartments or alcoves shall have  
 17 a minimum working space clearance of 3 inches (76 mm) along the sides, back and top. Furnaces  
 18 having a firebox open to the atmosphere shall have at least a 6-inch (152 mm) working space along  
 19 the front combustion chamber side. Combustion air openings at the rear or side of the compartment  
 20 shall comply with the requirements of Chapter 17.

21 **Exception:** This section shall not apply to replacement appliances installed in  
 22 existing compartments and alcoves where the working space clearances are in accordance with the  
 23 equipment or appliance manufacturer’s installation instructions.

1 Section 3. That Chapter 20.10 of the Lincoln Municipal Code be amended by adding  
2 a new section numbered 20.10.730 to read as follows:

3 **20.10.730 Section M1307.3 Amended; Elevation of Ignition Source.**

4 Section M1307.3 of the International Residential Code is amended to read as follows:

5 **M1307.3 Elevation of ignition source.** Appliances having a burner or ignition source,  
6 excluding the blower motor, shall be elevated such that the source of ignition is not less than 18  
7 inches (457 mm) above the floor in garages. For the purpose of this section, rooms or spaces that  
8 are not part of the living space of a dwelling unit and that communicate with a private garage  
9 through openings shall be considered to be part of the garage.

10 **M1307.3.1 Protection from impact.** Appliances located in a garage or carport shall  
11 be protected from impact by automobiles.

12 Section 4. That Chapter 20.10 of the Lincoln Municipal Code be amended by adding  
13 a new section numbered 20.10.740 to read as follows:

14 **20.10.740 Section M1411.5 Amended; Insulation of Refrigerant Piping.**

15 Section M1411.5 of the International Residential Code is amended to read as follows:

16 **M1411.5 Insulation of refrigerant piping.** Piping and fittings for refrigerant vapor  
17 (suction) lines shall be insulated with insulation having a thermal resistivity of at least R-2.

18 Section 5. That Chapter 20.10 of the Lincoln Municipal Code be amended by adding  
19 a new section numbered 20.10.750 to read as follows:

20 **20.10.750 Section M1502.6 Amended; Duct Length.**

21 Section M1502.6 of the International Residential Code is amended to read as follows:

22 **M1502.6 Duct length.** The maximum length of a clothes dryer exhaust duct shall not exceed  
23 25 feet (7620 mm), including two 90-degree ells, from the dryer location to the wall or roof  
24 termination. The maximum length shall be reduced 2.5 feet for each 45-degree ell and 5 feet for each

1 90-degree ell beyond the allowed two 90-degree ells. The maximum length of the exhaust duct does  
2 not include the transition duct.

3 **Exceptions:**

4 1. Where the make and model of the clothes dryer to be installed is known and the  
5 manufacturer's installation instructions for the dryer are provided to the Building Official, the  
6 maximum length of the exhaust duct, including any transition duct, shall be permitted to be in  
7 accordance with the dryer manufacturer's installation instructions.

8 2. Where large-radius 45-degree (0.8 rad) and 90-degree (1.6 rad) bends are  
9 installed, determination of the equivalent length of clothes dryer exhaust duct for each bend by  
10 engineering calculation in accordance with the ASHRAE Fundamentals Handbook shall be  
11 permitted.

12 Section 6. That Chapter 20.10 of the Lincoln Municipal Code be amended by adding  
13 a new section numbered 20.10.760 to read as follows:

14 **20.10.760 Section M1503.3 Amended; Kitchen Exhaust Rates.**

15 Section M1503.3 of the International Residential Code is amended to read as follows:

16 **M1503.3 Kitchen exhaust rates.** Where domestic kitchen cooking appliances are equipped  
17 with ducted range hoods or down-draft exhaust systems, the fans shall be sized in accordance with  
18 Section M1507.3. Residential kitchen exhaust fans shall not be sized with air flow exceeding 300  
19 cfm.

20 **Exception:** Residential kitchen exhaust may exceed 300 cfm provided makeup air  
21 is provided into the structure. The makeup air shall be controlled by a motorized damper that is  
22 electrically interlocked to open with operation of the kitchen exhaust fan. The makeup air shall be  
23 conditioned to within 10 degrees F. of the space designed temperature during the winter heating  
24 mode. The makeup air may be conditioned by circulation with a forced air furnace system or by  
25 other means approved by the Building Official.

1                   Section 7. That Chapter 20.10 of the Lincoln Municipal Code be amended by adding  
2 a new section numbered 20.10.770 to read as follows:

3 **20.10.770      Section M1507.3 Amended; Ventilation Rate.**

4                   Section M1507.3 of the International Residential Code is amended to read as follows:

5                   **M1507.3 Ventilation rate.** Ventilation systems shall be designed to have the capacity to  
6 exhaust all the air from the restroom, toilet room, and bath room a minimum of five times per hour.  
7 If such rooms calculate a CFM of less than 50 CFM, their exhaust rate shall be a minimum of 50  
8 CFM.

9                   **Table M1507.3 is hereby deleted.**

10                  Section 8. That Chapter 20.10 of the Lincoln Municipal Code be amended by adding  
11 a new section numbered 20.10.780 to read as follows:

12 **20.10.780      Section M1601.1.1 Amended; Above-ground Duct Systems.**

13                  Section M1601.1.1 of the International Residential Code is amended to read as follows:

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

16                  1. Equipment connected to duct systems shall be designed to limit discharge air  
17 temperature to a maximum of 250°F (121°C).

18                  2. Factory-made air ducts shall be constructed of Class 0 or Class 1 materials as designated  
19 in Table M1601.1.1(1).

20                  3. Fibrous duct construction shall conform to the SMACNA Fibrous Glass Duct  
21 Construction Standards or NAIMA Fibrous Glass Duct Construction Standards.

22                  4. Minimum thickness of metal duct material shall be as listed in Table M1601.1.1(2).  
23 Galvanized steel shall conform to ASTM A 653.

1           5. Use of gypsum products to construct return air ducts or plenums is permitted, provided  
2 that the air temperature does not exceed 125°F (52°C) and exposed surfaces are not subject to  
3 condensation.

4           6. Duct systems shall be constructed of materials having a flame spread index not greater  
5 than 200.

6           7. Stud wall cavities and the spaces between solid floor joists to be used as air plenums  
7 shall comply with the following conditions:

8                   7.1. These cavities or spaces shall not be used as a plenum for supply air.

9                   7.2. These cavities or spaces shall not be part of a required fire-resistance-rated  
10 assembly.

11                   7.3. Stud wall cavities and joist-space plenums shall be isolated from adjacent  
12 concealed spaces by tight-fitting fire blocking in accordance with Section R602.8.

13           Section 9. That Chapter 20.10 of the Lincoln Municipal Code be amended by adding  
14 a new section numbered 20.10.790 to read as follows:

15 **20.10.790 Section M1601.3.1 Amended; Joints and Seams.**

16           Section M1601.3.1 of the International Residential Code is amended to read as follows:

17           **M1601.3.1 Joints and seams.** Joints of duct systems shall be made substantially airtight by  
18 means of tapes, mastics, gasketing or other approved closure systems. Replacement duct and duct  
19 connections to replacement equipment shall be sealed where accessible. Closure systems used with  
20 rigid fibrous glass ducts shall comply with UL 181A and shall be marked “181A-P” for  
21 pressure-sensitive tape, “181 A-M” for mastic or “181 A-H” for heat-sensitive tape. Closure systems  
22 used with flexible air ducts and flexible air connectors shall comply with UL 181B and shall be  
23 marked “181B-FX” for pressure-sensitive tape or “181B-M” for mastic. Duct connections to flanges  
24 of air distribution system equipment or sheet metal fittings shall be mechanically fastened.  
25 Mechanical fasteners for use with flexible nonmetallic air ducts shall comply with UL 181B and

1 shall be marked 181B-C. Crimp joints for round metal ducts shall have a contact lap of at least 1½  
2 inches (38 mm) and shall be mechanically fastened by means of at least three sheet-metal screws  
3 or rivets equally spaced around the joint.

4 Section 10. That Chapter 20.10 of the Lincoln Municipal Code be amended by adding  
5 a new section numbered 20.10.800 to read as follows:

6 **20.10.800 Section M1601.3.2 Amended; Duct Installation; Support.**

7 Section M1601.3.2 of the International Residential Code is amended to read as follows:

8 **M1601.3.2 Support.** Metal ducts shall be supported by 1/2-inch (13 mm) wide 26-gage  
9 metal straps or 12-gage galvanized wire at intervals not exceeding 10 feet (3048 mm) or other  
10 approved means. Nonmetallic ducts shall be supported in accordance with the manufacturer's  
11 installation instructions.

12 Section 11. That Chapter 20.10 of the Lincoln Municipal Code be amended by adding  
13 a new section numbered 20.10.810 to read as follows:

14 **20.10.810 Section M1702.2 Amended; Combustion Air; Confined Space.**

15 Section M1702.2 of the International Residential Code is amended to read as follows:

16 **M1702.2 Confined space.** Where the space in which the appliance is located does not meet  
17 the criterion specified in Section M1702.1, two permanent openings to adjacent spaces shall be  
18 provided so that the combined volume of all spaces meets the criterion. One opening shall be within  
19 12 inches (305 mm) of the top and one within 12 inches (305 mm) of the bottom of the space, as  
20 illustrated in *Figure M1702.2*. Each opening shall have a free area equal to a minimum of 1 square  
21 inch per 1,000 Btu/h (2201 mm<sup>2</sup>/kW) input rating of all appliances installed within the space, but  
22 not less than 100 square inches (64 415 mm<sup>2</sup>).

23 **Exception: Existing Building:** When fuel-burning appliances are installed in an existing  
24 building containing other fuel-burning appliances, the room or space shall be provided combustion  
25 air as required by this chapter for all fuel-burning appliances contained therein. Additional floor

1 area can be used for combustion air requirements of a replacement furnace when all of the following  
2 conditions are met:

3 (1) The structure is a single-family dwelling.

4 (2) The communicating high-low combustion grills between the mechanical space  
5 and adjoining areas must constitute at least 50% of the required cubic feet for combustion air for the  
6 total BTU's in the space.

7 (3) A blower type furnace is being installed.

8 (4) A grill equivalent to one square inch (25 mm<sup>2</sup>) free air per 4000 BTU (19.325  
9 L/W) input rating of all appliances shall be installed on the supply duct or plenum.

10 (5) The grill shall not have shutters and shall be labeled with at least 1/2-inch letters  
11 of metal, plastic, or other approved materials and read: "Combustion Air Grill--Do Not Cover. If  
12 covered, may cause illness or death."

13 (6) The combustion grill cannot be on the plenum or supply duct, within the furnace  
14 room, if the furnace room area is less than 25% of the required cubic feet.

15 Section 12. That Chapter 20.10 of the Lincoln Municipal Code be amended by adding  
16 a new section numbered 20.10.820 to read as follows:

17 **20.10.820 Section M1803.3.3 Deleted; Chimney and Vent Connections; Installation; Size.**

18 Section M1803.3.3 of the International Residential Code is hereby deleted.

19 Section 13. That Section 20.10.710 of the Lincoln Municipal Code as hitherto existing  
20 be and the same is hereby repealed.

21 Section 14. That this ordinance shall take effect and be in force from and after its  
22 passage and publication in one issue of a daily or weekly newspaper of general circulation in the  
23 City according to law.

Introduced by:

Approved as to Form & Legality:

---

City Attorney

Approved this \_\_\_ day of \_\_\_\_\_, 2009:

---

Mayor