

Sec. 4-81. – Amendments.

INTERNATIONAL MECHANICAL CODE 2018

CHAPTER 1 ADMINISTRATION

SECTION 101 GENERAL

101.1 Title, is amended and shall read as follows:

These regulations shall be known as the Mechanical Code of "The City of Wilmington," hereinafter referred to as "this code."

SECTION 103 DEPARTMENT OF LICENSES AND INSPECTIONS

103.1 General, is amended and shall read as follows:

The Department of Licenses and Inspections is hereby created and the executive official in charge thereof shall be known as the code official.

SECTION 303 EQUIPMENT AND APPLIANCE LOCATION

303.3 Prohibited locations, is amended by deleting exceptions.

303.4.1 Protection from damage. Steel sleeved bollards, filled with concrete and minimum #4 reinforcing rod, as approved by the Building Official, shall be installed for vehicle crash protection around all utility regulatory equipment, including gas meters.

SECTION 305 PIPING SUPPORT

Section 305.3 Structural attachment, is amended by adding new subsections Section 305.3.1 and Section 305.6 and shall read as follows:

Section 305.3.1 - Flexible duct and connectors shall be installed in accessible areas only.

Section 305.6 Installation - Flexible duct and connections shall be installed in conformance with SMACNA HVAC Flexible Duct Construction Standards listed in Appendix A.

SECTION 307 CONDENSATE DISPOSAL

Section 307.2.1 Condensate disposal, is amended by adding new subsection Section 307.2.1.1 and shall read as follows:

Section 307.2.1.1 Where condensate line is exposed to the exterior, it shall be no longer than 18 inches and insulated so as to prevent freezing."

SECTION 402 NATURAL VENTILATION

Section 402 Natural Ventilation, is amended by adding new subsection 402.5 and shall read as follows:

402.5 Bathrooms and Powder rooms: rooms containing bathtubs, showers, spas, and similar bath fixtures shall be mechanically ventilated.

SECTION 601 RETURN AIR OPENINGS

Section 601.5 Return air openings, is amended by adding subsections 9 through 12 to section 601.5 as additional conditions and shall read as follows:

1. Openings shall not be located less than 10 feet (3048 mm) measured in any direction from an open combustion chamber or draft hood of another appliance located in the same room or space.
2. Return air shall not be taken from a hazardous or insanitary location or a refrigeration room as defined in this code.
3. The amount of return air taken from any room or space shall be not greater than the flow rate of supply air delivered to such room or space.
4. Return and transfer openings shall be sized in accordance with the appliance or equipment manufacturer's installation instructions, ACCA Manual D or the design of the registered design professional.
5. Return air taken from one dwelling unit shall not be discharged into another dwelling unit.
6. Taking return air from a crawl space shall not be accomplished through a direct connection to the return side of a forced air furnace. Transfer openings in the crawl space enclosure shall not be prohibited.
7. Return air shall not be taken from a closet, bathroom, toilet room, kitchen, garage, boiler room, furnace room or unconditioned attic.
8. Return air shall not be taken from indoor swimming pool enclosures and associated deck areas.

Exceptions:

1. Where the air from such spaces is dehumidified in accordance with Section 403.2.1, Item 2.
2. Dedicated HVAC systems serving only such spaces
9. The undercutting of doors shall be prohibited from use as Transfer Air or as Return Air.
10. The space utilized for Return Air must not be part of a fire-resistant rated assembly. All cavities of the plenum, not used for air movement, must be isolated from the plenum, or transfer air opening, with fire-blocking constructed and installed to comply with the IBC.
11. All Transfer Grills, including High/Low Grills, constructed from one space into another space shall be ducted and fire-stopped to comply with the IBC.
12. Connection of Return Air from one floor level to another floor level is prohibited.

SECTION 602 PLENUMS

Section 602 Plenums, is amended by amending section 602.3 and adding new subsection Section 602.5 and shall read as follows:

602.3 Stud cavity and joist space plenums, is amended and shall read as follows:

Stud wall cavities and the spaces between solid floor joists to be utilized as air plenums shall comply with the following conditions. All space between studs or joists used as a return air plenum shall be so constructed and sealed as to effectively eliminate air infiltration into the return system:

1. Such cavities or spaces shall not be utilized as a plenum for supply air.
2. Such cavities or spaces shall not be part of a required fire-resistance-rated assembly.
3. Stud wall cavities shall not convey air from more than one floor level.
4. Stud wall cavities and joist space plenums shall comply with the floor penetration protection requirements of the International Building Code.

5. Stud wall cavities and joist space plenums shall be isolated from adjacent concealed spaces by approved fire blocking as required in the International Building Code.

602.5. Furnace plenum height.

All up-flow furnace supply plenums shall have a minimum height of 18 inches measured from the furnace top or 12 inches measured from the top of a cooling coil, whichever is higher.

SECTION 603 DUCT CONSTRUCTION AND INSTALLATION

Section 603 Duct Construction, is amended and shall read as follows:

603.6.1.1 Duct length, is amended and shall read as follows:

Flexible ducts and flexible duct connectors shall be limited in length to 12 feet in length.

603.6.2.1 Connector length, is amended and shall read as follows:

Flexible air connectors shall be limited in length to 12 feet (4267 mm).

SECTION 604 INSULATION

604.11 Vapor retarders, is amended by adding subsection Section 604.11.1 and shall read as follows:

Section 604.11.1 Supply and return duct systems in unconditioned attics, crawl spaces, or basements shall be insulated to provide a thermal resistance equal to or better than the thermal resistance of the insulation as listed in the IECC 2018 edition.

CHAPTER 8 CHIMNEYS AND VENTS

SECTION 801 GENERAL

801.2.1 Oil-fired appliances, is amended by adding new subsection Section 801.2.2 and shall read as follows:

801.2.2 Unlined. When an existing chimney is unlined, an approved liner or another vent shall be installed for any installation of fossil fuel fired heating appliances.

CHAPTER 13 FUEL OIL PIPING AND STORAGE

Section 1301 General, is amended by adding new section 1309 and new subsections Section 1301.6 through 1301.16.8, Section 1301.7, Section 1301.8, Section 1301.9, Section 1301.10, Section 1301.11, Section 1301.12, Section 1301.13, Section 1301.14, Section 1301.15, Section 1301.16, Section 1301.16.1, Section 1301.16.2, Section 1301.16.3, Section 1301.16.4, Section 1301.16.5, Section 1301.16.6, Section 1301.16.7, and Section 1301.16.8 and shall read as follows:

1301.6. Storage Systems - Whenever there is a change from oil to gas, whether for residential or commercial use, the oil tank shall be removed in accordance with Delaware Department of Natural Resources and Environmental Control ("DNREC") requirements.

1301.7 Auxiliary Tanks - Small storage or auxiliary tanks of not more than 275-gallon capacity may be installed aboveground in the lowest story of a building, when mounted on substantial noncombustible supports, and located at least seven feet from any boiler, furnace, stove or other exposed flame. Not more than two such tanks shall be connected to any one burner, nor shall more than two tanks of 275-gallon capacity each be installed in any one building, unless protected as provided for larger tanks.

1301.8 Large Tanks - Tanks of more than 275-gallon capacity located within a building shall be installed on the lowest floor and shall be protected with an approved reinforced concrete or masonry jacket not less than four inches thick, or such tank may be buried with the top not less than two feet below the floor level or shall be covered with an approved reinforced concrete slab not less than four inches thick.

1301.9 Maximum Storage - The aggregate flow of capacity for all individual storage tanks located within a building or other structure shall not exceed 20,000 gallons.

1301.10 Exterior Storage Tanks - Oil storage tanks which are located outside a building or other structures may be erected above or underground, and shall comply with all the pertinent requirements of the fire prevention code.

1301.11 Underground Tanks - When required by ground water pressure, such tanks shall be anchored to a foundation sufficiently to prevent floating.

1301.12 Aboveground Tanks - An aboveground storage tank located outside a building shall be located not less than 1 1/3 tank diameters, and in no case less than ten feet from interior lot lines or from the nearest building thereto, or from any other tank.

1301.13 Electric Ground - All exterior metallic storage tanks aboveground of more than 10,000 gallons shall be electrically grounded with at least No. 6 AWG copper conductor in the manner approved by the National Electrical Code.

1301.14 Location - The capacity of individual tanks shall be determined by the location in respect to property lines as specified in Table 21.

1301.15 Protecting Dikes - Each aboveground tank of more than 10,000-gallon capacity shall be protected by an embankment or dike of approved construction with an enclosed volume not less than 1 1/2 times the capacity of the tank. The height of the dike shall not exceed one-fourth the height of the tank, but in no case less than 4' high.

1301.16 Oil-burning installations.

1301.16.1 - Permits - Oil-burning installations utilizing more than six gallons of fuel storage require a permit secured from the Department of Licenses and Inspections as herein specified. A permit shall not be required for the installation and use of portable burners of the type commonly used for household purposes which do not require a flue connection, including oil stoves, oil heaters and oil lamps equipped with a woven wick, or for such portable apparatus required in construction operations as blow torches, soldering pots, and tar and bitumen heaters.

1301.16.2 - Identification - Each approved burner shall have permanently and prominently affixed thereto a metal plate.

1301.16.3 - Instructions - Appropriate operating instructions shall be supplied by the manufacturer or installer of each appliance and posted permanently in a prominent position on the appliance. At a minimum, they shall include igniting, operating, owner maintenance and shutdown procedures.

1301.16.4 - Construction - An approved burner, including the oil-burning heater, shall be an assembly of approved parts which are suitable for use with each other and for the service intended.

1301.16.5 - Safety Devices - Each appliance shall be provided with approved safeguards and protected devices for control of the fuel supply, air mixing, ignition, high temperature or pressure, high and low water limits, and for the control of the burner when ignition fails as described in this code.

1301.16.6 - Quality of Oil - Oil for use in oil burners shall be free of acid, grit, fibrous and other foreign matter, with a flashpoint not lower than 100 degrees Fahrenheit, and shall comply with the applicable standards listed in appendix B.

1301.16.7 - Oil Burner Operation - The operation of an approved burner shall ensure a carbon dioxide content in the flue gas of not less than eight percent, with a smoke spot not greater than No. 2 for No. 1 and No. 2 fuel oils, and not greater than No. 4 for other grades of fuel oil. Smoke spot number shall be determined by the method outlined in ANSI Z11.182, ASTM D2156, Standard Method of Test for Smoke Density in Flue Gases from Distillate Fuels.

1301.16.8 - Tests - When installed, each burner shall be tested for defects and proper functioning throughout the operating range as provided in this chapter and the manufacturer's instructions.

SECTION 1302 MATERIAL

Section 1302 is amended by adding new subsections Section 1302.9, Section 1309.10, and Section 1309.11 and shall read as follows:

1302.9 Minimum Size of Gas Main - Where a gas fired central heater is installed, the minimum size gas main shall be one inch.

1309.10 Flexible metal tubing - Approved flexible metal tubing having a nominal diameter not less than the inlet connection to the appliances, and as short as possible but not to exceed six feet in length, may be used to connect overhead mounted unit heaters, infrared heaters, gas ranges, and clothes dryers, and other appliances to reduce the effect of jarring and vibration where rigid connections are impracticable. Flexible metal tubing shall be listed by a nationally recognized testing or approved agency. Where such flexible metal tubing is used, a fuel shutoff device shall be installed at the point where the flexible metal tubing is connected to the fuel supply line. Any part of such flexible metal tubing shall not extend through a partition, wall, floor or ceiling or a building or structure.

1302.11 Pipe-Joint Compounds - shall be used on the male threads only, no Teflon tape or Teflon bearing pipe dope shall be permitted to be used.

SECTION 1309 GAS METER INSTALLATION

1309.1 Installation - Customer meters and regulators shall be installed adjacent to either a side or rear wall for all residential or commercial units.

1309.2 Alteration of Meter and Regulator Location -

- (a) Where a meter and regulator system is to be relocated to a front wall of an existing structure and said system will project beyond the true property line, the gas utility will bear the installation costs as well as any on-going costs of a remote meter box;
- (b) Where a meter box and regulatory system is to be relocated to a front wall of an existing structure and such system will not project beyond the true property line, the owner shall install suitable architectural screening approved by the department of licenses and inspections and the gas utility.

1309.3 New Construction - Where a meter and a regulator system are to be installed adjacent to the front wall of a new structure, the developer will incorporate into his plans suitable architectural screening approved by the department of licenses and inspections and the gas utility.