



**CITY OF CLEVELAND HEIGHTS
BUILDING DEPARTMENT
40 SEVERANCE CIRCLE
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POLICY BULLETIN 1-16-04

MECHANICAL INSTALLATIONS

**RESIDENTIAL CODE OF OHIO
via CLEVELAND HEIGHTS BUILDING CODE 1301.01**

GENERAL - Heating and Cooling Equipment and appliances shall be installed in accordance with the manufacturer's installation instructions and the requirements of the Cleveland Heights Building Code, the Residential Code of Ohio, and the National Fuel Gas Code.

DUCTS - Duct systems serving heating, cooling and ventilation equipment shall be fabricated in accordance with the provisions of the 2003 Residential Code of Ohio and the Air Conditioning Contractors of America (ACCA) manual "D" or other approved methods.

NFGC 10.3.7.4 Where a furnace is installed so supply ducts carry air circulated by the furnace to areas outside the space containing the furnace, the return air shall also be handled by a duct(s) sealed to the furnace casing and terminating outside the space containing the furnace.

A. Return Air. Return air shall be taken from inside the dwelling. Dilution of return air with outdoor air shall not be prohibited.

B. Prohibited Sources. Outside or return air for a forced-air heating or cooling system shall not be taken from the following locations:

1. Closer than 10 feet (3048 mm) from an appliance vent outlet, a vent opening from a plumbing drainage system or the discharge outlet of an exhaust fan, unless the outlet is 3 feet (914 mm) above the outside air inlet.
2. Where there is the presence of flammable vapors; or where located less than 10 feet (3048 mm) above the surface of any abutting public way of driveway; or where located at grade level by a sidewalk, street, alley or driveway.
3. A room or space, the volume of which is less than 25 percent of the entire volume served by such system. Where connected by a permanent opening having an area sized in accordance with ACCA Manual D, adjoining rooms or spaces shall be considered as a single room or space for the purpose of determining the volume of such rooms or spaces.

Exception: The minimum volume requirement shall not apply where the amount of return air taken from a room or space is less than or equal to the amount of supply air delivered to such room or space.

4. A closet, bathroom, toilet room, kitchen, garage, mechanical room, furnace room or other dwelling unit.
5. A room or space containing a fuel-burning appliance where such room or space serves as the sole source of return air.

Exceptions:

1. The fuel-burning appliance is a direct-vent appliance or an appliance not requiring a vent in accordance with Section M1801.1 or Chapter 24.
2. The room or space complies with the following requirements:
 - 2.1. The return air shall be taken from a room or space having a volume exceeding 1 cubic foot for each 10 Btu/h (9.6 L/W) of combined input rating of all fuel-burning appliances therein.
 - 2.2. The volume of supply air discharged back into the same space shall be approximately equal to the volume of return air taken from the space.
 - 2.3. Return-air inlets shall not be located within 10 feet (3048 mm) of any appliance firebox or draft hood in the same room or space.
3. Rooms or spaces containing solid-fuel burning appliances, provided that return-air inlets are located not less than 10 feet (3048 mm) from the firebox of such appliances.

C. 3 Inlet Opening Protection. Outdoor air inlets shall be covered with screens having not less than 1/4-inch (6.4 mm) openings and not greater than 1/2-inch (12.7 mm) openings.

rf(11/08/06-revised)