

SECTION 306 (IFGC) ACCESS AND SERVICE SPACE

[M] 306.1 Clearances for maintenance and replacement. Clearances around appliances to elements of permanent construction, including other installed appliances, shall be sufficient to allow inspection, service, repair or replacement without removing such elements of permanent construction or disabling the function of a required fire-resistance-rated assembly.

[M] 306.2 Appliances in rooms. Rooms containing appliances requiring access shall be provided with a door and an unobstructed passageway measuring not less than 36 inches (914 mm) wide and 80 inches (2032 mm) high.

Exception: Within a dwelling unit, appliances installed in a compartment, alcove, basement or similar space shall be provided with access by an opening or door and an unobstructed passageway measuring not less than 24 inches (610 mm) wide and large enough to allow removal of the largest appliance in the space, provided that a level service space of not less than 30 inches (762 mm) deep and the height of the appliance, but not less than 30 inches (762 mm), is present at the front or service side of the appliance with the door open.

[M] 306.3 Appliances in attics. Attics containing appliances requiring access shall be provided with an opening and unobstructed passageway large enough to allow removal of the largest component of the appliance. The passageway shall not be less than 30 inches (762 mm) high and 22 inches (559 mm) wide and not more than 20 feet (6096 mm) in length when measured along the centerline of the passageway from the opening to the equipment. The passageway shall have continuous solid flooring not less than 24 inches (610 mm) wide. A level service space not less than 30 inches (762 mm) deep and 30 inches (762 mm) wide shall be present at the front or service side of the equipment. The clear access opening dimensions shall be a minimum of 20 inches by 30 inches (508 mm by 762 mm), where such dimensions are large enough to allow removal of the largest component of the appliance.

Exceptions:

1. The passageway and level service space are not required where the appliance is capable of being serviced and removed through the required opening.
2. Where the passageway is not less than 6 feet (1829 mm) high for its entire length, the passageway shall be not greater than 50 feet (15 250 mm) in length.

[M] 306.3.1 Electrical requirements. A lighting fixture controlled by a switch located at the required passageway opening and a receptacle outlet shall be provided at or near the equipment location in accordance with the ICC *Electrical Code*.

[M] 306.4 Appliances under floors. Under-floor spaces containing appliances requiring access shall be provided with an access opening and unobstructed passageway large enough to remove the largest component of the appliance. The passageway shall not be less than 30 inches (762 mm) high and 22 inches (559 mm) wide, nor more than 20 feet (6096 mm) in length when measured along the centerline of the passageway from the opening to the equipment. A level service space not less than 30 inches (762 mm) deep and 30 inches (762 mm)

wide shall be present at the front or service side of the appliance. If the depth of the passageway or the service space exceeds 12 inches (305 mm) below the adjoining grade, the walls of the passageway shall be lined with concrete or masonry extending 4 inches (102 mm) above the adjoining grade and having sufficient lateral-bearing capacity to resist collapse. The clear access opening dimensions shall be a minimum of 22 inches by 30 inches (559 mm by 762 mm), where such dimensions are large enough to allow removal of the largest component of the appliance.

Exceptions:

1. The passageway is not required where the level service space is present when the access is open and the appliance is capable of being serviced and removed through the required opening.
2. Where the passageway is not less than 6 feet high (1829 mm) for its entire length, the passageway shall not be limited in length.

[M] 306.4.1 Electrical requirements. A lighting fixture controlled by a switch located at the required passageway opening and a receptacle outlet shall be provided at or near the equipment location in accordance with the ICC *Electrical Code*.

[M] 306.5 Appliances on roofs or elevated structures. Where appliances requiring access are installed on roofs or elevated structures at a height exceeding 16 feet (4877 mm), such access shall be provided by a permanent approved means of access, the extent of which shall be from grade or floor level to the appliance's level service space. Such access shall not require climbing over obstructions greater than 30 inches high (762 mm) or walking on roofs having a slope greater than four units vertical in 12 units horizontal (33-percent slope).

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

1. The side railing shall extend above the parapet or roof edge not less than 30 inches (762 mm).
2. Ladders shall have a rung spacing not to exceed 14 inches (356 mm) on center.
3. Ladders shall have a toe spacing not less than 6 inches (152 mm) deep.
4. There shall be a minimum of 18 inches (457 mm) between rails.
5. Rungs shall have a minimum diameter of 0.75-inch (19 mm) and shall be capable of withstanding a 300-pound (136.1 kg) load.
6. Ladders over 30 feet (9144 mm) in height shall be provided with offset sections and landings capable of withstanding a load of 100 pounds per square foot (488.2 kg/m²).
7. Ladders shall be protected against corrosion by approved means.

Catwalks installed to provide the required access shall be not less than 24 inches wide (610 mm) and shall have railings as required for service platforms.

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

[M] **306.5.1 Sloped roofs.** Where appliances are installed on a roof having a slope of three units vertical in 12 units horizontal (25-percent slope) or greater and having an edge more than 30 inches (762 mm) above grade at such edge, a level platform shall be provided on each side of the appliance to which access is required by the manufacturer's installation instructions for service, repair or maintenance. The platform shall not be less than 30 inches (762 mm) in any dimension and shall be provided with guards in accordance with Section 306.6.

[M] **306.5.2 Electrical requirements.** A receptacle outlet shall be provided at or near the equipment location in accordance with the ICC *Electrical Code*.

[M] **306.6 Guards.** Guards shall be provided where appliances, fans or other components that require service are located within 10 feet (3048 mm) of a roof edge or open side of a walking surface and such edge or open side is located more than 30 inches (762 mm) above the floor, roof or grade below. The guard shall extend not less than 30 inches (762 mm) beyond each end of such appliances, fans or other components and the top of the guard shall be located not less than 42 inches (1067 mm) above the elevated surface adjacent to the guard. The guard shall be constructed so as to prevent the passage of a 21-inch-diameter (533 mm) sphere and shall comply with the loading requirements for guards specified in the *International Building Code*.

SECTION 307 (IFGC) CONDENSATE DISPOSAL

307.1 Fuel-burning appliances. Liquid combustion by-products of condensing appliances shall be collected and discharged to an approved plumbing fixture or disposal area in accordance with the manufacturer's installation instructions. Condensate piping shall be of approved corrosion-resistant material and shall not be smaller than the drain connection on the appliance. Such piping shall maintain a minimum slope in the direction of discharge of not less than one-eighth unit vertical in 12 units horizontal (1-percent slope).

[M] **307.2 Drain pipe materials and sizes.** Components of the condensate disposal system shall be cast iron, galvanized steel, copper, polybutylene, polyethylene, ABS, CPVC or PVC pipe or tubing. All components shall be selected for the pressure and temperature rating of the installation. Condensate waste and drain line size shall be not less than $\frac{3}{4}$ -inch internal diameter (19 mm) and shall not decrease in size from the drain connection to the place of condensate disposal. Where the drain pipes from more than one unit are manifolded together for condensate drainage, the pipe or tubing shall be sized in accordance with an approved method. All horizontal sections of drain piping shall be installed in uniform alignment at a uniform slope.

307.3 Traps. Condensate drains shall be trapped as required by the equipment or appliance manufacturer.

SECTION 308 (IFGS) CLEARANCE REDUCTION

308.1 Scope. This section shall govern the reduction in required clearances to combustible materials and combustible assemblies for chimneys, vents, appliances, devices and equipment. Clearance requirements for air-conditioning equipment and central heating boilers and furnaces shall comply with Sections 308.3 and 308.4.

308.2 Reduction table. The allowable clearance reduction shall be based on one of the methods specified in Table 308.2 or shall utilize an assembly listed for such application. Where required clearances are not listed in Table 308.2, the reduced clearances shall be determined by linear interpolation between the distances listed in the table. Reduced clearances shall not be derived by extrapolation below the range of the table. The reduction of the required clearances to combustibles for listed and labeled appliances and equipment shall be in accordance with the requirements of this section except that such clearances shall not be reduced where reduction is specifically prohibited by the terms of the appliance or equipment listing [see Figures 308.2(1) through 308.2(3)].

308.3 Clearances for indoor air-conditioning equipment. Clearance requirements for indoor air-conditioning equipment shall comply with Sections 308.3.1 through 308.3.5.

308.3.1 Equipment installed in rooms that are large in comparison with the size of the equipment. Air-conditioning equipment installed in rooms that are large in comparison with the size of the equipment shall be installed with clearances in accordance with the terms of their listing and the manufacturer's instructions.

308.3.2 Equipment installed in rooms that are not large in comparison with the size of the equipment. Air-conditioning equipment installed in rooms that are not large in comparison with the size of the equipment, such as alcoves and closets, shall be listed for such installations and installed in accordance with the manufacturer's instructions. Listed clearances shall not be reduced by the protection methods described in Table 308.2, regardless of whether the enclosure is of combustible or noncombustible material.

308.3.3 Clearance reduction. Air-conditioning equipment installed in rooms that are large in comparison with the size of the equipment shall be permitted to be installed with reduced clearances to combustible material provided the combustible material or equipment is protected as described in Table 308.2.

308.3.4 Plenum clearances. Where the furnace plenum is adjacent to plaster on metal lath or noncombustible material attached to combustible material, the clearance shall be measured to the surface of the plaster or other noncombustible finish where the clearance specified is 2 inches (51 mm) or less.

308.3.5 Clearance from supply ducts. Air-conditioning equipment shall have the clearance from supply ducts within 3 feet (914 mm) of the furnace plenum be not less than that specified from the furnace plenum. No clearance is necessary beyond this distance.