



Log No. 087
Proponent Revision 2
5/24/22

STATE OF WASHINGTON
STATE BUILDING CODE COUNCIL

1. State Building Code to be Amended:

- International Building Code
- ICC ANSI A117.1 Accessibility Code
- International Existing Building Code
- International Residential Code
- International Fire Code
- Uniform Plumbing Code

- International Mechanical Code
- International Fuel Gas Code
- NFPA 54 National Fuel Gas Code
- NFPA 58 Liquefied Petroleum Gas Code
- Wildland Urban Interface Code

For the Washington State Energy Code, please see specialized [energy code forms](#)

Section(s):
[WSMC](#)

Title:
[Access for appliances above ceilings](#)

2. Proponent Name (Specific local government, organization or individual):

Proponent: [Austin Bonnes, Rushing](#)
Title: [Mechanical Engineer](#)
Date: [4/8/2022](#)

3. Designated Contact Person:

Name: [Austin Bonnes](#)
Title: [Mechanical Engineer](#)
Address: [1725 Westlake Ave N Suite 300, Seattle, WA 98109](#)

Office Phone: () [206-285-7114](#)
Cell: () [217-721-2977](#)
E-Mail address: austinb@rushingco.com

4. Proposed Code Amendment. Reproduce the section to be amended by underlining all added language, striking through all deleted language. Insert new sections in the appropriate place in the code in order to continue the established numbering system of the code. If more than one section is proposed for amendment or more than one page is needed for reproducing the affected section of the code, additional pages may be attached.

Clearly state if the proposal modifies an existing amendment or if a new amendment is needed. If the proposal modifies an **existing amendment**, show the modifications to the existing amendment by underlining all added language and striking through all deleted language. If a new amendment is needed, show the modifications to the **model code** by underlining all added language and striking through all deleted language.

Code(s) **WSMC** Section(s) **306.6**

Enforceable code language must be used.

Amend section to read as follows:

See proposed a updated section 306.6 below in **red**, to align with Seattle Mechanical code. The idea is to remove the word “ready”.

306.6 Appliances above ceilings. Appliances that are located above ~~the ceilings~~ shall have **ready** access for inspection, service and repair without removing permanent construction. Appliances that are located above a ceiling shall be provided with access to the working space(s) per NFPA 70 Section 110.26(A)(4) with ready access to panel or removable ceiling tile with by an opening not smaller than 22 inches by 22 inches (559 mm x 559 mm) minimum nominal dimensions of 24 inches by 24 inches (609 mm x 609 mm). All enclosure doors or hinged panels shall be capable of opening a minimum of 90 degrees.

The appliance is not required to be removable or replaceable through the enclosure door, access hinged panel, or removable lay-in ceiling tile, or other removal cover. The appliance may be removed or replaced by removing the ceiling or wall assemblies adjacent to the appliance as long as they are not *permanent construction*.

Exceptions:

- 1. This section shall not apply to replacement appliances installed in existing compartments and alcoves where the working space clearances are in accordance with the ~~equipment or appliance~~ manufacturer’s installation instructions.**
- 2. A smaller enclosure door, access hinged panel, or removable lay-in ceiling tile, or other removal cover shall be permitted when allowed by the ~~equipment or appliance~~ manufacturer’s installation instructions and electrical access per NFPA 70 Section 110.26 is not required.**

Definition clips below for reference.

**SECTION 202
GENERAL DEFINITIONS**

ABRASIVE MATERIALS. Moderately abrasive particulate in high concentrations, and highly abrasive particulate in moderate and high concentrations, such as alumina, bauxite, iron silicate, sand and slag.

ABSORPTION SYSTEM. A refrigerating system in which refrigerant is pressurized by pumping a chemical solution of refrigerant in absorbent, and then separated by the addition of heat in a generator, condensed (to reject heat), expanded, evaporated (to provide refrigeration), and reabsorbed in an absorber to repeat the cycle; the system can be single or multiple effect, the latter using multiple stages or internally cascaded use of heat to improve efficiency.

ACCESS (TO). That which enables a device, *appliance* or *equipment* to be reached by ready access or by a means that **first requires the removal or movement of a panel or similar** obstruction [see also “Ready access (to)”].

READY ACCESS (TO). That which enables a device, *appliance* or *equipment* to be directly reached, without **requiring the removal or movement of any panel or similar** obstruction [see “Access (to)”].

IMC Commentary

APPLIANCE. A device or apparatus that is manufactured and designed to utilize energy and for which this code provides specific requirements.

❖ An appliance is a manufactured component or assembly of components that converts one form of energy into a different form of energy to serve a specific purpose. The term "appliance" generally refers to residential- and commercial-type equipment that is manufactured in standardized sizes or types. The term "appliance" is generally not associated with industrial-type equipment. For the application of the code provisions, the terms "appliance" and "equipment" are mutually exclusive.

Examples of appliances include furnaces; boilers; water heaters; room heaters; refrigeration units; cooking equipment; clothes dryers; wood stoves; pool, spa and hot tub heaters; unit heaters; ovens and similar fuel-fired or electrically operated appliances (see the definition of "Equipment").

AIR-HANDLING UNIT. A blower or fan used for the purpose of distributing supply air to a room, space or area.

❖ In addition to blowers, air-handling units may contain heat exchangers, filters and means to control air volume.

EQUIPMENT. All piping, ducts, vents, control devices and other components of systems other than appliances which are permanently installed and integrated to provide control of environmental conditions for buildings. This definition shall also include other systems specifically regulated in this code.

❖ In the code, appliances are not referred to as equipment and vice versa. Throughout the code, the terms "equipment" and "appliance" have been used as necessary to match the terms with the intent and context of the code text. Traditionally, the term "equipment" has referred to large machinery and specialized hardware not thought of as an "appliance." See the definition of "Appliance" and the commentary for Section 301.7.

NFPA 70-2017 Section 110.26 Handbook for Reference

N (4) Limited Access. Where equipment operating at 1000 volts, nominal, or less to ground and likely to require examination, adjustment, servicing, or maintenance while energized is required by installation instructions or function to be located in a space with limited access, all of the following shall apply:

(a) Where equipment is installed above a lay-in ceiling, there shall be an opening not smaller than 559 mm × 559 mm (22 in. × 22 in.), or in a crawl space, there shall be an accessible opening not smaller than 559 mm × 762 mm (22 in. × 30 in.).

(b) The width of the working space shall be the width of the equipment enclosure or a minimum of 762 mm (30 in.), whichever is greater.

(c) All enclosure doors or hinged panels shall be capable of opening a minimum of 90 degrees.

(d) The space in front of the enclosure shall comply with the depth requirements of **Table 110.26(A)(1)**. The maximum height of the working space shall be the height necessary to install the equipment in the limited space. A horizontal ceiling structural member or access panel shall be permitted in this space.

This requirement was formerly located in **424.66**. A typical application of this requirement is the installation of duct heaters and other ventilation equipment located above suspended ceilings. The workspace is usually limited and workers are usually performing maintenance from ladders.

NFPA 70 Section 110.26 for Reference

Part II. 1000 Volts, Nominal, or Less

110.26 Spaces About Electrical Equipment. Access and working space shall be provided and maintained about all electrical equipment to permit ready and safe operation and maintenance of such equipment.

(A) Working Space. Working space for equipment operating at 1000 volts, nominal, or less to ground and likely to require examination, adjustment, servicing, or maintenance while energized shall comply with the dimensions of 110.26(A)(1), (A)(2), (A)(3), and (A)(4) or as required or permitted elsewhere in this *Code*.

Informational Note: NFPA 70E-2018, Standard for Electrical Safety in the Workplace, provides guidance, such as determining severity of potential exposure, planning safe work practices including establishing an electrically safe work condition, arc flash labeling, and selecting personal protective equipment.

(1) Depth of Working Space. The depth of the working space in the direction of live parts shall not be less than that specified in Table 110.26(A)(1) unless the requirements of 110.26(A)(1)(a), (A)(1)(b), or (A)(1)(c) are met. Distances shall be measured from the exposed live parts or from the enclosure or opening if the live parts are enclosed.

(a) *Dead-Front Assemblies.* Working space shall not be required in the back or sides of assemblies, such as dead-front switchboards, switchgear, or motor control centers, where all connections and all renewable or adjustable parts, such as fuses or switches, are accessible from locations other than the back or sides. Where rear access is required to work on nonelectrical

parts on the back of enclosed equipment, a minimum horizontal working space of 762 mm (30 in.) shall be provided.

(b) *Low Voltage.* By special permission, smaller working spaces shall be permitted where all exposed live parts operate at not greater than 30 volts rms, 42 volts peak, or 60 volts dc.

(c) *Existing Buildings.* In existing buildings where electrical equipment is being replaced, Condition 2 working clearance shall be permitted between dead-front switchboards, switchgear, panelboards, or motor control centers located across the aisle from each other where conditions of maintenance and supervision ensure that written procedures have been adopted to prohibit equipment on both sides of the aisle from being open at the same time and qualified persons who are authorized will service the installation.

(2) Width of Working Space. The width of the working space in front of the electrical equipment shall be the width of the equipment or 762 mm (30 in.), whichever is greater. In all cases, the work space shall permit at least a 90 degree opening of equipment doors or hinged panels.

(3) Height of Working Space. The work space shall be clear and extend from the grade, floor, or platform to a height of 2.0 m (6½ ft) or the height of the equipment, whichever is greater. Within the height requirements of this section, other equipment or support structures, such as concrete pads, associated with the electrical installation and located above or below the electrical equipment shall be permitted to extend not more than 150 mm (6 in.) beyond the front of the electrical equipment.

Exception No. 1: On battery systems mounted on open racks, the top clearance shall comply with 480.10(D).

Exception No. 2: In existing dwelling units, service equipment or panelboards that do not exceed 200 amperes shall be permitted in spaces where the height of the working space is less than 2.0 m (6½ ft).

Exception No. 3: Meters that are installed in meter sockets shall be permitted to extend beyond the other equipment. The meter socket shall be required to follow the rules of this section.

Table 110.26(A)(1) Working Spaces

Nominal Voltage to Ground	Minimum Clear Distance		
	Condition 1	Condition 2	Condition 3
0-150	900 mm (3 ft)	900 mm (3 ft)	900 mm (3 ft)
151-600	900 mm (3 ft)	1.0 m (3 ft 6 in.)	1.2 m (4 ft)
601-1000	900 mm (3 ft)	1.2 m (4 ft)	1.5 m (5 ft)

Note: Where the conditions are as follows:

Condition 1 — Exposed live parts on one side of the working space and no live or grounded parts on the other side of the working space, or exposed live parts on both sides of the working space that are effectively guarded by insulating materials.

Condition 2 — Exposed live parts on one side of the working space and grounded parts on the other side of the working space. Concrete, brick, or tile walls shall be considered as grounded.

Condition 3 — Exposed live parts on both sides of the working space.

(4) **Limited Access.** Where equipment operating at 1000 volts, nominal, or less to ground and likely to require examination, adjustment, servicing, or maintenance while energized is required by installation instructions or function to be located in a space with limited access, all of the following shall apply:

- (1) Where equipment is installed above a lay-in ceiling, there shall be an opening not smaller than 559 mm × 559 mm (22 in. × 22 in.), or in a crawl space, there shall be an accessible opening not smaller than 559 mm × 762 mm (22 in. × 30 in.).
- (2) The width of the working space shall be the width of the equipment enclosure or a minimum of 762 mm (30 in.), whichever is greater.
- (3) All enclosure doors or hinged panels shall be capable of opening a minimum of 90 degrees.
- (4) The space in front of the enclosure shall comply with the depth requirements of Table 110.26(A)(1). The maximum height of the working space shall be the height necessary to install the equipment in the limited space. A horizontal ceiling structural member or access panel shall be permitted in this space.

(5) **Separation from High-Voltage Equipment.** Where switches, cutouts, or other equipment operating at 1000 volts, nominal, or less are installed in a vault, room, or enclosure where there are exposed live parts or exposed wiring operating over 1000 volts, nominal, the high-voltage equipment shall be effectively separated from the space occupied by the low-voltage equipment by a suitable partition, fence, or screen.

(B) **Clear Spaces.** Working space required by this section shall not be used for storage. When normally enclosed live parts are exposed for inspection or servicing, the working space, if in a passageway or general open space, shall be suitably guarded.

5. **Briefly explain your proposed amendment, including the purpose, benefits and problems addressed.** Specifically note any impacts or benefits to business, and specify construction types, industries and services that would be affected. Finally, please note any potential impact on enforcement such as special reporting requirements or additional inspections required.

Improve enforceability

6. **Specify what criteria this proposal meets.** You may select more than one.

- The amendment is needed to address a critical life/safety need.
- The amendment clarifies the intent or application of the code.
- The amendment is needed to address a specific state policy or statute.
- The amendment is needed for consistency with state or federal regulations.
- The amendment is needed to address a unique character of the state.
- The amendment corrects errors and omissions.

7. **Is there an economic impact:** Yes No

If no, state reason: [No cost impact, just a clarification to help with enforcement.](#)

If yes, provide economic impact, costs and benefits as noted below in items a – f.

- a. **Life Cycle Cost.** Use the OFM Life Cycle Cost [Analysis tool](#) to estimate the life cycle cost of the proposal using one or more typical examples. Reference these [Instructions](#); use these [Inputs](#). Webinars on the tool can be found [Here](#) and [Here](#)). If the tool is used, submit a copy of the excel file with your proposal submission. If preferred, you may submit an alternate life cycle cost analysis.

- b. **Construction Cost.** Provide your best estimate of the construction cost (or cost savings) of your code change proposal.

/square foot

(For residential projects, also provide [Click here to enter text.](#)/ dwelling unit)

Show calculations here, and list sources for costs/savings, or attach backup data pages

- c. **Code Enforcement.** List any code enforcement time for additional plan review or inspections that your proposal will require, in hours per permit application:
- d. **Small Business Impact.** Describe economic impacts to small businesses:
- e. **Housing Affordability.** Describe economic impacts on housing affordability:
- f. **Other.** Describe other qualitative cost and benefits to owners, to occupants, to the public, to the environment, and to other stakeholders that have not yet been discussed:

Please send your completed proposal to: sbcc@des.wa.gov

All questions must be answered to be considered complete. Incomplete proposals will not be accepted.