



Recommended Amendments to the 2015 International Mechanical Code

Part 5 – BUILDING REGULATIONS AND CODES

International Mechanical Code®, 2015 Edition (IMC®, 2015) Part 5, Chapter 3 “*International Mechanical Code*”

NOTICES:

Through its rulemaking process, the City of Choctaw has adopted the first printing of the 2015 edition of the International Mechanical Code® (IMC®, 2015). Errata found and corrected by the ICC®, if any, in a printing of the code other than the specific printing listed previously in this notice, has not been reviewed or approved by the City of Choctaw, adopted by the City of Choctaw itself, or promulgated as a permanent rule by the City of Choctaw.

The following sections, paragraphs, and sentences of the *2015 International Mechanical Code* are hereby amended as follows: Standard type is text from the IMC. Underlined type is text inserted. ~~Lined through type is deleted text from IMC.~~

The sections, paragraphs, and sentences are based off the adopting of the State of Oklahoma by the OUBCC (Oklahoma Uniform Building Code Council). **Any text highlighted in YELLOW is a local (City of Choctaw) adoption and reasoning.**

Section 101.1. Title; change to read as follows:

Section 101.1. Title. These regulations shall be known as the Mechanical Code of City of Choctaw, hereinafter referred to as “this code”.

(Reason: This section has been modified to identify the jurisdiction.)

Section 106.1.1; change to read as follows:

Section 106.1.1 Annual permit. Instead of an individual construction permit for each alteration to an already approved system or equipment or application installation, the code official is authorized to issue an annual permit upon application therefor to any person, firm or corporation regularly employing one or more qualified tradespersons in the building, structure or on the premises owned or operated by the applicant for the permit. An annual permit is a yearly permit

which represents a group of individual permits for each alteration to an already approved electrical, gas, mechanical or plumbing installation. The building official is authorized to issue an annual permit upon application therefor to any person, firm or corporation regularly employing one or more qualified tradespersons in the building, structure or on the premises owned or operated by the applicant for the permit.

(Reason: This section has been modified to clarify what an annual permit is)

Section 106.1.2; change to read as follows:

Section 106.1.2 Annual permit records. The person to whom an annual permit is issued shall keep a detailed record of alterations made under such annual permit. ~~The code-building official shall have access to such detailed records of alterations at all times or such records shall be filed with the code official as designated.~~ At the completion of the entity's annual permit term, the applicant shall file such detailed records of alterations with the building official. Pursuant to the authority of 59 O.S. § 1000.25, the building official shall collect fees for each individual permit which is part of the annual permit once the detailed records are submitted and remit such fees to the OUBCC.

(Reason: This section has been modified to require the building official to collect the OUBCC permit fee for each individual permit that is part of the annual permit at the completion of the annual permit term.)

Section 301.15; change to read as follows:

Section 301.15 Wind resistance. Mechanical *equipment*, appliances and supports that are exposed to wind shall be designed and installed to resist the wind pressures determined in accordance with the International Building Code®, SMACNA HVAC Duct Construction Standards - Metal and Flexible, and other approved methods.

(Reason: This section has been modified to allow design and installation of equipment and appliances that are exposed to wind to be built in accordance with SMACNA HVAC Duct Construction Standards – Metal and Flexible or other approved methods.)

Section 304.11; change to read as follows:

Section 304.11 Guards. Guards shall be provided where various components that require service ~~and roof hatch openings 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 components that require service. 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 inchØ diameter (553 mm) sphere and shall comply with the loading requirements for guards specified in the *International Building Code*.~~ relocated on a roof or elevated structure and have a condition as set forth in Sections 304.11.1 through 304.11.3. 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 as specified in the International Building Code®. Guards shall be provided at new components when added or replaced on an existing roof or elevated structure and have a condition as set forth in Sections 304.11.1 through 304.11.3. Exception: When approved by the authority having jurisdiction, guards are not required where permanent fall arrest/restraint anchorage connector devices that comply with ANSI/ASSE Z 359.1 are affixed for use during the entire roof covering lifetime. The devices shall be reevaluated for possible replacement when the entire roof covering is replaced. The devices shall be placed not more than 10 feet (3048 mm) on center along hip and ridge lines and placed not less than 10 feet (3048 mm) from roof edges and the open sides of walking surfaces.

(Reason: This section has been modified to clarify the circumstances under which guards shall be provided around components and to modify the exception to require the authority having jurisdiction approve the use of a fall/restraint system instead of guards.)

Section 304.11.1; added to read as follows:

Section 304.11.1 Roof edge. Guards complying with 304.11 shall be provided when components are located within 10 feet (3048 mm) of a roof edge or open side of a walking surface or elevated structure 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 the component that requires service.

(Reason: This section has been added to clarify the circumstances required to exist for the installation of guards at the roof edge when the components needed service are within a specific distance of the roof edge.)

Section 304.11.2; added to read as follows:

Section 304.11.2 Skylights. Guards complying with Section 304.11 shall be provided when a skylight is within 10 feet (3048 mm) of the component that requires service. The guard shall extend 30 inches (762 mm) beyond the edge of the skylight.

Exceptions:

1. Guards are not required when the skylight is located at least 42 inches (1067 mm) above the highest point of the walking surface adjacent to the skylight or component.
2. Guards are not required if some other provision for skylight fall-through protection is provided and approved by the authority having jurisdiction.

(Reason: This section has been added to clarify the circumstances for the installation of guards around components near skylights and to provide exceptions to the requirement.)

Section 304.11.3; added to read as follows:

Section 304.11.3 Roof hatch. Guards complying with Section 304.11 shall be provided when a roof hatch is within 10 feet (3048 mm) of the component that requires service. The guard shall extend 30 inches (762 mm) beyond the edge of the roof hatch. If the component is within 10 feet (3048 mm) of the ladder access side of the roof hatch, the guard shall incorporate a self-closing, selflatching gate. The gate shall have a top edge of not less than 42 inches (1067 mm) above the elevated surface adjacent to the gate and shall not allow the passage of a 21 inch (533 mm) sphere. If a roof hatch exists within 10 feet of a roof edge that is located more than 30 inches (762 mm) above the floor, roof or grade below and a new component that requires services on that existing roof or elevated structure, than a guard complying with Section 304.11 shall be added between the existing roof hatch and the roof edge.

(Reason: This section has been added to clarify the circumstances for the installation of guards around components installed within a specific distance from the roof hatch.)

Section 305.5.1; added to read as follows:

Section 305.5.1 Location and protection of refrigerant piping. Location and protection of refrigerant piping. Refrigerant piping installed within 1 1/2 inches (38 mm) of the underside of roof decks shall be protected from damage caused by nails and other fasteners.

(Reason: This section has been added to provide protection for refrigerant piping installed within 1 1/2 inches (38 mm) of the underside of roof decks.)

Section 306.3 Appliances in Attics; change to read as follows:

306.3 Appliances in Attics. Attics containing appliances shall be provided . . . *{bulk of paragraph unchanged}* . . . side of the appliance. The clear *access* opening dimensions shall be a minimum of 20 inches by 30 inches (508 mm by 762 mm), or larger where such dimensions are not large enough to allow removal of the largest appliance. A walkway to an appliance shall be rated as a floor as approved by the building official. As a minimum, for access to the attic space, provide one of the following:

1. A permanent stair.
2. A pull down stair with a minimum 300 lb. (136 kg) capacity.
3. An access door from an upper floor level.
4. Access Panel may be used in lieu of items 1, 2, and 3 with prior approval of the code official due to building conditions.

Exceptions:

1. The passageway and level service space are not required where the appliance is

capable of being serviced and removed... {remainder of section unchanged}

(Reason: To provide a safe means of accessibility to appliances in attics and to allow for different types of construction limitations. Consistent with regional amendment to International Fuel and gas Code (IFGC) 306.3.)

Section 306.5; change to read as follows:

Section 306.5 Equipment and appliances on roofs or elevated structures. Where *equipment* requiring access or appliances are located on an elevated structure or the roof of a building such that personnel will have to climb higher than 16 feet (4877 mm) above grade to access such equipment or appliances, ~~an~~ a permanent interior or exterior means of access shall be provided. Such access shall not require climbing over obstructions greater than 30 inches (762 mm) in height or walking on roofs having a slope greater than 4 units vertical in 12 units horizontal (33-percent slope). Such access shall not require the use of portable ladders. Where access involves climbing over parapet walls, the height shall be measured to the top of the parapet wall.

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 rung spacing not to exceed 14 inches (356 mm) on center. The uppermost rung shall not be greater than 24 inches (610 mm) below the upper edge of the roof hatch, roof or parapet, as applicable.
3. Ladders shall have a toe spacing not less than 6 inches (152 mm) deep.
4. There shall be not less than 18 inches (457 mm) between rails.
5. Rungs shall have a diameter not less than 0.75-inch (19 mm) and 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 100 pounds per square foot (488.2 kg divided by meters squared). Landing dimensions shall be not less than ~~18 inches (457 mm)~~ and not less than the width of the ladder served. A guard rail shall be provided on all open sides of the landing.
7. Climbing clearance. The distance from the centerline of rungs to the nearest permanent object on the climbing side of the ladder shall be not less than 30 inches (762 mm) measured perpendicular to the rungs. This distance shall be maintained from the point of ladder access to the bottom of the roof hatch. A minimum clear width of 15 inches (381 mm) shall be provided on both sides of the ladder measured from the midpoint of and parallel with the rungs except where cages or wells are installed.
8. Landing required. The ladder shall be provided with a clear and unobstructed bottom landing area having a minimum dimension of 30 inches (762 mm) by 30 inches (762 mm) centered in front of the ladder.
9. Ladders shall be protected against corrosion by an *approved* means.
10. Access to ladders shall be provided at all times.

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

Exceptions:

1. This section shall not apply to Group R-3 occupancies.
2. This section shall not apply to appliance replacement.

(Reason: This section has been modified to add a second exception for when the section would not apply.)

Section 306.5.1; change to read as follows:

306.5.1 Sloped Roofs. Where appliances, *equipment*, fans or other components that require service are installed on a roof having a slope of 3 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 catwalk at least 16 inches in width with substantial cleats spaced not more than 16 inches apart shall be provided from the roof access to a level platform at the appliance. The level platform shall be provided on each side of the appliance to which *access* is required for service, repair or maintenance. The platform shall be not less than 30 inches (762 mm) in any dimension and shall be provided with guards. The guards shall extend not less than 42 inches (1067 mm) above the platform, 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*. . . . *{bulk of paragraph unchanged}* . .

(Reason: To assure safe access to roof appliances. Consistent with IFGC amendments.)

Section 306; add Section 306.6 to read as follows:

306.6 Water Heaters Above Ground or Floor. When the mezzanine or platform in which a water heater is installed is more than eight (8) feet (2438 mm) above the ground or floor level, it shall be made accessible by a stairway or permanent ladder fastened to the building.

Exception: A maximum 10 gallon water heater (or larger with approval) is capable of being accessed through a lay-in ceiling and the water heater installed is not more than ten (10) feet (3048 mm) above the ground or floor level and may be reached with a portable ladder.

(Reason: To provide safe access to water heaters and to provide lighting and receptacle for maintenance of equipment.)

Section 307.2.1; change to read as follows:

Section 307.2.1 Condensate disposal. Condensate from all cooling coils and evaporators shall be conveyed from the drain pan outlet to an *approved* place of disposal. Such piping shall maintain a minimum horizontal slope in the direction of discharge of not less than one-eighth unit vertical in 12 units horizontal (1-percent slope). Condensate drains shall be allowed to terminate to an approved pit or French drain consisting of a minimum of 24 inches by 24 inches by 24 inches (610 mm by 610 mm by 610 mm), or equivalent; of 1 inch (25 mm) washed rock. Such pits or French

drains shall be located 30 inches (762 mm) minimum from outer edge of foundation to nearest edge of pit or French drain. Condensate shall not discharge into a street, alley or other areas so as to cause a nuisance.

(Reason: This section has been modified to allow condensate drains to terminate to a pit or French drain when approved by the code official.)

Section 307.2.3 Auxiliary and secondary drain system; amend item 2 to read as follows:

Section 307.2.3 Auxiliary and secondary drain system. In addition to the requirements . . . *{bulk of paragraph unchanged}* . . . each cooling coil or fuel-fired appliance that produces condensate:

1. *{unchanged}*
2. A separate overflow drain line shall be connected to the drain pan provided with the equipment. Such overflow drain shall discharge to a conspicuous point of disposal to alert occupants in the event of a stoppage of the primary drain. The overflow drain line shall connect to the drain pan at a higher level than the primary drain connection. However, the conspicuous point shall not create a hazard such as dripping over a walking surface or other areas so as to create a nuisance.
3. *{unchanged}*
4. *{unchanged}*

Exemption: {unchanged}

(Reason: Greater specificity in prohibited locations for condensate discharge. Consistent with regional amendment to IPC 314.2.1.)

Section 307.2.3.1 Water-level monitoring devices; change to read as follows:

Section 307.2.3.1 Water-level monitoring devices. On down-flow units and all other coils that do not have a secondary drain or provisions to install a secondary or auxiliary drain pan, a water-level monitoring device shall be installed inside the primary drain pan. This device shall shut off the equipment served in the event that the primary drain becomes restricted. Devices installed in the drain line shall not be permitted.

Exception: This section shall not apply to appliances installed in areas outside on the ground or elevated structure where condensate overflow does not damage building components or contents.

(Reason: This section was modified to add an exception for when the section shall not apply.)

Section 502.15; change to read as follows:

Section [F] 502.15 Repair garages. Where Class I liquids or LP-gas are stored or used within a building having a basement or pit wherein flammable vapors could accumulate, the basement or pit shall be provided with ventilation designed in accordance with Section 2311.4.3 of the International Fire Code® to prevent the accumulation of flammable vapors therein.

(Reason: This section has been modified to require compliance with Section 2311.4.3 of the International Fire Code® when designing basement or pit ventilation.)

Section 502.16.1; change to read as follows:

Section [F] 502.16.1 Design. Indoor locations shall be ventilated utilizing air supply inlets and exhaust outlets arranged to provide uniform air movement to the extent practical. Inlets shall be uniformly arranged on exterior walls near floor level. Outlets shall be located at within 18 inches (457 mm) of the high point of the room in exterior walls or the roof.

Ventilation shall be by a continuous mechanical ventilation system or by a mechanical ventilation system activated by a continuously monitoring natural gas detection system, or for hydrogen, a continuously monitoring flammable gas detection system, each activating at a gas concentration of not more than 25 percent of the lower flammable limit (LFL). In all cases, the system shall shut down the fueling system in the event of failure of the ventilation system.

The ventilation rate shall not be less than 1 cubic foot per minute per ~~12 cubic feet [0.00138 m³/s × m³]~~ one (1) square foot [0.0051 cubic meters per (second square meter)] of room area.

(Reason: This section has been modified to clarify exhaust outlets should be located within 18 inches (475 mm) of the high point of the room on exterior walls or the roof and to change the ventilation rate from not less than 1 cubic foot per minute per 12 cubic feet of room volume to 1 cubic foot per square foot of room area.)

Section 506.3.1.1; modified to read as follows:

Section 506.3.1.1 Grease duct materials. Grease ducts serving Type I hoods shall be constructed of non-galvanized carbon steel having a minimum thickness of 0.0575 inch (1.463 mm) (No. 16 gage) or stainless steel not less than 0.0450 inch (1.14 mm) (No. 18 gage) in thickness.

Exception: Factory-built commercial kitchen grease ducts listed and labeled in accordance with UL 1978 and installed in accordance with Section 304.1.

(Reason: This section has been added to clarify the language between the code and NFPA® 96 regarding the type of steel to be utilized.)

Section 507.2; modified to read as follows:

Section 507.2. Type I hoods. Type I hoods shall be installed where cooking appliances produce grease or smoke as a result of the cooking process. Type I hoods shall be installed over medium-duty, heavy-duty, and extra-heavy-duty cooking appliances.

Exceptions: A Type I hood shall not be required for an electric cooking appliance where an approved testing agency provides documentation that the appliance effluent contains 5 mg per cubic meter or less of grease when tested at an exhaust flow rate of 500 cfm (0.236 cubic meters per second) in accordance with UL 710B.

In household cooking occupancies a residential or Type II hood can be installed over a medium-duty household appliance when approved.

(Reason: This section has been modified to add an additional exception for installation of Type II hoods when specific conditions are met.)

Section 604.1 General. This section has been modified to read:

604.1 General. Duct insulation shall conform to the requirements of Sections 604.2 through 604.13, the International Energy Conservation Code® and SMACNA HVAC Duct Construction Standards – Metal and Flexible.

(Reason: This section was modified to add a requirement to duct insulation to conform to SMACNA HVAC Duct Construction Standards – Metal and Flexible.)