



Southern Nevada Building
Officials

c/o City of Las Vegas
Building & Safety Dept
713 S. 4th Street
Las Vegas, NV 89101

Phone: 702-229-6257

Fax: 702-382-1731

Email:

chknight@lasvegasnevada.gov

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City of Las Vegas

Greg Blackburn
City of North Las Vegas

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SOUTHERN NEVADA AMENDMENTS TO THE 2009 UNIFORM MECHANICAL CODE

**Approved by SNBO
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Chapter 1 Administration.

Delete Chapter 1 in its entirety, except for Section 101.0 Title and Section 101.2 Purpose.

Section 205.0 Definitions.

Add a new definition to Section 205.0, as follows:

Combustible Construction - Combustible construction shall mean work within any building or structure classified as Type III, Type IV, or Type V as defined in the Building Code. Plastic piping is not permitted in Type I and Type II buildings.

Section 303.1.1 Plastic Pipe Use.

Add a new Section 303.1.1, Plastic Pipe Use, as follows:

303.1.1 Plastic Pipe Use. Plastic materials listed for use in mechanical equipment are acceptable as an alternate to other approved materials for use in installations in combustible construction only.

Exceptions:

- (1) Approved plastic control tubing of mechanical equipment may be used in buildings or structures of all construction classifications when installed in accordance with their listings.
- (2) When restricted by other sections of this code.

Section 309.2 Condensate Control.

Revise Section 309.2, as follows:

309.2 Condensate Control. When a cooling coil or cooling unit is located in an attic or furred space where damage may result from condensate overflow an additional watertight pan of corrosion-resistant metal shall be installed beneath the cooling coil or unit top to catch the overflow condensate due to a clogged primary condensate drain or one of the following methods may be used:

- (1) One pan with a standing overflow and a separate secondary drain may be provided in lieu of the secondary drain pan.
- (2) One pan with a standing overflow and a water level detection device in lieu of the secondary drain pan. The water level detection device shall conform to UL 508 and shall shut off the equipment served in the event that the primary drain is blocked. The device shall be installed in the overflow drain line or in the equipment-supplied drain pan, located at a point higher than the primary drain line connection and below the overflow rim of the drain pan.

Exception: Fuel-fired appliances that automatically shut down operation in the event of a stoppage in the condensate drainage system.

The additional pan or the standing overflow shall be provided with a drain pipe, minimum 3/4 inch (19.1 mm) nominal pipe size, discharging at a point that can be readily observed.

This requirement is in addition to the requirements in Sections 309.3 and 309.4.

Section 504.3 Moisture Exhaust Ducts.

Revise Section 504.3.1 by adding a new exception, as follows:

504.3.1 Moisture Exhaust Ducts. Moisture exhaust ducts shall terminate on the outside of the building and shall be equipped with a back-draft damper. Screens shall not be installed at the duct termination.

Ducts for exhausting clothes dryers shall not be connected or installed with sheet metal screws or other fasteners which will obstruct the flow. Clothes dryer moisture exhaust ducts shall not be connected to a gas vent connector, gas vent or chimney and shall only serve clothes dryers. Clothes dryer moisture exhaust ducts under positive pressure shall not extend into or through ducts or plenums.

Exception: When moisture exhaust ducts terminate vertically through a roof, backdraft dampers are not required.

Section 504.3.2.2 Length Limitation.

Revise Section 504.3.2.2 by adding a new exception, as follows:

504.3.2.2 Length Limitation. Unless otherwise permitted or required by the dryer manufacturer's installation instructions and approved by the Authority Having Jurisdiction, domestic dryer moisture exhaust ducts shall not exceed a total combined horizontal and vertical length of fourteen (14) feet (4,263 mm), including two (2) 90 degree (1.57 rad) elbows. Two (2) feet (610 mm) shall be deducted for each 90 degree (1.57 rad) elbow in excess of two.

Exception: Lengths may be increased when justified by calculations prepared by a Nevada Licensed Mechanical Engineer.

Section 510.7.2 Interior Installations.

Add a new Section 510.7.2.4, as follows:

510.7.2.4 Unless specifically listed, the structural supports for a duct enclosure shall be outside the enclosure.

Section 511.2.5 Performance Test.

Add a new Section 511.2.5, as follows:

511.2.5 Performance Test. Upon completion and before final approval of the installation of a ventilation system serving commercial food heat-processing equipment, a performance test shall be performed to verify the rate of airflow and proper operation as specified in this chapter or manufacturer's listing. The permittee shall furnish the necessary test equipment and devices required to perform the tests and shall provide the jurisdiction with an accurate, completed, and signed test report. The report shall be on a form supplied by the jurisdiction or on a form containing equivalent information. At the discretion of the building official, the performance test may be required to be witnessed by the Authority Having Jurisdiction, performed by an approved third party testing agency.

Section 609.0 Automatic Shutoffs.

Revise Section 609.0 by adding a new paragraph following the exceptions, as follows:

Upon completion and before final approval of the air-moving system provided with the required smoke detectors, a performance test shall be performed to verify compliance of detector installation to manufacturer's instructions and system compatibility as specified in this chapter. The permittee shall furnish the necessary test equipment and devices required to perform the tests and shall provide the jurisdiction with an accurate, completed, and signed test report. The report shall be on a form supplied by the jurisdiction or on a form containing equivalent information. At the discretion of the building official, the performance test may be required to be witnessed by the Authority Having Jurisdiction, performed by an approved third party testing agency.

Section 802.6.2 Gas Vents.

Add a new Exception to Section 802.6.2, item (1), as follows:

802.6.2 A gas vent shall terminate in accordance with one of the following:

- (1) Above the roof surface with a listed cap or listed roof assembly. Gas vents twelve (12) inches (300 mm) in size or smaller with listed caps shall be permitted to be terminated in accordance with Figure 5-2, provided they are at least eight (8) feet (2.4 m) from a vertical wall or similar obstruction. Other gas vents shall terminate not less than two (2) feet (0.6 m) above the highest point where they pass through the roof and at least two (2) feet (0.6 m) exceeding any portion of a building within ten (10) feet (3.1 m).

Exception: A single-family residence having gas vents twelve (12) inches (300 mm) in size or smaller with listed caps shall be permitted to be terminated in accordance with Figure 5-2, provided they are at least four (4) feet (1.2 m) from a vertical wall or similar obstruction.

The remainder of the section remains unchanged.

Section 904.10 Access to Appliances and Air Moving Systems on Roofs.

Revise Section 904.10, as follows:

904.10 Access to Appliances and Air Moving Systems on Roofs.

904.10.1 Appliances and air moving systems located on roofs or other elevated locations shall be accessible by permanent roof access ladders, as follows:

- (1) Each ladder shall have side railings which extend at least thirty (30) inches (762 mm) above the roof or parapet wall.
- (2) Each ladder shall be a minimum of fourteen (14) inches (356 mm) in width.
- (3) Each ladder rung shall be spaced at a maximum of fourteen (14) inches (356 mm) on center.
- (4) Each ladder shall have a minimum of a six (6) inch (152 mm) toe space.
- (5) Each ladder shall have intermediate horizontal landings whenever the ladder height exceeds eighteen feet (5486 mm) above finished grade. Landings shall be placed at eighteen foot (5486 mm) intervals, maximum.

Exceptions:

- (1) Permanent exterior ladders providing roof access need not extend closer than eight (8) feet (2438 mm) to the finish grade.
- (2) A portable ladder may be used for access for a Group R Division 3 and 4 and U occupancies.
- (3) Permanent ladders for equipment access need not be provided at parapets or walls less than thirty (30) inches (762mm) in height.

Chapter 10 Steam and Hot Water Boilers

Delete Chapter 10 in its entirety except Section 1001.0 and revise Section 1001.0, as follows:

1001.0 Applicability. For boilers and water heaters less than 120 gallon capacity, or a BTU input rating less than 200,000, or less than 160 pounds per square inch of pressure, see Chapter 5 of the Uniform Plumbing Code. For all other units, contact the Mechanical Section of the Nevada Division of Occupational Safety and Health, part of the Office of Business and Industrial Relations.

Table 11-1 Refrigerant Groups, Properties and Allowable Quantities.

Revise Table 11-1, by adding a new footnote #16, as follows:

¹⁶ For occupancy Group I, Division 1 and Division 2, the quantity of refrigerant in each system is limited to 50 percent of the respective amount listed in this table. Exceptions: Kitchens, laboratories and mortuaries.

Table 11-2 Permissible Refrigeration Systems.

Revise Table 11-2 and add new footnotes #3 and #4, as follows:

Table 11-2
Permissible Refrigeration Systems¹

Occupancy Group⁴ and Division	High - Probability System	Low Probability System	Machinery Room
A-1	Group A1 only	Any	Any
A-2	Group A1 only	Any	Any
A-3	Group A1 only	Any	Any
A-4	Group A1 only	Any	Any
A-5	Group A1 only	Any	Any
B	Group A1 only ²	Any	Any
E	Group A1 only	Any	Any
F-1	Group A1 only	Any	Any
F-2	Any ²	Any	Any
H-1	Any	Any	Any
H-2	Any	Any	Any
H-3	Any	Any	Any
H-4	Any	Any	Any
H-5	Group A1 only	Any	Any
I-1	Group A1 only ³	Any	Any
I-2	Group A1 only ³	Any	Any
I-3	Group A1 only ³	Any	Any
I-4	Group A1 only ³	Any	Any
M	Group A1 only ²	Any	Any
R-1	Group A1 only	Any	Any
R-2	Group A1 only	Any	Any
R-3	Group A1 only	Any	Any
R-4	Group A1 only	Any	Any
S-1	Group A1 only ²	Any	Any
S-2	Any ²	Any	Any
U	Any	Any	Any

Notes:

¹ See Section 1105.0.

² Any refrigerant may be used within a high-probability system when the room of space complies with Section 1105.3.

³ The allowable quantities shown in Table 11-1 shall be reduced by 50 percent for all institutional occupancies except kitchens, laboratories, and mortuaries. (ASHRAE Safety Standard for Refrigeration Systems 15-2007 Section 7.2.1.)

⁴ Occupancy classifications are defined in the Building Code

Section 1302 Fuel Gas.

Revise Section 1302.2 by adding a new Section 1303.2.1, as follows:

1303.2 Fuel Gas – Natural, manufactured, liquefied petroleum, or a mixture of these.

1303.2.1 Dry Gas – A gas having a moisture and hydrocarbon dew point below any normal temperature to which the gas piping is exposed. Southern Nevada shall be considered a dry gas condition area unless specified by the local gas purveyor.

Section 1312.1.6 Piping Underground Beneath Buildings.

Revise Section 1312.1.6 in its entirety, as follows:

1312.1.6 Piping Underground Beneath Buildings. No gas piping shall be installed in or on the ground under any building or structure unless installed in gastight conduit, and all exposed gas piping shall be kept at least six (6) inches (152 mm) above grade or structure. The term “building or structure” shall include structures such as porches and steps, whether covered or uncovered, breezeways, roofed porte-cocheres, roofed patios, carports, covered walks, covered driveways, and similar structures or appurtenances. All gas piping under a slab shall be capable of being removed and replaced.

The conduit shall be of material approved for installation underground beneath buildings and not less than Schedule 40 pipe. The interior diameter of the conduit shall be not less than one-half (1/2) inch (15 mm) larger than the outside diameter of the gas piping.

The conduit shall extend to a point at least (12) inches (305 mm) beyond any area where it is required to be installed or to the outside wall of a building, and the outer ends shall not be sealed. Where the conduit terminates within a building, it shall be readily accessible and the space between the conduit and the gas piping shall be sealed to prevent leakage of gas into the building.

Exception: Products listed for such use.

Section 1312.3.2 Connections.

Revise Section 1312.3.2, item 4, as follows:

1312.3.2 Connections. Where gas piping is to be concealed, unions, tubing fittings, bushings, and compression couplings made by combinations of fittings shall not be used. Connections shall be of the following types:

- (1) Pipe fittings such as elbows, tees, and couplings.
- (2) Joining tubing by brazing (see Section 1209.5.8.2).
- (3) Fittings listed for use in concealed spaces that have been demonstrated to sustain, without leakage, any forces due to temperature expansion or contraction, vibration, or fatigue based on their geographic location, application or operation.

- (4) Where necessary to insert fittings in gas pipe that has been installed in a concealed location, the pipe shall be reconnected by welding, flanges, or right and left couplings.

1316.3 Test Pressure.

Delete Sections 1316.3.2 and 1316.3.3 and revise Sections 1316.3 and 1316.3.1 in their entirety, as follows:

1316.3 Final Piping Inspection

1316.3.1 This inspection shall be made after all piping authorized by the permit has been installed and after all portions thereof which are to be covered or concealed are so concealed and before any fixtures, appliance, or shutoff valve has been attached thereto. Gas valves may be installed when permitted by the manufacturer to withstand test pressures. This inspection shall include an air, CO₂ or nitrogen pressure test, at which time the gas piping shall stand a pressure of not less than ten (10) pounds per square inch (68.9 kPa) gauge pressure, or at the discretion of the Authority Having Jurisdiction, the piping and valves may be tested at a pressure of at least six (6) inches (152 mm) of mercury, measured with a manometer or slope gauge. Test pressures shall be held for a length of time satisfactory to the Authority Having Jurisdiction, but in no case for less than fifteen (15) minutes, with no perceptible drop in pressure. For welded piping, and for piping carrying gas at pressures in excess of fourteen (14) inches (356 mm) water column pressure, the test pressure shall not be less than sixty (60) pounds per square inch (413.4 kPa) and shall be continued for a length of time satisfactory to the Authority Having Jurisdiction, but in no case for less than thirty (30) minutes. These tests shall be made using air, CO₂, or nitrogen pressure only and shall be made in the presence of the Administrative Authority. All necessary apparatus for conducting tests shall be furnished by the permit holder. Test gauges used in conducting tests shall comply with Section 1304.3.2.