



# PLAN CHECK CORRECTION SHEET FOR MECHANICAL SYSTEMS 2023 LAMC

This is intended to provide uniform application of the codes by the plan check staff and to help the public apply the codes correctly.

**Section: Mechanical Plan Check**

Plan Check/PCIS Application No.: \_\_\_\_\_ Date: \_\_\_\_\_

Job Address: \_\_\_\_\_

Applicant Name: \_\_\_\_\_

Address: \_\_\_\_\_ Phone: \_\_\_\_\_

City/State/Zip: \_\_\_\_\_ E-mail: \_\_\_\_\_

Plan Check Engineer: \_\_\_\_\_

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Your feedback is important; please visit our website to complete a Customer Survey at [www.ladbs.org/LADBSWeb/customer-survey.jsf](http://www.ladbs.org/LADBSWeb/customer-survey.jsf).

**If you have any questions or need clarification on any plan check matters, please contact a plan check supervisor or call our Customer Hotline at (213) 482-0056.**

Your plans have been examined and the issuance of a permit is withheld for the reasons set forth. The approval of plans and specifications does not permit the violation of any section of the Code, or other local ordinance or state law.

**INSTRUCTIONS:**

- Corrections with circled item numbers apply to this plan check.
- Additional corrections are at the end of the list.
- Incomplete or non-legible drawings or calculations will not be accepted.
- Incorporate all comments as marked on the checked set of plans and calculations and this correction sheet.
- For each correction indicate the sheet number and detail or note number on the plans where the corrections are made.
- **WHEN YOU HAVE COMPLIED WITH ALL CORRECTIONS, CALL OR EMAIL THE PLAN CHECK ENGINEER TO MAKE AN APPOINTMENT FOR VERIFICATION**
- **PLEASE BRING THE MARKED UP PLANS AND THE CORRECTIONS SHEET TO THE VERIFICATION APPOINTMENT**

**SEE MARKED UP PLANS FOR CLARIFICATIONS OF CORRECTIONS.**

## **GENERAL REQUIREMENTS**

1. Plans shall bear the license number and signature of an architect, engineer or contractor licensed in the appropriate discipline. (State of California Business and Professional Code Div. 3, Chap. 7, Art. 3, Sec. 6735.4; LAMC 112.2(8))
2. Show job address on plans. (LAMC 112.3(2))
3. Plans shall be legible, and the drawing scale shall not be smaller than 1/8 inch per foot. (LAMC 112.2 (4))
4. Show equipment schedule on the plans. (LAMC 112.3(1)(D))
5. Show the make, model, cfm, horsepower, static pressure rating and weight of each fan on the equipment schedule. (LAMC 112.3(1)(D))
6. Show location, size, gages, and materials of all ducts and openings (LAMC 112.3 (1) (B); Table 506.2(1); 601.2; 602.1;)
7. Metal ducts shall be constructed in accordance with SMACNA-2006 or UL 181 (LAMC 602.1)
8. Show the occupancy of each area. (LAMC 112.3(1)(I))
9. Show the intended use of each room. (LAMC 112.3(1)(I))
10. Identify all fire-rated walls and ceilings. (LAMC 112.3(1)(J))
11. Provide roof plans showing the location of all roof equipment. (LAMC 112.3(1)(C); LAMC 303.8)
12. Provide a permanent roof access. (LAMC 304.3)
13. Provide approved structural plans showing that the roof is designed to withstand all dead loads and all required live loads. (LAMC.303.8.1)
14. Where ducts penetrate a rated corridor, indicate if rated corridors are tunnel type or full height. (LAMC 112.3(1)(J))
15. Cooling towers in all commercial buildings and residential buildings of 25 stories or less shall comply with one of the following:
  - a. A maximum of 6 cycles of concentration (blowdown); or
  - b. A minimum of 50% of make-up water supply shall come from non-potable water sources, including treated backwash. (LAGBC 4.305.3.1)
16. Cooling towers in buildings over 25 stories shall comply with all of the following:
  - a. A maximum of 6 cycles of concentration (blowdown); and
  - b. 100% of make-up water supply shall come from non-potable water sources, including treated backwash. (LAGBC 4.305.3.2)
17. Provide calculations on the plans showing the concentration of refrigerant for the complete discharge of the high-probability system. The concentration shall not exceed the amount shown in Table 1104.2. (LAMC 1104.2)
18. Provide calculations for the volume used to convert from refrigerant concentration limits to refrigerating system quantity limits. (LAMC 1104.2.1)
19. Provide calculations for the volume of the smallest occupied space to determine the refrigerant quantity limit in the system. (LAMC 1104.2.2)
20. When floor levels connect through an atrium or mezzanine, the volume to be used when calculating the refrigerant quantity limit shall be determined by multiplying the floor area of the lowest space by 8.2 feet. (LAMC 1104.2.2)
21. Show that the worst case or smallest volume in which the leaked refrigerant disperses is used to determine the refrigerant quantity limit. (LAMC 1104.2.3)
22. Add the following Note onto the Plans:

*“All new buildings are required to be All-Electric. There shall be no combustion equipment, plumbing for combustion*

equipment, gas piping, or fuel gas serving any use including, but not limited to, space heating (including fireplaces), water heating (including pools and spas), cooking appliances (including barbeques), and clothes drying, within the building or building property lines, and instead uses electricity as the sole source of energy for all lighting, appliances and/or equipment, including, but not limited to, space heating, water heating, cooking appliances, and drying appliances". (LA City Ordinance 187714)

## **VENTILATION**

1. Ventilation air requirements for occupancies regulated by the California Energy code shall comply with the California Energy Code (LAMC 402.1)
2. Dwelling units in residential occupancies where occupants are non-transient shall comply with section 405 and the California Energy Code (LAMC 401.1, LAMC 405.0, LAMC 402.1)
3. Provide calculations showing the minimum required ventilation rate for the dwelling units (Title 24 120.1)
4. The mechanical ventilation system within a dwelling unit shall comply with one of the following: (Title 24 120.1)
  - a. A balanced Mechanical Ventilation System
  - b. A continuously operating Supply only or Exhaust only Ventilation system
5. If a balanced Mechanical Ventilation system is used, show compliance with the following:
  - a. *Provide ventilation airflow for each dwelling unit served at a rate equal to or greater than the rate specified by Equation 150.0-B [ASHRAE 62.2:4.1.1], but no more than twenty percent greater than the specified rate.*
6. If a continuously operating Supply Ventilation or exhaust ventilation system is used, provide the following note on the plans: (Title 24 120.1)
  - a. *"Continuously operating supply ventilation systems, or continuously operating exhaust ventilation systems shall be allowed to be used*

*to provide the required dwelling unit ventilation airflow if the dwelling-unit envelope leakage is less than or equal to 0.3 cubic feet per minute at 50 Pa per ft<sup>2</sup> of dwelling unit envelope surface area as confirmed by field verification and diagnostic testing in accordance with the procedures specified in Reference Residential Appendix RA3.8"*

7. Spaces within buildings, except those within a dwelling unit in residential occupancies where occupants are nontransient, shall comply with Section 402.0 through Section 404.0. (LAMC 401.1)
8. Mechanical ventilation systems shall be designed in accordance with Sections 402.3. (LAMC 402.3)
9. Natural ventilation shall be designed in accordance with Sections 402.2. (LAMC 311.1; 402.2)
10. Exhaust ducts that convey class 4 air shall be negatively pressurized relative to ducts, plenums, or occupiable spaces through which the ducts pass. Class 3 air shall not extend into or pass through ducts, plenums, or occupiable spaces other than the space from which the exhaust air is drawn. (LAMC 603.10)
11. Provide make-up air. (LAMC 505.10)
12. Environmental exhaust ducts shall terminate outside the building and shall be equipped with a back draft damper or motorized damper that automatically shuts when the system or spaces served are not in use. (LAMC 504.1.1)
13. Environmental exhaust outlets shall terminate not less than 3 feet from property line, 3 feet from openings into the building, 10 feet from a forced air inlet, and shall not discharge onto a public walkway. (LAMC 311.3; 502.2.1)
14. Product-conveying outlets shall terminate not less than 10 feet from property line, 3 feet from exterior roof/wall, 10 feet from openings into the building, and 10 feet above grade. (LAMC 502.2.2)
15. Ducts conveying explosives or flammable vapors, fumes, or dusts shall terminate not less than 30 feet from a property line, 10 feet from openings into the building, 6 feet from

exterior walls or roofs, 30 feet from combustible walls or openings in the building that are in the direction of the exhaust discharge, and 10 feet above adjoining grade. (LAMC 502.2.2)

16. Ducts conveying explosives or flammable vapors, fumes, or dusts shall extend directly to the exterior of the building without entering other spaces. (LAMC 505.1)
17. Systems conveying particulate matter shall be designed employing the constant velocity method. (LAMC 505.9)

### **AIR-CONDITIONING**

1. Provide additional protection method for condensate overflow in accordance with one of the methods in accordance section 301.2 of the Los Angeles Mechanical Code. (LAMC 310.2)
2. Flexible ducts shall not penetrate fire-rated assemblies. (LABC 717.7)
3. Flexible ducts shall not penetrate walls. (LABC 717.7)
4. Flexible ducts shall not penetrate any floor or ceiling. (LABC 717.7)
5. Flexible ducts shall be more than 5 ft in length. (LABC 717.7)
6. Provide listed duct type smoke detectors in the supply air ducts in every air moving system supplying air in excess of 2,000 cfm to enclosed spaces within buildings (Multiple units serving the same room, or having a common return air plenum or a common outside air duct are considered to be one system for the determination of the cfm). In lieu of duct type smoke detectors, complete coverage area detectors may be installed. (LAMC 609.1)
7. Provide listed duct type smoke detectors in the supply and return air ducts of each air-conditioning unit having capacity greater than 2,000 cfm (LAMC 609.1; LABC 907.2.13.1.2)
8. Provide listed duct type smoke detectors at each connection to a vertical duct or riser serving two or more stories from a return air duct or plenum of an air-conditioning system. In Group R-1 and R-2 occupancies, a smoke detector is allowed to be used in each return air riser carrying not more than 5,000 cfm and serving not more than 10 air-inlet openings. (LAMC 609.1; LABC 907.2.13.1.2)
9. Provide listed fire dampers at all duct penetrations through fire-rated walls and barriers. (LAMC 606.2; 717.5.1; 717.5.2)
10. Provide listed fire and smoke dampers at all duct penetrations through fire barriers. (Group A, E, H, I, L, R occupancies, High rise buildings, and other applications listed in section 1.11 regulated by the Office of the State Fire Marshal). (LAMC 605.2; LABC 717.5.2)(LAMC 606.2; 717.5.1; 717.5.2)
11. Provide listed combination smoke/fire dampers at all duct penetrations through fire-rated shafts. (LAMC 606.1; 606.2; LABC 717.5.3)
12. Provide listed fire radiation dampers at all duct penetrations through fire-rated floor/ceiling or roof/ceiling assemblies. (LAMC 606.3, LABC 717.6.1, 717.6.2(2))
13. Fire dampers shall be dynamic type. (LAMC 606.2)
14. Install a duct type smoke detector within 5 feet of each smoke damper. (LABC 717.3.3.2(1))
15. Outside air for a heating or cooling system shall not be taken from less than 10 feet in distance from an appliance vent outlet, a vent opening of a plumbing drainage system, the discharge outlet of an exhaust fan, or a medical-surgical vacuum outlet unless the outlet is 3 feet above the outside-air inlet. (LAMC 311.3 (1))
16. Outside air for a heating or cooling system shall not be taken from less than 10 feet above the surface of an abutting public way, driveway, sidewalk, street, alley, or driveway. (LAMC 311.3(2))
17. Outside or return air for a heating or cooling system shall not be taken from a hazardous or insanitary location, or refrigerant machinery room as defined in the CMC. (LAMC 311.3(3))
18. Return air for a heating or cooling system shall not be taken from an area, the volume of which is less than 25 percent of the entire volume served by such system, unless there is a permanent opening to an area, the volume of which is equal to 25 percent of the entire volume served. (LAMC 311.3(4))
19. Return air for a heating or cooling system shall not be taken from a closet, bathroom, toilet room, or kitchen. (LAMC 311.3(5))
20. Return air for a heating or cooling system shall not be taken from rooms or spaces containing a fuel-burning appliance therein where such room

or space serves as source of return air. (LAMC 311.3(6))

21. Show on the plans that the air filters for outside and return air have a Minimum Efficiency Reporting Value (MERV) of 13. (LAMC 401.2; Title 24 120.1(c)1B; 150.0(m)12C)

## **TITLE 24 ENERGY COMPLIANCE**

22. Electric resistance heating shall not be used for space heating. (Title 24 140.4(g))
23. Alternatively, either provide an energy budget or state with which exception to section 140.4(g) the system complies (Title 24 140.4(g) Exceptions).
24. Show thermostats (Title 24 120.2)
25. Provide economizers in every system with a total mechanical cooling capacity over 33,000 Btu/hr. Alternatively provide an energy budget showing that the system complies without economizer, or Indicate which exception in section 140.4(e) you comply with. (Title 24 140.4(e) Exceptions).
26. If domestic hot water credit is taken on the energy budget, provide approved plumbing plans to verify the water heating equipment matches the energy budget.
27. If Lighting credit is taken on the energy budget, provide approved Electrical plans to verify the lighting equipment matches the energy budget.

## **TOILET ROOM VENTILATION**

28. Provide listed fire dampers where the bathroom exhaust duct penetrates fire barriers (fire rated walls) (LABC 717.5.2)
29. Bathrooms in residential buildings shall have a ventilation shall have an exhaust system capable of exhausting 25 cfm if operating continuously or 50 cfm if operating intermittently. (LAMC Table 403.7)
30. Toilet rooms in commercial buildings shall have a ventilation system capable of exhausting 50 cfm per water closet or urinal. (70 cfm in assembly occupancies and schools. (LAMC Table 403.7; Title 24 Table 120.1-B)
31. State on the plans whether the toilet room ventilation system is designed for continuous or intermittent operation. (LAMC Table 403.7)

32. Each residential bathroom shall be mechanically ventilated. (LAMC 402.5; LAGC 4.506.1)
33. Toilet exhaust shall terminate not less than 3 feet from a property line, 10 feet from a forced air inlet, and 3 feet from openings into the building. (LAMC 502.2.1)
34. Toilet Exhaust under positive pressure shall not extend into or pass through ducts or plenums. (LAMC 603.10)

## **RESIDENTIAL KITCHEN VENTILATION**

35. Local kitchen exhaust rate shall comply with Table 160.2-E or 160.2-F (Title 24 Section 160.2(b)2Avi)
36. Residential range hood exhaust airflow rate in multifamily buildings shall comply with Table 160.2-G (Title 24- Section 160.2(b)2Bii)
37. Residential range hood exhaust airflow rate in single family dwellings shall comply with Table 150.0-E or 150.0-G (Title 24 Section 150.0(o)1Giii)

## **LAUNDRY ROOM VENTILATION**

38. Exhaust ducts for domestic dryers shall be 4 inch minimum and shall not exceed a total length of 14 feet including two 90o elbows. Two feet shall be deducted for each 90o elbow in excess of two. (LAMC 504.4.2.1)
39. Provide the product literature of dryer allowing the dryer moisture exhaust duct to exceed 14 feet. Include the listing of the dryer with the product literature. (LAMC 504.4.2.2)
40. Provide an approved "Request for Modification of Building Ordinance" allowing the dryer to exceed 14 feet. (LAMC 302.3; 504.4.2.1)
41. Clothes dryer moisture exhaust ducts shall be made out of metal. (LAMC 504.4)
42. Clothes dryer moisture exhaust ducts shall be equipped with back draft dampers (LAMC 504.1.1; 504.4)
43. Clothes dryer moisture exhaust duct shall terminate outside of the building. (LAMC 502.2.1; 504.4)
44. Clothes dryer moisture exhaust ducts under positive pressure shall not extend into or pass through ducts or plenums. (LAMC 603.10)

45. Remove the fire or combination fire/smoke dampers from the clothes dryer moisture exhaust duct. (LAMC 504.4)
46. Laundry room exhaust ducts under positive pressure shall not extend into or pass through ducts or plenums. (LAMC 603.11)
47. Laundry room exhaust shall terminate not less than 3 feet from a property line, 10 feet from a forced air inlet, and 3 feet from openings into the building. (LAMC 502.2.1)
48. Calculate the laundry room ventilation requirement. (LAMC 402.1.2; Table 402.1; Title 24 Table 121.1-A)
49. Laundry room make up air shall take into consideration the air exhausted by the dyers (LAMC 504.4.1)
50. Provide make up air to the laundry room. (LAMC 504.4.1)
51. Make up air is not allowed to be taken from the corridor. (LAMC 602.6)
52. Provide product literature for the exhaust duct power ventilator showing listing and installation instructions. (LAMC 504.4.2.3; LAMC 112.3(1)(D))
53. Provide listed fire dampers where the laundry room exhaust duct penetrates fire barriers (fire rated walls) (LABC 717.5.2)
54. Provide listed combination fire dampers where the laundry exhaust duct penetrates a fire rated shaft. (LABC 717.5.3)

### **CORRIDOR VENTILATION**

55. Show fire rated walls and ceilings where the ducts pass through. (LAMC 112.3(1)(J))
56. Indicate if the fire rated corridors are tunnel type or full height. (LAMC 112.3(1)(J))
57. Provide corridor ventilation at a rate not less than 0.15 cfm/square foot (Title 24 Table 120.1-A; Table 160.2-B)
58. Provide listed combination smoke/fire dampers at all penetrations through fire-rated shafts. (LABC 717.5.3)
59. Provide listed fire dampers (in floor ceiling assemblies) or ceiling radiation dampers (for ceiling membrane of a fire-resistance-rated floor/ceiling assembly) (LABC 717.6.1; 717.6.2(2))

60. Provide listed combination smoke/fire dampers to isolate ducts serving rated corridors (Applies to B, F, M occupancies). (LABC 717.5.4.1)
61. Install fire dampers in all penetrations of the corridor walls (Applies to B, F, M occupancies). (LABC 717.5.4.1)
62. Provide listed combination fire/smoke dampers to isolate ducts serving rated corridors. (LABC 717.5.4; 717.5.4.1)
63. Fire dampers shall be dynamic type. (LAMC 606.2)
64. Do not pressurize the corridor. Corridors shall have supply air inlets and exhaust air outlets. (LAMC 602.6)
65. Rooms adjacent to the corridor shall not draw air from the corridor. (LAMC 602.6)
66. Make-up air is not allowed to be taken from the corridor. (LAMC 602.8)
67. Provide make-up air in the corridor. (LAMC 602.6)

### **REFRIGERATION MACHINERY ROOM**

68. State the type and amount of refrigerant in each independent circuit. (LAMC 1106.1)
69. Provide a refrigeration machinery room for the refrigerant system. (LAMC 1106.1)
70. Provide an unobstructed walking space not less than 3 feet wide by 6 feet 8 inches in height throughout for equipment maintenance. (LAMC 1106.10)
71. Doors shall swing in the direction of exit (LAMC 1106.12; LABC 1006.2.2)
72. Provide two separate exits for machinery rooms exceeding 1000 square feet. (LAMC 1106.12; LABC 1006.12.2.3)
73. Remove any equipment, pipes or ducts that are not essential for the refrigeration process, maintenance of equipment, or for illumination, ventilation, or fire protection of the machinery room. (LAMC 1108.1)
74. Show refrigerant detectors on the plans. (LAMC 1106.2.2.1)
75. The refrigerant detectors shall actuate an alarm and the emergency ventilation (LAMC 1106.2.2.1)
76. Provide a dedicated mechanical exhaust system and provide calculations showing that it can

achieve the minimum required ventilation for heat removal and emergency purge. Provide either separate fans for emergency purge or use two-speed fans. (LAMC 1106.2.4)

77. Exhaust ventilation shall terminate outside according to the following requirements:

- a. For refrigerants having flammability classification of 1 (A1, B1) not less than 10 feet from property line, 3 feet from exterior walls or roofs, 10 feet from openings into the building, and 10 feet above adjoining grade (LAMC 502.2.2; 1106.2.3; 1106.2.4; 1106.2.5)
- b. For refrigerants having flammability classification of 2 or 3 (A2, B2, A3, B3) not less than 30 feet from property line, 6 feet from exterior walls or roofs, 10 feet from openings into the building, 30 feet from combustible walls or openings into the building that are in the direction of the exhaust discharge, and 10 feet above adjoining grade (LAMC 502.2.2; 1106.2.3; 1106.2.4; 1106.2.5)

78. Exhaust air inlets shall be located within 1 foot of the lowest point of the machinery room for refrigerants that are heavier than air, and shall be within 1 foot of the highest point for refrigerants that are lighter than air. (LAMC 1106.2.4)

79. State the density or specific density of the refrigerant. (LAMC 112.2(2))

80. Ventilation fans shall have a control switch located adjacent immediately outside the machinery room door. (LAMC 1107.1.10))

81. A clearly identified emergency shut-off switch of the break-glass type or with an approved tamper-resistant cover shall be provided immediately adjacent to and outside of the principle refrigeration machinery room entrance. (LAMC 1108.3)

82. Provide make up air intakes. Make up air intakes shall supply air to the refrigeration machinery room directly from outside of the building. (LAMC 1106.7)

83. Install backdraft damper in the makeup air intakes. (LAMC 1106.7)

84. Show the point of discharge of the pressure-relief device. It shall be:

- a. Not less than 15 feet above grade.
- b. Not less than 20 feet from openings into the building, air intakes, pedestrian walkways, or building exits. (LAMC 1112.11.2)

85. Provide calculations showing that the release of refrigerant in the courtyard does not yield a concentration of refrigerant in excess of the RCL (Refrigerant Concentration Limit). (LAMC 1112.11.2(3))

86. Show on the plans make, model HP, cfm, and static pressure rating of all fans. (112.3(1)(D))

87. Provide product literature for all fans used showing their cfm and static pressure rating. (112.3(1)(D))

#### **GENERATOR ROOMS**

88. Show the engine exhaust pipe from the point of connection at the engine to the point of termination. Show all wall and roof penetrations and identify which walls and roofs are fire rated (LAMC 112.3(1) J)

89. Provide a minimum of 18 inches clearance from combustible construction. The clearance shall be measured from the outside surface of the pipe or duct and not from the insulation around the pipe. (LAMC 802.7.3.4)

90. Show that the exhaust pipe passing through a combustible roof has a noncombustible, non-ventilating thimble which extends not less than 18 inches above and 6 inches below the roof. (LAMC 802.7.3.5)

91. Show that the engine exhaust system terminates at a safe location. Exhaust system shall terminate outside the building and shall not be directed towards structures or areas that contain flammable vapors, gases or combustible dust. (NFPA-37 8.2.3.1; NFPA-37 8.2.3.2)

92. The termination of the engine exhaust shall not be less than 7 feet above finished ground level where located adjacent to public walkways. (LAMC 802.3.3.5)

93. The exhaust from the Diesel engine shall terminate not less than 4 feet below, 4 feet horizontally from, or 1 foot above a door, operable window, or gravity air inlet into a building. The bottom of the vent shall be located not less than 2 inches above finished floor. (LAMC 802.3.3.5; 802.6.1(6); 802.8.1)

94. Show that the engine exhaust is guarded where necessary to prevent personnel burns. (NFPA-37 8.2.4).
95. Enclose the engine exhaust pipe in a fire rated shaft (LAMC 802.14; NFPA 211 8.2.2.1)
96. No portion of the engine exhaust pipe shall extend into or pass through ducts or plenums (LAMC 802.3.5)
97. Provide installation instructions from the engine manufacturer showing the following:
  - a. The amount of combustion air required.
  - b. The amount of air required for radiator or room cooling.
  - c. The engines exhaust CFM and the exhaust pipe back pressure.
  - d. The maximum allowable room temperature. (NFPA-37 8.1.2)
98. Provide calculations showing that all of the manufacturer's criteria specified in item 140 above are met. (NFPA-37 8.1.2)
99. Provide calculations showing the pressure loss in the exhaust pipe is less than the pipe back pressure provided by the engine manufacturer. (LAMC 802.5.5(4); NFPA-37 8.1.2)
100. In absence of product literature, size combustion air according to LAMC 701.9.
101. Combustion air shall be drawn from outdoors. (LAMC 701.9)
102. Dampers are not allowed in combustion-air ducts. (LAMC 701.12)
103. Show room ventilation supply and exhaust. (LAMC 504.1; LAMC 112.3)
104. The room ventilation shall be added to the combustion air. ( LAMC 701.8; 701.9.1 LAMC 701.9.1)
105. Show point of termination outside of the building of the room ventilation. (LAMC 502.2.1)
107. Remove the furnace from the bedroom or show compliance with Section 904.1. (LAMC 904.1)
108. Remove the furnace from the bathroom or show compliance with Section 904.1. (LAMC 904.1)
109. Show the clearances around the furnace. (LAMC 904.2; 906.7)
110. Provide product literature showing the required clearances around the furnace. (LAMC 904.2.1; 906.7)
111. Under floor furnace supported by the ground shall be installed on a concrete slab not less than 3 inches above adjoining space. (LAMC 904.3.1.1)
112. Under floor furnace supported from above shall have a clearance of at least 6 inches above adjoining ground level. (LAMC 904.3.1.2)
113. Where the excavation exceeds 12 inches provide a seepage pan. (LAMC 906.9)
114. Show a 24-inch-wide passageway to the furnace. (LAMC 304.4.2)
115. State the height of the passage way to the furnace. (LAMC 304.4.1)
116. Passage ways with height less than 6 feet shall not exceed 20 feet in length. (LAMC 304.4.1)
117. Show the location and size of permanent access to the furnace. (LAMC 304.1; 304.2; 304.3; 304.4)
118. Provide a level platform of not less than 30 inches by 30 inches on the service side of the furnace. (LAMC 304.2)
119. Show location and size of all combustion air openings or ducts. (LAMC 701.1)
120. Provide calculations for the combustion air. (LAMC 701.1)
121. Combustion air duct shall be constructed of galvanized steel or material having equivalent corrosion resistance, strength, and rigidity. (LAMC 701.11(1))
122. Dampers are not allowed in combustion air ducts. (LAMC 701.12)
123. Provide a fire-rated enclosure around the vent. (LAMC 701.12)
124. Provide an elevation view of the furnace. Show the draft hood, vent size and type (e.g.

## **FURNACES**

106. Show that the flame associated to the furnace installed in the garage is located a minimum of 18 inches below the floor-ceiling assembly or 18 inches above the floor. (LAMC 305.1[residential]; NFPA-88A 6.2.2 [commercial])



double wall type B vent, positive-pressure vent, etc.), clearances and vent termination. (LAMC 802.4; 802.8; 802.6; 802.12)

125. The vent shall be type B. (LAMC 802.4; LAMC Table 802.4)

126. The vent shall be listed as a positive-pressure type. (LAMC 802.3.3)

127. Provide product literature showing that the mechanical draft system is listed. (LAMC 802.3.3)

128. The vent shall have at least the same area of the draft hood outlet, but shall not be greater than 7 times the draft hood outlet area. (LAMC 802.6.2.1 (3))

129. The vent termination shall be at least 5 feet above the vent collar. Single-wall metal pipe shall terminate at least 5 feet in vertical height above the highest connected appliance draft hood outlet or flue collar (LAMC 802.7.2)

130. Vents shall extend above the roof and shall terminate in a vent cap. (LAMC 802.7.2(3))

131. The mechanical venting system shall terminate at least 4 feet below or horizontally from, and 1 foot above any opening into the building. The bottom of the vent termination shall be located not less than 12 inches above finished ground level. (LAMC 802.8.1)

132. A gas vent shall terminate not less than 3 feet above a forced air inlet located within 10 feet. (LAMC 802.6.1 (7) )

133. The vent shall extend vertically, except one 60° offset is allowed. (LAMC 802.6.2.2)

134. The total horizontal run of a vent plus the length of horizontal vent connector shall not exceed 75% of the vertical height of the vent. (LAMC 802.6.2.2)

135. Provide manufacture brochure showing the venting criteria for the condensing furnaces. (LAMC 802.6.2.3)

136. Vents shall not extend into or pass through a fabricated air ducts or furnace plenums. (LAMC 802.3.5)

137. Connectors entering a common venting system shall be offset, or shall be attached to the vertical portion of the vent 45 degrees or less relative to the vertical. (LAMC 802.10.3)

138. The area of a common vent connector shall not be less than the area of the largest vent

connectors plus 50% of the areas of the additional vent connectors. (LAMC 802.5.5)

### **OSHPD 3 HEALTH FACILITIES**

139. The minimum volume of the boiler room shall be 16 times more than the total volume of the boilers installed in the room. The total volume boilers shall be based on the total number of boilers that can operate at the same time. (LAMC 303.2)

140. Show that your design complies with the heating, cooling and humidity requirements stated in Table 4-A. (320.3.1)

141. Provide emergency power for all the equipment listed in section 321.2 to 321.6 of the Mechanical Code. (LAMC 321.0)

142. The ventilation air requirements listed in table 402.1 are not permitted for OSHPD facilities. Ventilation systems shall comply with sections 405.0 through 418.5. (LAMC 402.0).

143. Evaporative cooling shall not be used in patient areas. (LAMC 406.0)

144. Provide ducts for the return air. (LAMC 602.1)

145. Flexible ducts that are more than 10 feet in length shall not be used. (LAMC 603.4.1.1)

146. Thermal acoustical lining materials shall not be installed within ducts, terminal boxes or sound traps and other in-duct systems serving patient areas like operating rooms, delivery rooms, post anesthesia care units, etc. (LAMC 605.2)

147. Perforated ventilating ceilings are not allowed in health facilities (LAMC 607.1.1).

148. Design of refrigeration systems shall comply with Table 1104.1.



