CaliforniaCerts

California Commercial Mechanical Inspector

Solution key

April 6, 2026

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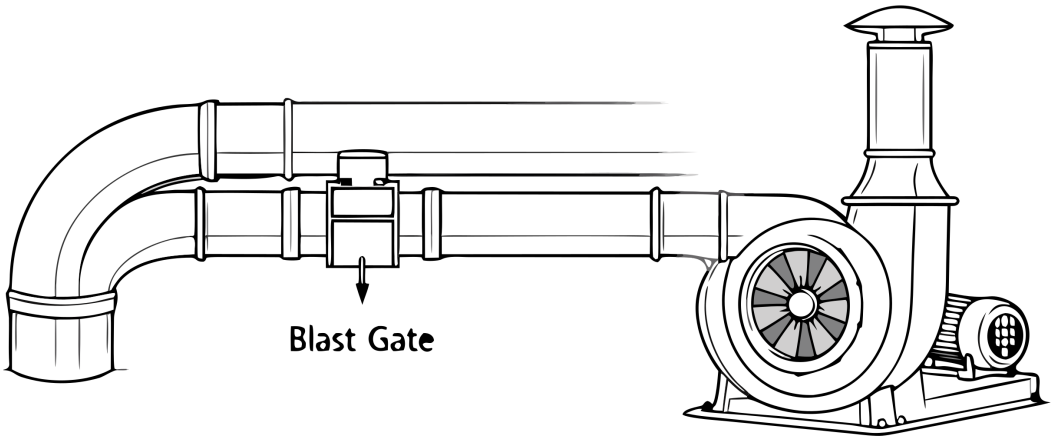
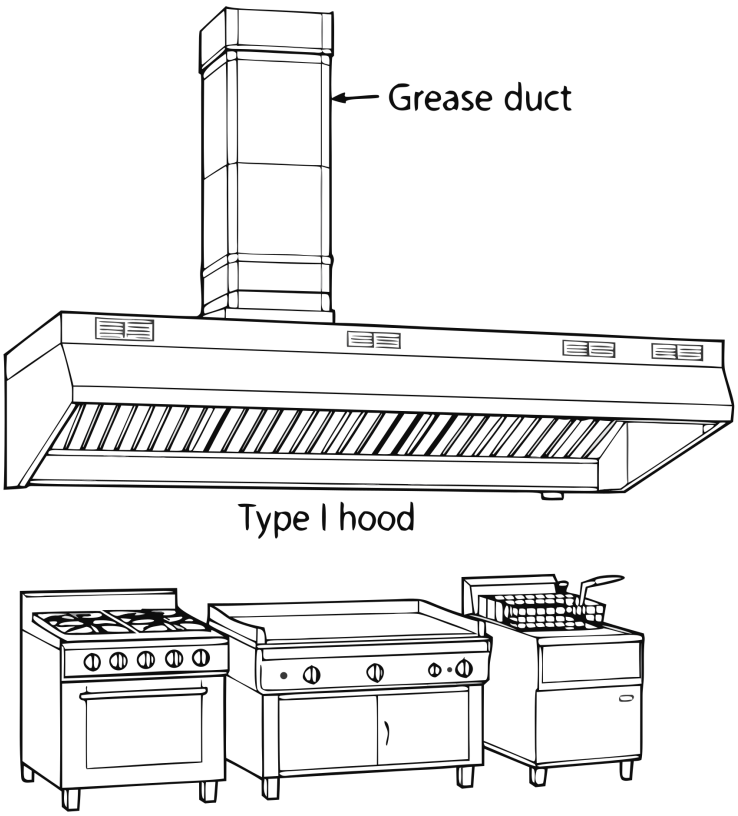
1. Product-conveying exhaust systems shall:



A (correct). Be constructed and listed for the material conveyed
B. Use dryer transition duct
C. Omit cleanouts
D. Terminate in corridors

Rationale: Exhaust systems conveying product shall comply with materials, construction, and safety requirements in the ventilation chapter.
Code: 511.0

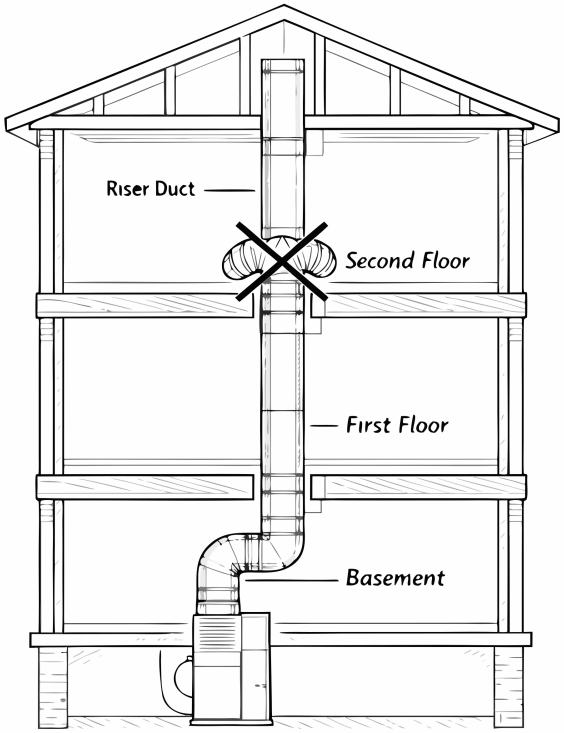
2. Commercial kitchen grease exhaust systems shall comply with:



A (correct). CMC and referenced standards such as NFPA 96
B. IMC only, CMC silent
C. Local restaurant menu only
D. UL 300 for all ducts without listing

Rationale: Kitchen ventilation and hoods are governed by CMC Chapter 5 and NFPA 96 as referenced.
Code: 508.0

3. Ducts listed and labeled to UL 181 shall not be used for vertical risers in systems serving:



A (correct). More than two stories
B. Only residential occupancies
C. One story only
D. Any height if insulated

Rationale: Section 603.1.4 prohibits UL 181 ducts for vertical risers in air-duct systems serving more than two stories.
Code: 603.1.4

4. Refrigerant piping and components shall be:

A. Copper only in all occupancies
B. Supported only by insulation
C (correct). Installed per code and protected from physical damage
D. Run through fire-resistance-rated walls without protection

Rationale: Refrigeration equipment and piping must be installed per code and listing; leaks and materials are regulated in Chapter 11.
Code: 1102.0

5. Fuel gas pipe sizing shall be determined using:

A. Contractor experience only, without calculation
B. Nominal pipe size matching appliance connection only
C. A single standard table without adjustment for length or elevation
D (correct). Approved pipe sizing tables or engineering analysis for the installation conditions

Rationale: Pipe sizing shall be based on approved engineering methods or pipe sizing tables in the referenced fuel gas code for length, pressure, and demand.
Code: 902.0

6. A breeching is defined as:

A. A draft hood only
B. Plastic vent for Category IV appliances
C. A condensate drain line
D (correct). A metal connector for medium- and high-heat appliances

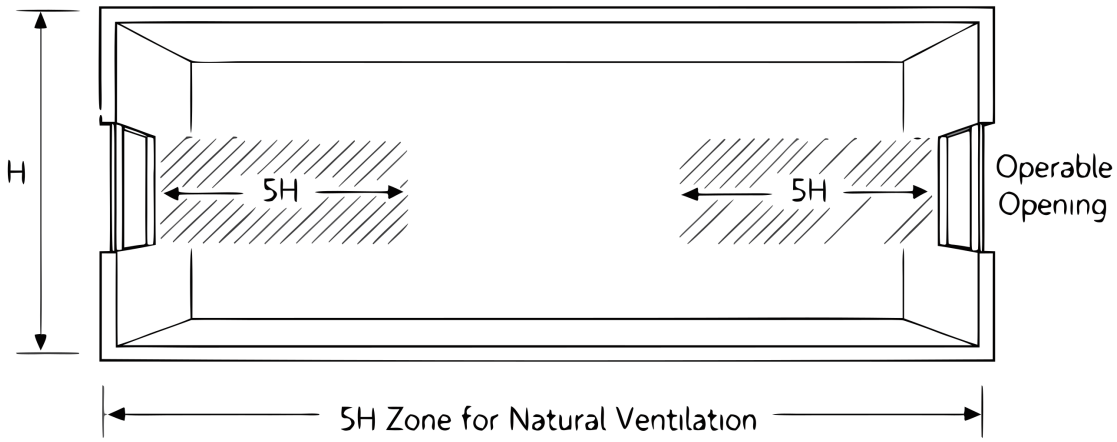
Rationale: The CMC defines Breeching as a metal connector for medium- and high-heat appliances.
Code: 202.1

7. Masonry chimneys shall be lined with:

A. PVC
B (correct). Approved clay flue lining or listed lining system
C. Single-wall metal only
D. Bare masonry only

Rationale: Section 802.5.3 requires approved clay flue lining or listed chimney lining system per UL 1777.
Code: 802.5.3

8. For natural ventilation with operable openings on two opposite sides, the maximum distance from openings is:



A. 8H
B. 2H
C (correct). 5H
D. 3H

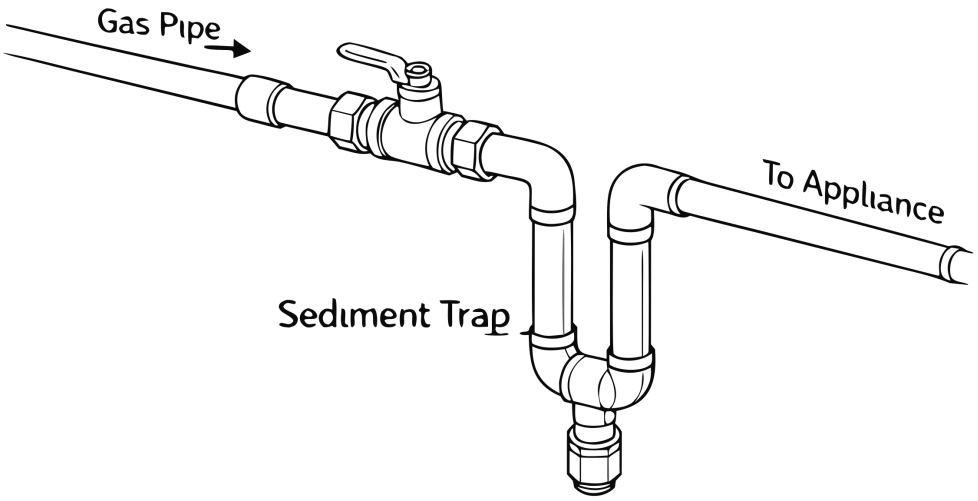
Rationale: Section 402.2.1.2 limits distance to not more than 5H.
Code: 402.2.1.2

9. Mechanical combustion air supply shall deliver at least:

A. 1.0 cfm per 1000 Btu/h
B. 0.50 cfm per 1000 Btu/h
C (correct). 0.35 cfm per 1000 Btu/h
D. 0.20 cfm per 1000 Btu/h

Rationale: Section 701.9 requires not less than 0.35 cfm per 1000 Btu/h for all appliances in the space.
Code: 701.9

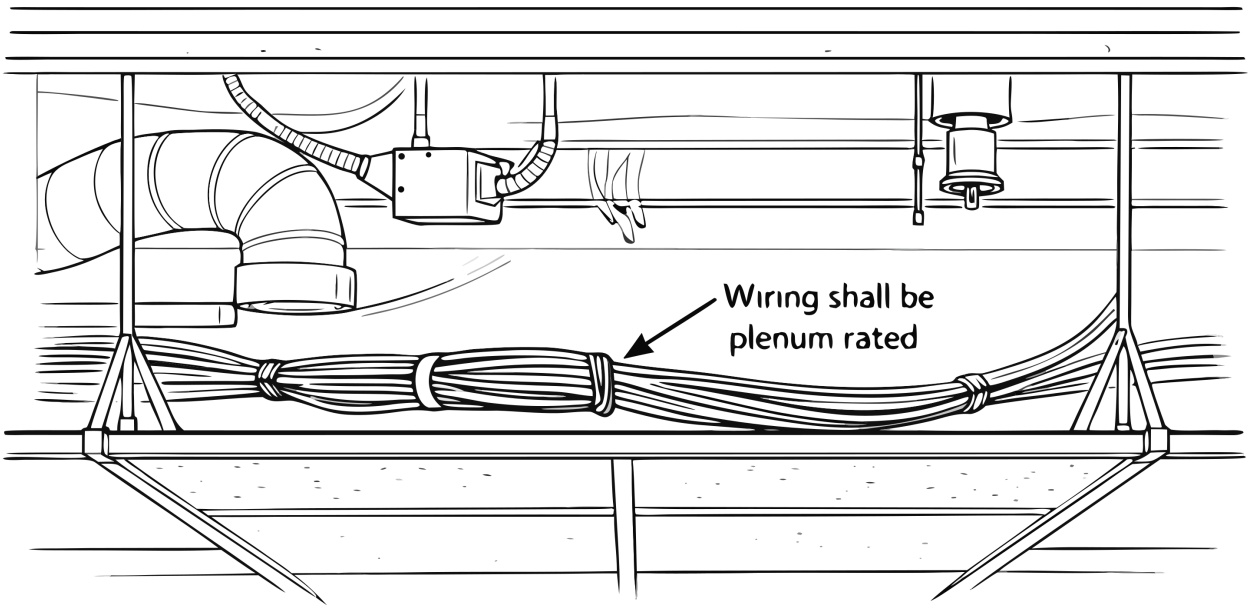
10. A sediment trap is required ahead of:



A (correct). The inlet of equipment where required by the fuel gas code
B. Only meters
C. Never in commercial buildings
D. Every manual shutoff valve

Rationale: Fuel gas code connection requirements include sediment trap/drip at listed equipment inlets where required by NFPA 54 / CMC fuel gas provisions.
Code: 1312.0

11. Electrical wiring in plenums shall comply with:



A. NM cable without restriction
B. Extension cords where hidden
C. Romex in all plenums
D (correct). The California Electrical Code for plenum wiring

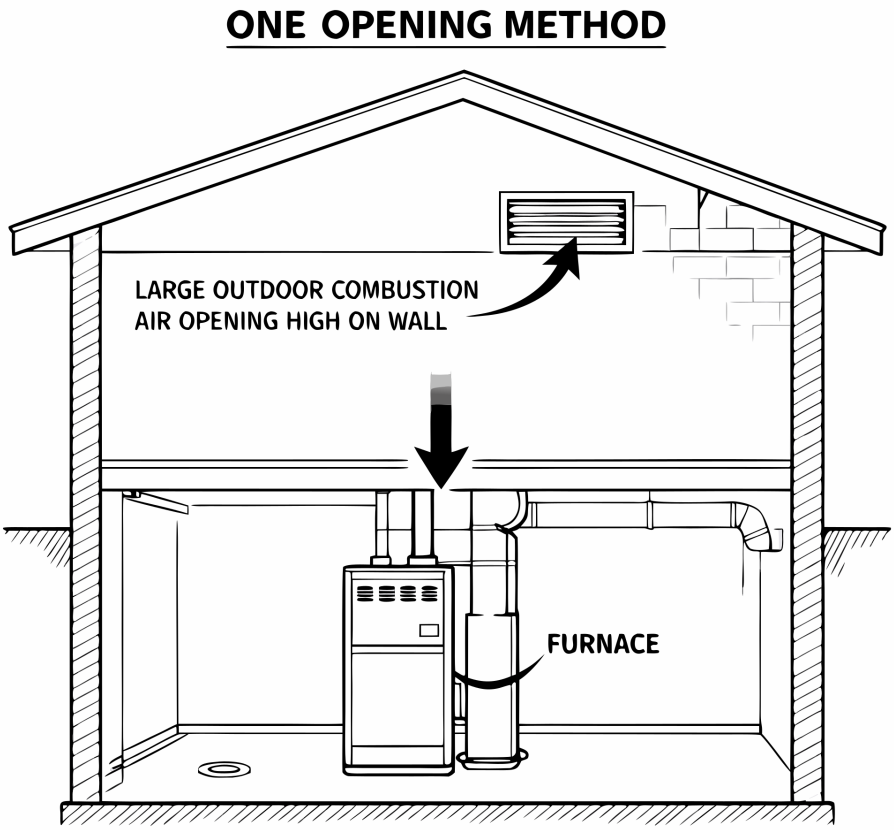
Rationale: Section 602.2.1 requires electrical wiring in plenums comply with the California Electrical Code listing for plenum use.
Code: 602.2.1

12. Venting systems shall not extend through:

A. Exterior wall sleeves
B. Chimney liners
C (correct). Fabricated air ducts or furnace plenums
D. Roof flashing only

Rationale: Section 802.3.5 prohibits venting systems extending into fabricated air ducts or furnace plenums.
Code: 802.3.5

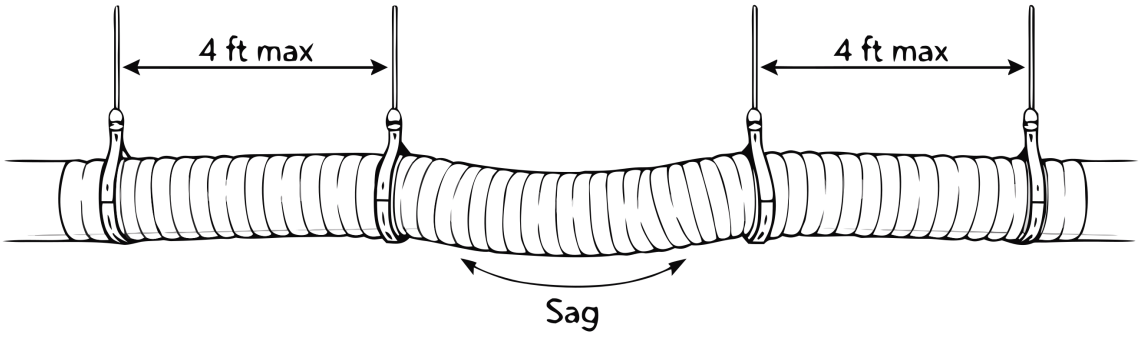
13. The one-permanent-opening outdoor method requires minimum free area of:



A. 1 sq in per 4000 Btu/h
B. 1 sq in per 2000 Btu/h
C (correct). 1 sq in per 3000 Btu/h
D. 1 sq in per 1000 Btu/h

Rationale: Section 701.6.2(1) requires 1 square inch per 3000 Btu/h of total input.
Code: 701.6.2

14. Horizontal flexible air ducts shall be supported at intervals not exceeding:



A. 6 feet
B. 2 feet
C (correct). 4 feet
D. 8 feet

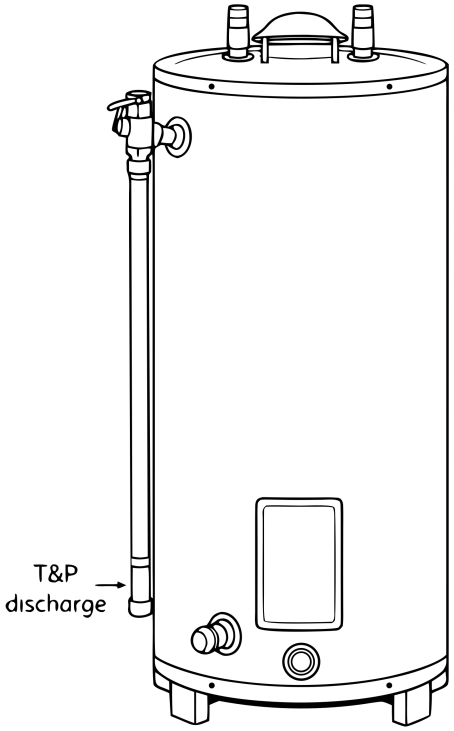
Rationale: Section 603.4(2) requires horizontal flexible duct supports at not more than 4 foot intervals.
Code: 603.4(2)

15. Who is responsible for enforcing the California Mechanical Code in a jurisdiction?

A. The general contractor only
B (correct). The Authority Having Jurisdiction
C. The equipment manufacturer
D. The property owner

Rationale: Section 103.1 states the Authority Having Jurisdiction is the authority duly appointed to enforce this code.
Code: 103.1

16. Water heaters shall be installed in accordance with:



A. Local utility pamphlet only
B (correct). This code and the manufacturer's instructions
C. Contractor preference only
D. NFPA 13 only

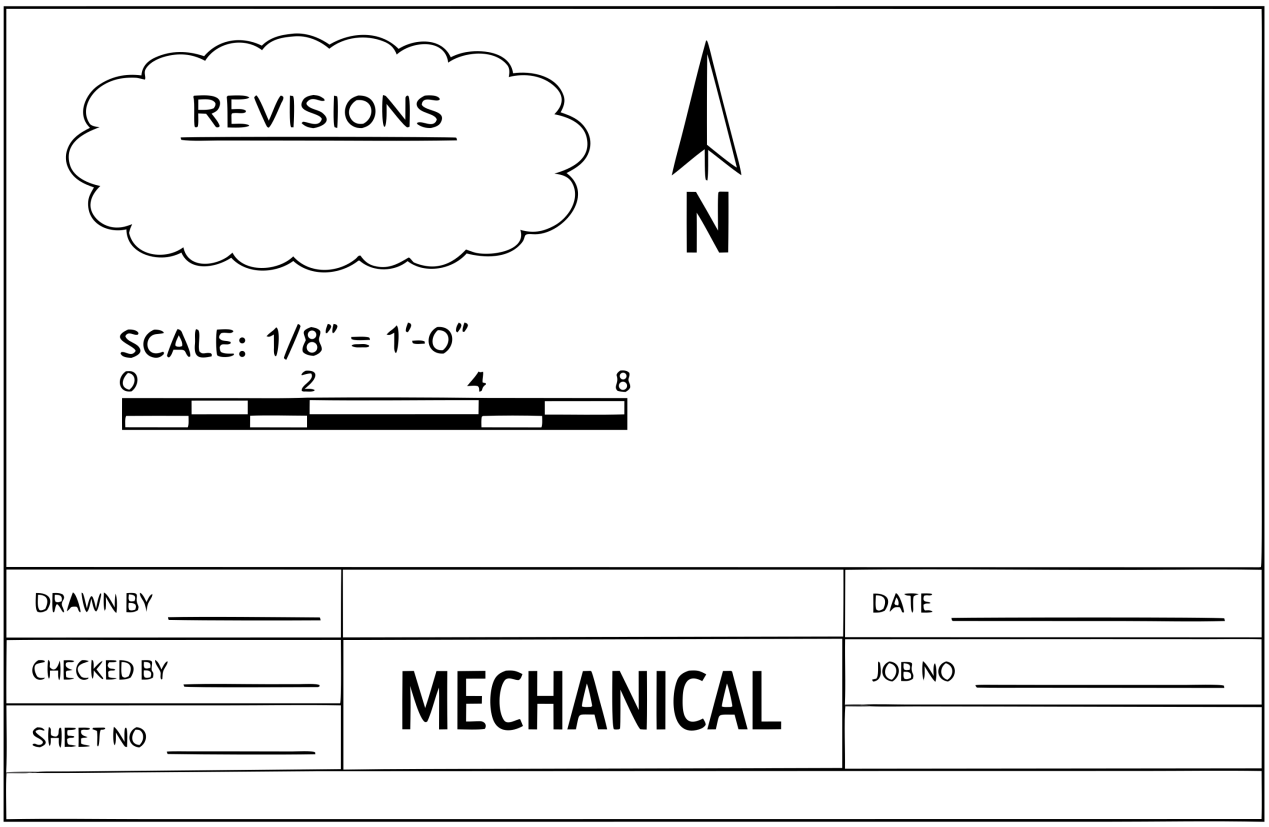
Rationale: Chapter 5 water heater provisions require compliance with this code and the manufacturer's instructions (general Chapter 5 scope).
Code: 502.0

17. Combustion air ducts shall be constructed of:

A. PVC schedule 40
B. Unlined flexible dryer duct
C. Wood boards
D (correct). Galvanized steel or equivalent approved materials

Rationale: Section 701.11(1) requires galvanized steel or equivalent corrosion resistance, strength, and rigidity.
Code: 701.11(1)

18. Construction documents submitted for a mechanical permit shall be prepared by:



A (correct). A registered design professional
B. The equipment supplier only
C. The building owner
D. Any licensed contractor

Rationale: Section 104.3.1 requires construction documents be prepared by, and the mechanical system designed by, a registered design professional.
Code: 104.3.1

19. Explosive or combustible dust collectors require:

A. PVC duct only
B (correct). Compliance with applicable code provisions for combustible dust
C. Shared kitchen hood
D. No special provisions

Rationale: Dust collection exhaust must address deflagration protection and code-referenced safeguards.
Code: 511.0

20. Rough-in inspection for mechanical systems shall be made:

A. Only at final inspection
B. After finishes are complete
C (correct). Prior to wall or ceiling membranes
D. Before permit issuance

Rationale: Section 105.2(2) requires rough-in inspection prior to the installation of wall or ceiling membranes.
Code: 105.2

21. An appliance shall be connected to:

A. A higher pressure without regulator
B. Any available gas without review
C (correct). The fuel gas for which it was designed
D. Mixed gases without listing

Rationale: Section 902.4 requires connection to the fuel gas for which the appliance was designed.
Code: 902.4

22. Which appliance is generally NOT required to be vented?

A. Water heater
B (correct). Listed range
C. Residential gas furnace
D. Unit heater

Rationale: Section 802.2.1 lists listed ranges among appliances not required to be vented.
Code: 802.2.1

23. Under the CMC definition of "Readily Accessible," which situation qualifies?

A. Accessible only with a ladder over 6 ft
B (correct). Direct access without removing a panel or door
C. Behind a screwed access panel that must be removed
D. Behind a locked utility room door only

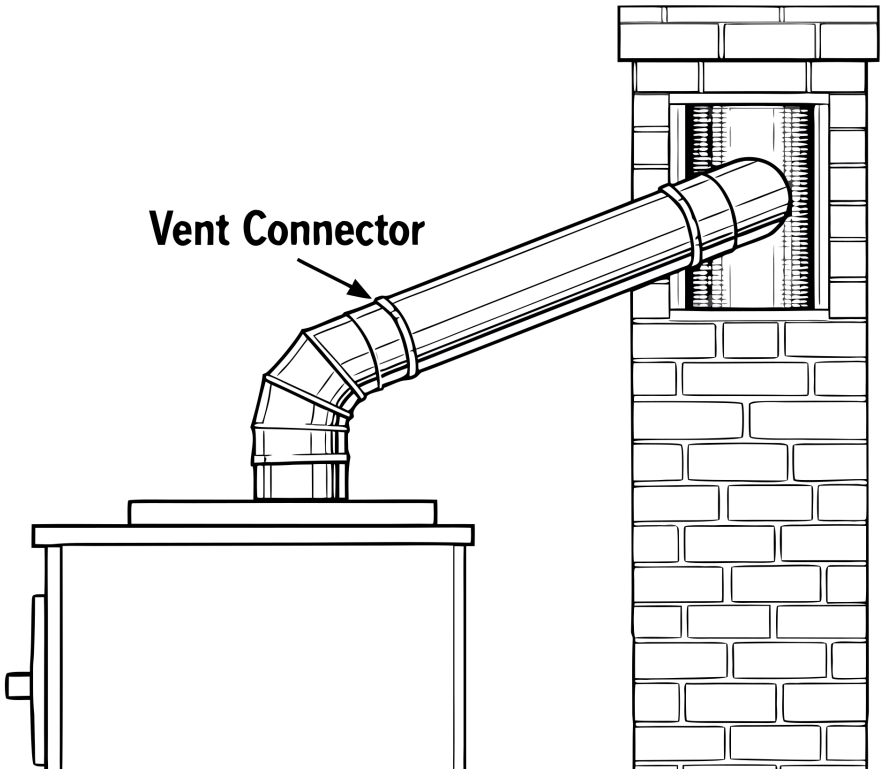
Rationale: The definition of Readily Accessible is having direct access without the necessity of removing a panel, door, or similar obstruction.
Code: 202.1

24. Materials exposed in ducts or plenums shall be:

A. Plastic without testing
B. Carpet scraps allowed if covered
C (correct). Noncombustible or meet specified flame/smoke indices
D. Any paint-grade wood

Rationale: Section 602.2 requires noncombustible or limited flame/smoke indices per ASTM E84 unless an exception applies.
Code: 602.2

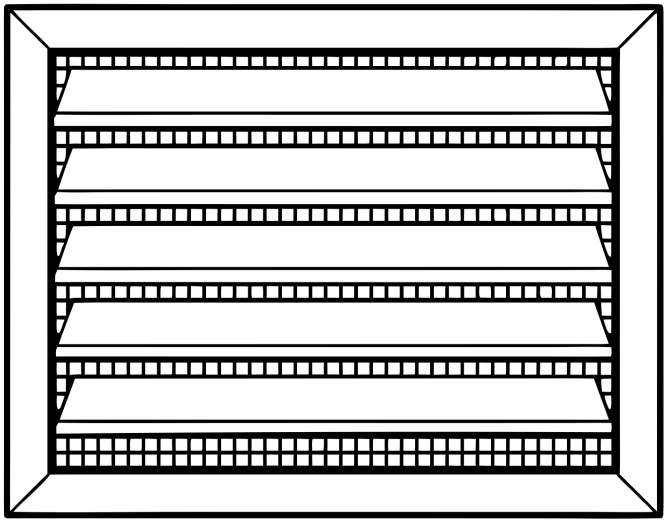
25. Vent connectors shall be installed:



A. Horizontal only unlimited length
B. Using flexible plastic only
C. With reduced size without table
D (correct). Per Chapter 8, listing, and manufacturer's instructions

Rationale: Vent connectors must comply with Chapter 8, appliance listing, and clearances to combustibles.
Code: 803.0

26. Outdoor air intake screens shall have openings not less than:

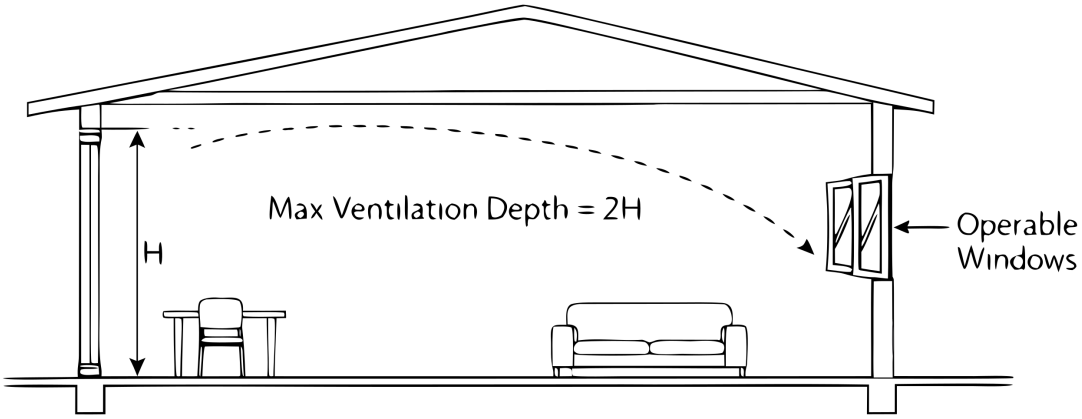


1/4 in min mesh,
1/2 in max openings

A. 1/8 inch
B (correct). 1/4 inch minimum opening size
C. No screening required
D. 1 inch

Rationale: Section 402.4 requires screens with not less than 1/4 inch openings and not more than 1/2 inch openings.
Code: 402.4

27. For natural ventilation with operable openings on one side, the maximum distance from openings is:



A (correct). 2H
B. H
C. 5H
D. 10H

Rationale: Section 402.2.1.1 limits distance to not more than 2H where H is ceiling height.
Code: 402.2.1.1

28. How many sets of construction documents are required with each permit application when plans are required?

A. Three sets only
B (correct). Two or more sets
C. One set
D. Electronic only; no paper sets

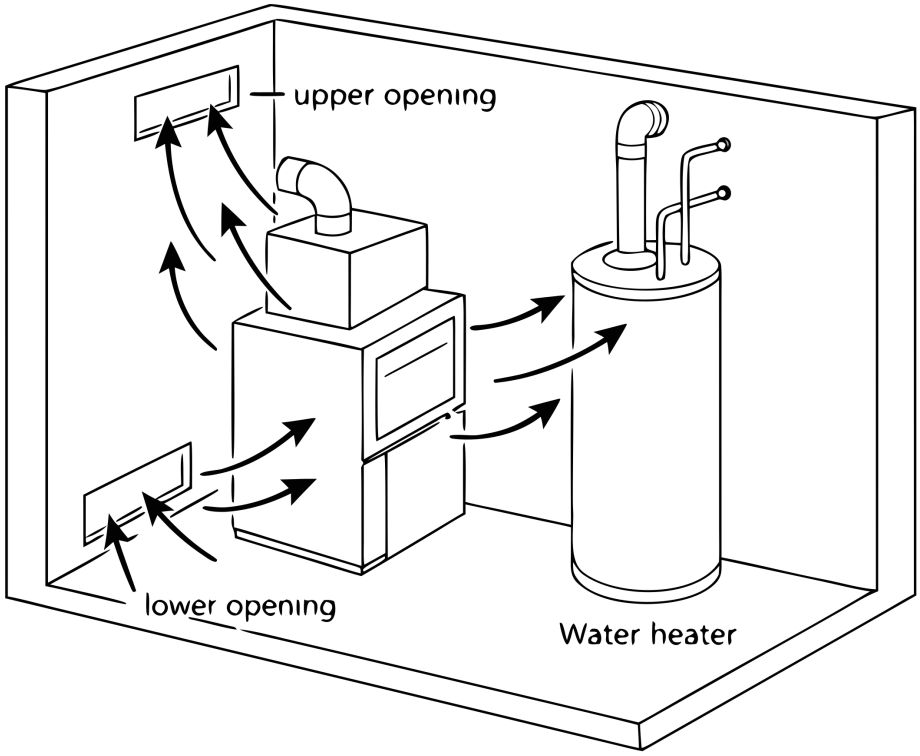
Rationale: Section 104.3.1 states construction documents shall be submitted in two or more sets with each application for a permit.
Code: 104.3.1

29. The standard method minimum indoor volume for combustion air is:

A. 25 cubic feet per 1000 Btu/h
B. 100 cubic feet per 1000 Btu/h
C (correct). 50 cubic feet per 1000 Btu/h
D. 75 cubic feet per 1000 Btu/h

Rationale: Section 701.4.1 requires 50 cubic feet per 1000 Btu/h.
Code: 701.4.1

30. Indoor combustion air openings between combined spaces shall each have minimum free area of:



A (correct). 1 sq in per 1000 Btu/h (minimum 100 sq in each)
B. 2 sq in per 1000 Btu/h
C. 50 sq in fixed regardless of input
D. 1 sq in per 4000 Btu/h

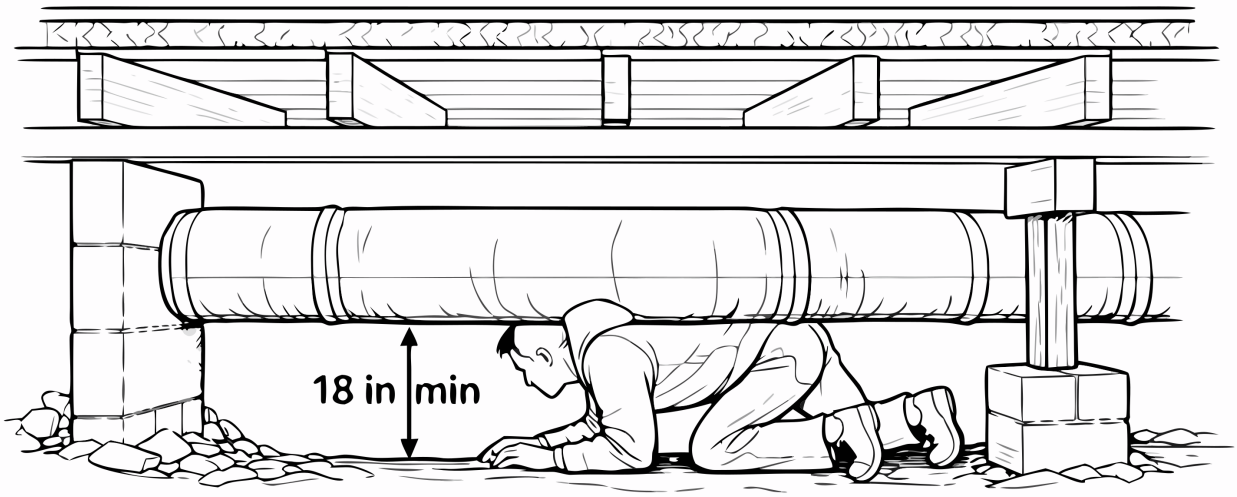
Rationale: Section 701.5(1) requires 1 square inch per 1000 Btu/h but not less than 100 square inches per opening.
Code: 701.5(1)

31. Where louver free area is unknown, metal louvers are assumed to have:

A (correct). 75 percent free area
B. 100 percent free area
C. 25 percent free area
D. 50 percent free area

Rationale: Section 701.10 states metal louvers and grilles are assumed 75 percent free area unless known.
Code: 701.10

32. Where access under ducts in a crawl space is required, vertical clearance shall be not less than:



A. 24 inches
B. 12 inches
C (correct). 18 inches
D. 30 inches

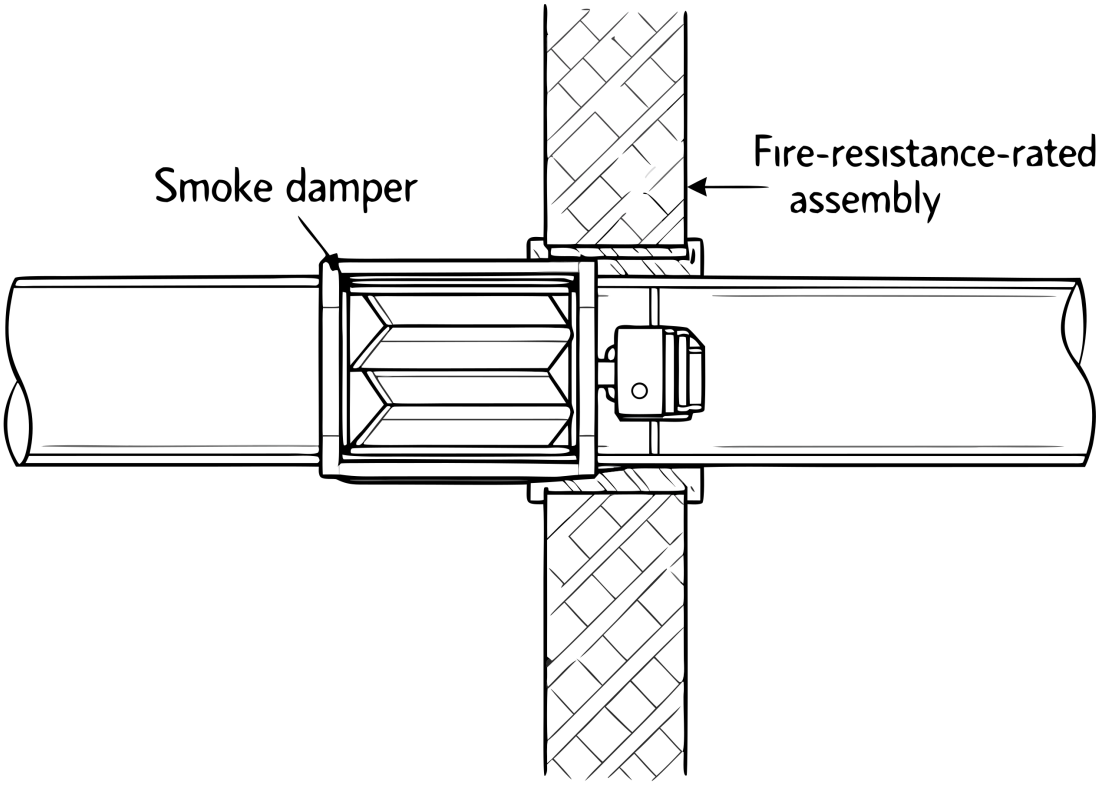
Rationale: Section 603.2(2) requires not less than 18 inches vertical clearance where it is required to move under ducts.
Code: 603.2(2)

33. Makeup air for hood exhaust systems shall:

A (correct). Be provided as required by code for the hood system
B. Come only from adjacent dining rooms unfiltered
C. Equal 50% of exhaust only
D. Be omitted if MUA fans are noisy

Rationale: Makeup air must replace exhausted air to avoid building depressurization and appliance interference per ventilation chapters.
Code: 509.0

34. Smoke dampers in air transfer openings shall be:



A. Field-fabricated from sheet metal
B (correct). Listed and installed per the code and building requirements
C. Manual only, no actuator
D. Omitted in sprinklered buildings

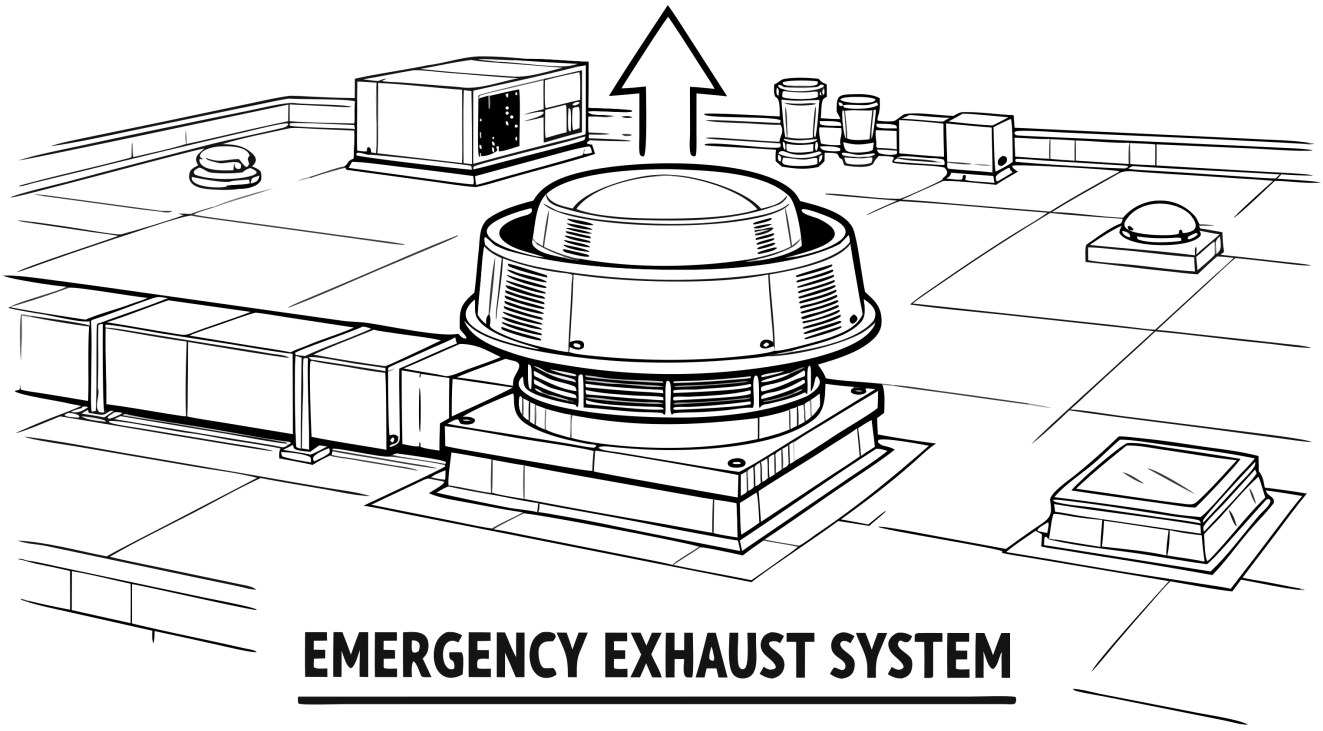
Rationale: Smoke damper provisions require listed devices installed per code and building fire-resistance requirements.
Code: 607.0

35. Once construction documents are approved, they:

A. May be field-revised by the installer
B. Expire after 90 days automatically
C (correct). Shall not be changed without AHJ authorization
D. Need only verbal approval for minor changes

Rationale: Section 104.4.1 states approved construction documents shall not be changed, modified, or altered without authorization from the Authority Having Jurisdiction.
Code: 104.4.1

36. Emergency exhaust systems for hazardous vapors shall:



A (correct). Exhaust contaminants per code and not recirculate hazardously
B. Share a return plenum with offices
C. Recirculate through MERV 8 filters
D. Terminate in attic

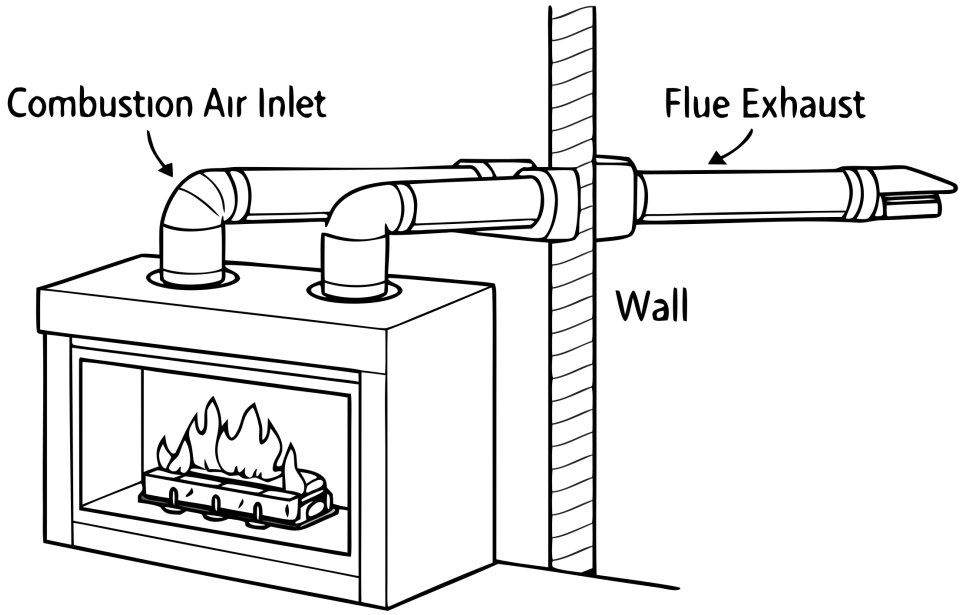
Rationale: Hazardous exhaust requires compliance with CMC exhaust provisions and occupancy requirements.
Code: 510.0

37. Type I hoods are required where:

A. Dishwashing only
B. Residential ranges only
C. Only non-cooking warming occurs
D (correct). Appliances produce grease-laden vapors

Rationale: Type I hoods address grease and smoke removal from commercial cooking; exam expectation ties to grease-laden vapors.
Code: 508.1

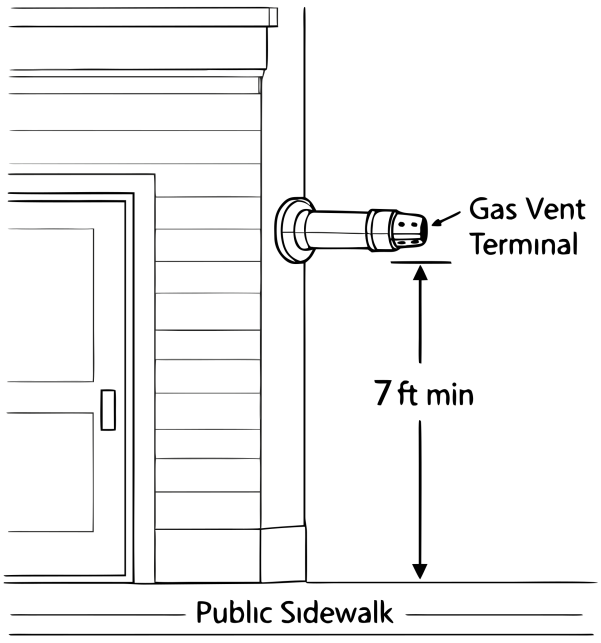
38. A direct vent appliance obtains all combustion air from:



A. Underfloor crawl space without ducts
B (correct). The outdoors, supplied directly to the appliance
C. Return air plenum only
D. Adjacent indoor corridors only

Rationale: Direct Vent Appliances are constructed and installed so that all air for combustion is derived directly from the outdoors.
Code: 202.1

39. Mechanical draft system exit terminals adjacent to public walkways shall be not less than above grade:



A. 12 feet
B (correct). 7 feet
C. 4 feet
D. 10 feet

Rationale: Section 802.3.3.5 requires exit terminals not less than 7 feet above finished ground where adjacent to public walkways.
Code: 802.3.3.5

40. A separate mechanical permit is required for each separate building or structure before regulated work begins, except where:

A (correct). Work falls under Section 104.2 exempt work
B. A homeowner performs the work
C. Only portable equipment is used permanently
D. The job is under $500 in value

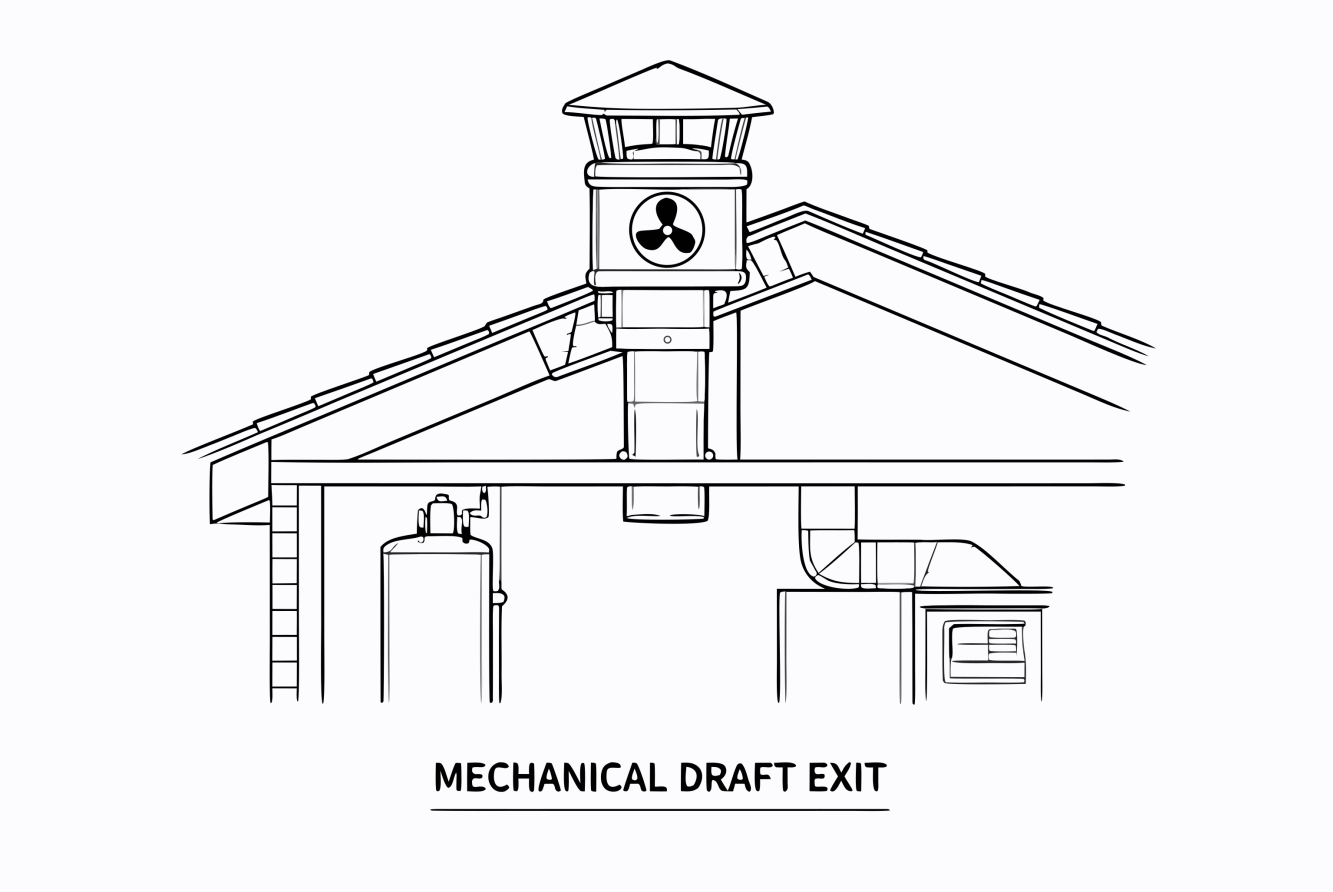
Rationale: Section 104.1 requires a separate mechanical permit for each separate building or structure unless exempt under Section 104.2.
Code: 104.1

41. Appliance vents shall not discharge through screens with mesh smaller than:

A. 1 inch mesh
B (correct). 1/4 inch mesh
C. 1/8 inch mesh
D. 1/2 inch mesh

Rationale: Section 802.1.2 prohibits discharge into spaces enclosed by screens with openings less than 1/4 inch mesh.
Code: 802.1.2

42. Mechanical draft systems shall be:



A. Shared with grease ducts

B. Installed without listing
C. Field-built only
D (correct). Listed to UL 378 and installed per instructions

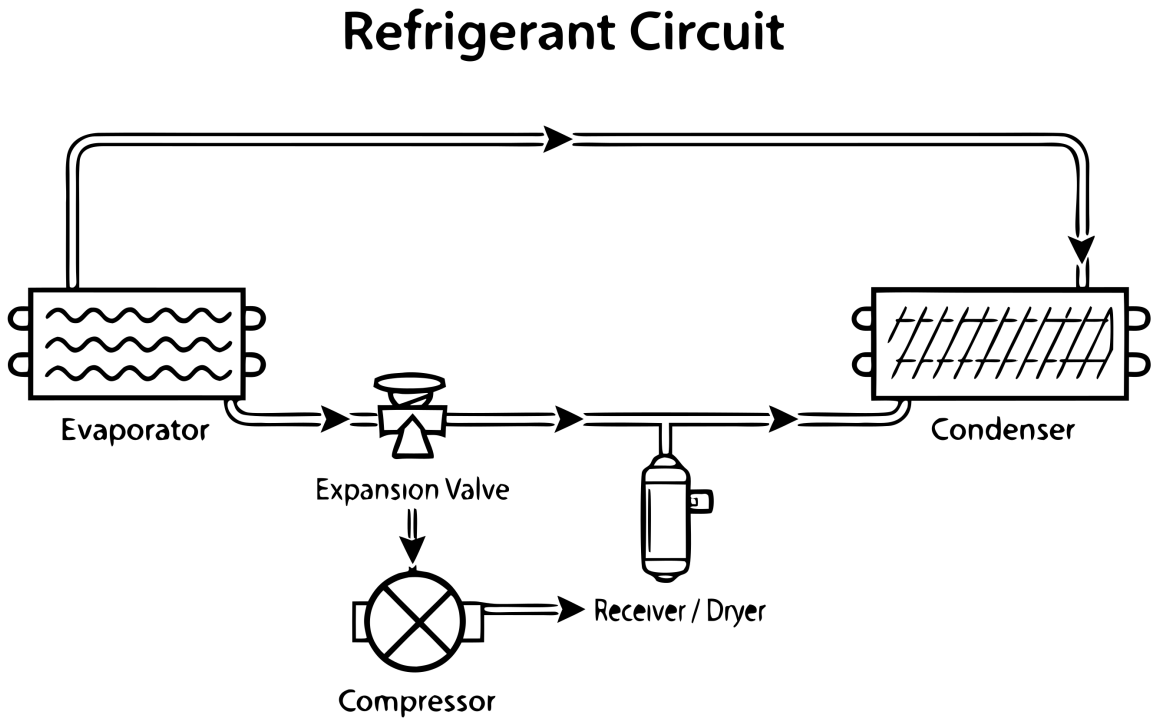
Rationale: Section 802.3.3 requires listing to UL 378 and installation per manufacturer instructions.
Code: 802.3.3

43. Gas appliance connections shall comply with:

A. Hose clamps on CSST without fittings
B. Soldered copper only
C (correct). The code and applicable connector/listing requirements
D. Compression fittings only underground

Rationale: Gas system connections shall comply with the referenced fuel gas code provisions and listing.
Code: 1312.0

44. Refrigeration systems shall comply with:



A. EPA Section 608 only
B (correct). The California Mechanical Code and referenced standards
C. ASHRAE 90.1 only
D. Manufacturer warranty terms only

Rationale: Chapter 11 (Refrigeration) systems are regulated for safety, installation, and access per CMC Chapter 11 general provisions.
Code: 1101.0

45. Domestic clothes dryers shall be exhausted to the:

A. Crawl space
B. Attic space
C. Return air plenum

D (correct). Outdoors

Rationale: CMC Chapter 5 requires dryers to exhaust to the outdoors per applicable sections (504 series).
Code: 504.0

46. Makeup air for commercial kitchen grease exhaust hoods shall be provided so that:

A. Is omitted where the kitchen is sprinklered
B. May be 100 percent transfer air from adjacent dining rooms without treatment
C (correct). Replaces exhausted air as required by the code and referenced standards
D. Is required only for Type II hoods

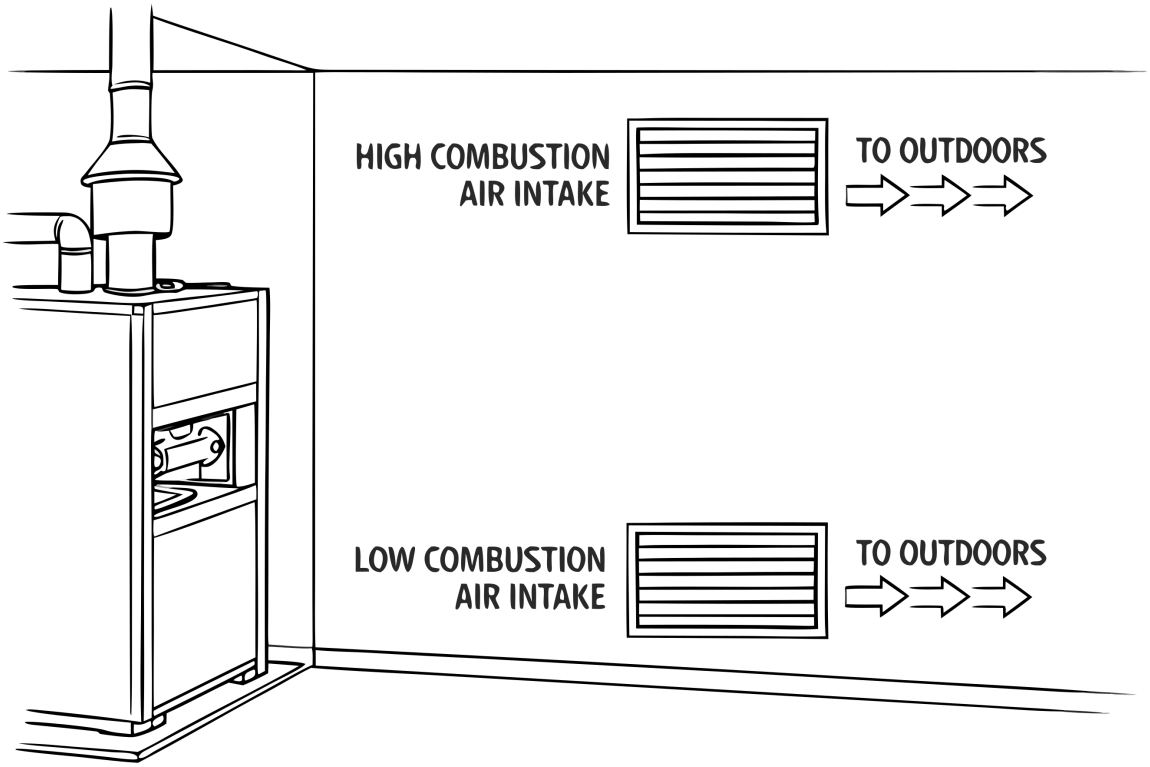
Rationale: Makeup air is required to replace exhausted air and maintain proper hood operation and building pressure per NFPA 96 and CMC Chapter 5.
Code: 509.0

47. The appliance fuel input rate shall not be:

A (correct). Changed in violation of the approved rating
B. Verified at start-up
C. Adjusted per manufacturer instructions within rating
D. Recorded on label

Rationale: Section 902.6 prohibits increasing or decreasing input in violation of the approved rating at altitude.
Code: 902.6

48. Two outdoor openings communicating through vertical ducts require each opening to have free area of:



A (correct). 1 sq in per 4000 Btu/h
B. 1 sq in per 2000 Btu/h
C. 1 sq in per 3000 Btu/h

D. 1 sq in per 1000 Btu/h

Rationale: Section 701.6.1(1) requires 1 square inch per 4000 Btu/h where directly communicating with outdoors or through vertical ducts.
Code: 701.6.1

49. Gas piping may serve both heating and cooling appliances where:

A (correct). They cannot be operated simultaneously
B. Piping is copper only
C. They operate simultaneously at full input
D. Only in dwellings

Rationale: Section 903.2.1 permits common piping where heating and cooling cannot operate simultaneously.
Code: 903.2.1

50. Evaporative cooling equipment shall be installed:

A (correct). In accordance with the code and manufacturer's instructions
B. With no outdoor air connection
C. Only on roofs
D. Without permits if under 5 tons

Rationale: General mechanical equipment chapters require installations per manufacturer's instructions and the code.
Code: 301.0