 Building Division	FURNACE (CLOSET/ALCOVE) City of Palo Alto (CPA) Building Inspection Division 285 Hamilton Ave. Inspection Request: 650 329-2496 IVR# 609	Revision Date: 03/04/11
		General Requirements/Checklist for: Residential Codes Enforced: 2010 CRC, CBC, CMC, CPC, CEC Palo Alto Municipal Code (PAMC)
The information provided in this document is general and intended as a guide only. Each project is unique and additional requirements may be enforced as deemed appropriate.		

WARNING

- Failure to complete items below, prior to inspection, may result in a re-inspection fee.

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- *Energy Star gas furnace saves as much as 20% annually on your total energy cost.

INSPECTION

- Manufacturer's installation and operating instructions: The appliance installer shall leave the manufacturer's installation and operating instructions attached to the appliance.** *CMC 304.1*
- Listed appliances:** The furnace shall be listed for use in rooms that are not large such as closets and alcoves. The installation of appliances shall conform to the conditions of the listing. Clearances of listed appliances from combustible materials shall be as per specified in the listing or on the rating plate. *CMC 904.2 (b), 304.1*
- Central- heating furnace(s) shall be listed for closet or alcove installation.** Where not listed for closet, the furnace shall be installed in a room or space having 12 times the volume of the furnace. *CMC 304.2*
- Labeling:** Furnace shall bear a permanent and legible factory-applied nameplate with the following information: *CMC 307.1*
 - The manufacturer's name. *CMC 307.1.1*
 - Fuel input rating in BTU'S. *CMC 307.1.2*
 - Model and serial number. *CMC 307.1.3*
 - Instructions for lighting, operation, and shutdown of furnace. *CMC 307.1.4*
 - The type of fuel approved for use with furnace. *CMC 307.1.5*
 - Symbol of approved agency. *CMC 307.1.6*
 - **Required clearances from combustibles.** *CMC 307.1.7*
- Installation:** Furnace shall be installed per manufacturer's instructions and installed on a floor of noncombustible construction, CPA minimum requirements for a noncombustible platform floor shall be one layer ¾" plywood and one layer of Hardy Board or Dura Rock and 26 gage galvanized sheet metal or pan under furnace. When down flow furnaces require a base plate, it shall be installed per manufacturer's instructions. *CMC 904.3*

- **Gas appliance Vents** shall be installed per Chapter 8 of the 2007 California Mechanical Code. **Vents** that pass through unconditioned areas such as attic, roofs, underfloor, and unconditioned basements shall be listed Type B or Type L double wall vents and shall have a minimum 1" inch clearance to combustibles. Single wall vents are not allowed. *CMC 802.10.2*
- **Combustion and circulating air** shall be provided in accordance with *CMC 701.0* See "Combustion air for gas appliance" guidelines for approved methods of obtaining combustion air. Direct vent appliances are exempt from the provisions of chapter 7 in the CMC and shall be installed per the appliance listing.
- **Access:** Furnace shall be accessible for inspection, service, repair, and replacement without removing permanent construction. See **[FIGURE A-2]** *CMC 305.0, 305.1*
- **Anchorage:** Furnace shall be securely fastened in place to sustain vertical and horizontal loads. *CMC 304.4*
- **Identification:** When more than one furnace is installed it shall be permanently identified as to the area or space served by the furnace. *CMC 303.5*
- **Automatic control devices:** Furnace shall be equipped with a listed device(s) that will shut off the fuel supply to the main burner(s) in the event of pilot or ignition failure. *CMC 306.0*
- **Temperature limit control device** shall be listed and cannot be set for temperatures higher than 250 f and shall be located in the bonnet or plenum, within 2' of the discharge side of the heating element or in accordance with the listing. *CMC 306.0*
- **Disconnect** shall be adjacent to and within site of furnace. *CMC 309*
- **Dedicated circuit** shall be provided for furnace *CEC 422.12*
- **Electrical outlet** for service and maintenance purposes shall be located within 25' of furnace. *CMC 309*
- **Gas shutoff valve:** *CMC 1312.4*
 - Shall be in an accessible location and within 6' from the furnace.
 - Connected to rigid piping upstream from the flexible connection in the same room as the furnace.
 - Union connection shall be provided down stream from the valve to permit removal controls.
- **Gas connector** shall be rated/sized for load/demand of the furnace; shall not pass through any walls, partitions, ceilings, floors or concealed space; connector shall not exceed 3' feet in length; and the existing old connector shall not be reused when replacing the furnace. DO NOT REMOVE SIZING LABEL FROM CONNECTOR, INSPECTOR MUST VERIFY. *CMC 1312.1 (d)*
- **Gas line air test** required when any modifications are made to gas line piping, excluding gas connector. If applicable see "**Whole House Gas Test**" for testing guidelines. *CPC 1214.5*

- **Furnace located in bedroom or bathroom closet:** *CMC 904.1 (1) and (2)*
 - Furnace shall be direct vent type.
 - Closet shall be equipped with a listed, gasketed door assembly.
 - Listed self closing device. **(hold-open feature is not allowed)**
 - The door assembly shall be installed with a threshold and bottom door seal.
 - All combustion air shall be obtained from the outdoors.
 - The closet shall be used for exclusive use of the furnace **(not for storage)**
- **Flood zone area:** Ducts shall be located above the base flood elevation. *CMC 604.6*
- **Flood zone area:** Air exhaust and intake openings shall be located at or above the base flood elevation. *CMC 308.2.2*
- **Condensate sediment trap/drip leg:** Where required by manufacturer, **(read instructions)** drip leg shall be installed in such locations so that it will be readily accessible to permit cleaning or emptying and shall not be located where the condensate is likely to freeze. The sediment trap shall be either a tee fitting with a capped nipple in the bottom outlet as illustrated below or other device recognized as an effective sediment trap. **SEE [FIGURE A-1]** *CMC 1311.6.2, 1317.7*

FIGURE A-1
Tee fitting sediment trap

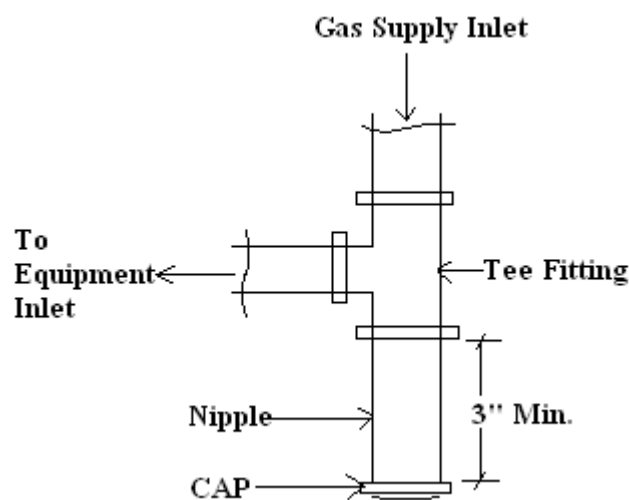


FIGURE A-2

Closet/alcove furnace showing minimum access and working clearances

