



# CITY OF MANTECA—COMMUNITY DEVELOPMENT DEPARTMENT

1001 West Center Street • Manteca, CA 95337  
Building Safety Division (209) 456-8550 • Fax (209) 923-8955  
Planning Division (209) 456-8500  
Public Works Division (209) 456-8400

**OFFICE USE ONLY**

Permit Application # **11** - \_\_\_\_\_

## HVAC Building Permit Application

**Project Address** \_\_\_\_\_, Manteca, CA

Name of Subdivision or Commercial Development (if applicable) \_\_\_\_\_

**Residential:** \_\_\_ New structure \_\_\_ Addition \_\_\_ Remodel \_\_\_ Fire Damage Repair \_\_\_ Patio Cover \_\_\_ Pool \_\_\_ Fence  
\_\_\_ Electrical \_\_\_ Mechanical/HVAC \_\_\_ Energy Documents \_\_\_ Plumbing \_\_\_ Other \_\_\_\_\_

**Commercial:** \_\_\_ New building \_\_\_ Addition/Remodel \_\_\_ Tenant Infill \_\_\_ Signage \_\_\_ Fire Alarms \_\_\_ Fire Sprinklers  
\_\_\_ Electrical \_\_\_ Mechanical/HVAC \_\_\_ Energy Documents \_\_\_ Plumbing \_\_\_ Other \_\_\_\_\_

Description of work to be done: \_\_\_\_\_

**Valuation** (cost of project): \$ \_\_\_\_\_

### CONTACT PERSON

Name \_\_\_\_\_

Mailing Address \_\_\_\_\_

City/State \_\_\_\_\_ Zip \_\_\_\_\_

Phone \_\_\_\_\_ Cell \_\_\_\_\_

Fax \_\_\_\_\_

E-mail \_\_\_\_\_

### CONTRACTOR

Contractor/Company Name \_\_\_\_\_

Mailing Address \_\_\_\_\_

City/State \_\_\_\_\_ Zip \_\_\_\_\_

Phone \_\_\_\_\_ Cell \_\_\_\_\_

Fax \_\_\_\_\_

E-mail \_\_\_\_\_

Contractor's License No. \_\_\_\_\_

Worker's Comp Carrier \_\_\_\_\_

Policy No. \_\_\_\_\_

### PROPERTY OWNER

Name \_\_\_\_\_

Mailing Address \_\_\_\_\_

City/State \_\_\_\_\_ Zip \_\_\_\_\_

Phone \_\_\_\_\_ Cell \_\_\_\_\_

Fax \_\_\_\_\_

E-mail \_\_\_\_\_

### ARCHITECT / ENGINEER

Name \_\_\_\_\_

License No. \_\_\_\_\_

Mailing Address \_\_\_\_\_

City/State \_\_\_\_\_ Zip \_\_\_\_\_

Phone \_\_\_\_\_ Cell \_\_\_\_\_

Fax \_\_\_\_\_

E-mail \_\_\_\_\_

**APPLICANT STATEMENT:** I certify that I have read this application and state that the above information is correct to the best of my knowledge. I agree to comply with all city and county ordinances and state laws relating to building construction, and hereby authorize representatives of the City to enter upon the above-mentioned property for inspection purposes. I (We) agree to save, indemnify and keep harmless the City of Manteca against liabilities, judgments, costs and expenses which may accrue against said City on consequence of the granting of this permit.

Printed Name \_\_\_\_\_  Owner  Contractor  Authorized Agent

Signature \_\_\_\_\_ Date \_\_\_\_\_

<b>Prescriptive Certificate of Compliance: Residential</b>		<b>CF-1R-ALT</b>
<i>Residential Alterations</i>		(Page 4 of 5)
Project Name:	Climate Zone #	# of Stories

<b>HVAC SYSTEMS - HEATING</b>					
Heating Equipment Type and Capacity <sup>1,2,3</sup>	Minimum Efficiency (AFUE or HSPF)	Distribution Type and Location <sup>4</sup>	Duct or Piping Insulation R-Value	Thermostat Type	Configuration (Central, Split, Space, Package or Hydronic)
<p>1. Indicate Heating Type (Central Furnace, Wall Furnace, Heat pump, Boiler, Electric Resistance, etc.)</p> <p>2. Electric resistance heating is allowed only in Component Package C, or except where electric heating is supplemental (i.e., if total capacity ≤ 2 KW or 7,000 Btu/hr electric heating is controlled by a time-limiting device not exceeding 30 minutes). See §151(b)3 exception.</p> <p>3. Refer to the HERS Verification section on Page 4 of the CF-1R-ALT Form for additional requirements and check applicable boxes.</p> <p>4. Indicate Type or Location (Ducts, Hydronic in Floor, Radiators, etc.)</p>					

<b>HVAC SYSTEMS - COOLING</b>					
Cooling Equipment Type and Capacity <sup>1,2</sup>	Minimum Efficiency (SEER/EER or COP)	Distribution Type and Location <sup>3</sup>	Duct or Piping Insulation R-Value	Thermostat Type	Configuration (Central, Split, Space, Package or Hydronic)
<p>1. Indicate Cooling Type (A/C, Heat pump, Evap. Cooling, etc.)</p> <p>2. Refer to the HERS Verification section on Page 4 of the CF-1R-ALT Form for additional requirements and check applicable boxes.</p> <p>3. Indicate Type or Location (Ducts, Hydronic in Floor, Radiators, etc.)</p>					

<b>WATER HEATING</b>					
<p>List water heaters and boilers for both domestic hot water (DHW) heaters and hydronic space heating. Individual dwelling DHW heaters must be gas or propane fired, and may not exceed 50 gallons. Hot water pipe insulation from the DHW heater to the kitchen(s) and on all underground hot water pipes is required in all component packages in all climate zones.</p>					
Water Heater Type/Fuel Type <sup>1</sup>	Distribution Type (Standard, Recirculating) <sup>2</sup>	Number In System	Tank Capacity (gal)	Energy Factor or Thermal Efficiency	External Tank Insulation R-Value <sup>3</sup>
<p>1. Indicate Type (Storage Gas, Heat Pump, Instantaneous, etc.)</p> <p>2. Recirculating systems serving multiple dwelling units shall meet the recirculation requirements of §150(n). The Prescriptive requirements do not allow the installation of a recirculating water heating system for single dwelling units.</p> <p>3. The external water heating tank and pipes shall be insulated to meet the requirements of §150(j).</p>					

<b>SPECIAL FEATURES</b>
The enforcement agency should pay special attention to the Special Features specified in this checklist below. These items may require written justification and documentation and special verification.
<b>NEW ROOF ASSEMBLY - Radiant Barrier</b> The radiant barrier requirement of §151(f)2 does not apply to roof alterations.
<b>Slab Edge (Perimeter) Insulation</b> <input type="checkbox"/> YES <input type="checkbox"/> NO YES: In Climate Zone 16 in Component Packages D, R-7 insulation is required.
<b>Heated Slab Insulation</b> <input type="checkbox"/> YES <input type="checkbox"/> NO YES: Slab edge insulation required for all heated slabs in all Climate Zones. See details in Table 118-A of the standards.
<b>Raised Slab Insulation</b> <input type="checkbox"/> YES <input type="checkbox"/> NO YES: In Climate Zones 1, 2, 11, 13, 14 & 16, R-8 insulation is required; in Climate Zones 12 & 15, R-4 is required under component Package D.
<b>Thermal Mass</b> To obtain Compliance Credit for the installation of thermal mass, use the Performance Approach.



# CITY OF MANTECA COMMUNITY DEVELOPMENT DEPARTMENT

1001 West Center Street • Manteca, CA 95337 • FAX (209) 825-2307

Building Safety Division (209) 239-8421 • Planning Division (209) 239-8427 • Public Works/Engineering (209) 239-8460

## Heating and Air Conditioning

**NOTE:** Check with your homeowners' association and architectural review committee for Conditions, Covenants & Restrictions (CC&R's). The City of Manteca has no regulatory authority to enforce or notify permit applicants of CC&R requirements, nor deny permits for non-compliance.

### WHEN IS A PERMIT REQUIRED?

Except as permitted in Section 112.2, no mechanical system regulated by the California Mechanical Code shall be **installed, altered, repaired, replaced, or remodeled** unless a separate mechanical permit for each separate building or structure has first been obtained.

Examples Include (but are not limited to):

- New HVAC installation on an existing home or business
- HVAC change-out/remodel/replacement including the air-handler, coil, FAU, or condenser.
- Relocation of an existing HVAC unit
- Removal of an HVAC unit or system
- Adding/replacing ducting to a business/residence/etc.



### WHEN IS A PERMIT NOT REQUIRED?

A building permit is not required for the following types of mechanical work (per California Mechanical Code, Section 108.4):

HVAC permits are not required for the following:

1. Portable heating appliances, portable ventilating equipment, portable cooling unit, or a portable evaporative cooler.
2. Steam, hot water, or chilled water piping within any heating or cooling equipment regulated by the Mechanical Code.
3. Replacement of any minor part of an appliance that does not alter the original approval of equipment or make such equipment unsafe.
4. A self-contained refrigeration system containing 10 (ten) pounds or less of refrigerant or actuated by motors of 1 (one) horsepower or less, i.e. window air conditioners or cord and plug connected movable air conditioner.

### HVAC INFORMATION

The California Energy Commission requires sealing of all conditioned air ducts and a refrigerant charge measurement or the installation of a thermal expansion valve (TXV). Duct leakage testing verification by a third-party HERS rater, independent from the installing company, is required for replacing HVAC equipment or certain components.

Duct Leakage testing is required when any of the following occurs:

- Complete HVAC replacement
- Heat Exchanger replacement
- Coil replacement
- Condenser Replacement
- Air Handler Replacement
- Any time more than 40 lineal feet of duct is added or replaced in an unconditioned space.

### PERMIT APPLICATION REQUIREMENTS

1. **Completed Building Permit Application**
2. **All necessary and required California Energy Commission Documents (see following pages).**
3. **Any NEW installation will require plumbing, electrical, and structural documentation at the time of submittal.**
4. **Reverse side of this document to be completed and signed.**

# Heating and Air Conditioning

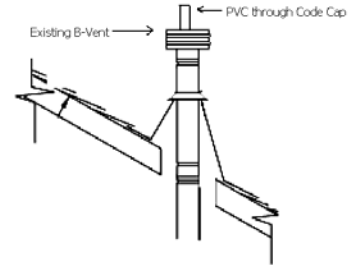
## Approved



- or similar -

- A listed and approved flashing shall be used (as seen on the left or an approved alternative) for High Efficient (PVC or ABS) vent terminations through the roof.

- An existing B-vent code cap is not listed or approved to have a PVC pipe penetrate the top (as seen on the right). The installation of this type is not allowed in the City of Manteca.



**NOT APPROVED**

## Residential:

The Following State Energy Requirements (Title 24) apply to New HVAC systems installed in existing structure's systems & change-outs:

- 1) Title 24 CF1R and MF1R (MF1R if new construction or an addition) are required at the time of submittal for new construction; Re-model/Change-outs will be required the CF1R at the time of submittal. Please fill out all portions that are applicable to project. All projects will always require both the CF-6R, and CF-4R (if duct testing is required, see item 7) at the time of inspection.
- 2) Heating equipment rating to be min. 78% efficient (Exception: Wall & floor furnaces; room heaters)
- 3) Central air conditioners & heat pumps less than 65k btu to be rated at min. 13 S.E.E.R.
- 4) Duct insulation to be min. R-6.
- 5) Set-back type thermostat required.
- 6) Sizing of equipment shall be performed using one of the following methods: ASHREA Handbook; SMACNA Installation Manual, or The Air Conditioning Contractors of America (ACCA) Manual J.
- 7) Duct testing is nearly all HVAC installations or replacements including: FAU (Furnaces), Outdoor Condensing Units (Air Conditioners), and/or ducting in accordance with the 2008 Residential Compliance Manual (page 8-30).
- 8) All unit weights shall be listed below when they are being installed on a ROOF or in an ATTIC. Units of greater weight than the unit being replaced will require structural analysis and/or engineering.

## Commercial:

The Following State Energy Requirements (Title 24) apply to new Commercial HVAC systems installed in existing buildings or change-outs of existing HVAC systems require the following documentation:

- 1) Title 24 Mech 1-C, Mech 2-C, Mech 3-C, and Mech 4-C forms are required at time of submittal. Mech 2-A through Mech 15-A forms are required at time of inspection as applicable. Please have all forms completed and that are applicable to project.
- 2) Complete mechanical drawings are required to clearly indicate mechanical unit's location and duct/register location.
- 3) If it is a new installation a complete set of electrical and plumbing drawings will be required. The electrical drawing will show all wire sizes, conduit size, conduit type, lengths, locations, etc for the new unit being installed. The plumbing drawing will show all gas pipe sizing, location, lengths, and the listed btu of the HVAC system being installed.
- 4) Also, engineering calculations for seismic forces will be required to justify support of mechanical units being placed on roofs or in attics.
- 5) Duct testing is required when: (Duct testing requires Mech 4-A form at time of inspection)
  - a) Constant Volume System used; not Variable Air Volume (VAV) **AND**
  - b) Each HVAC system serves 5,000 sq. ft. or less of floor area **AND**
  - c) More than 25% of duct surface area located in unconditioned area/space
- 6) Elevations of the existing building will be required for verification that no rooftop mounted equipment will be visible from any public right-of-way. If it is visible from the public right away then it must be effectively screened per the City of Manteca Planning Department.
- 7) All unit weights shall be listed below when they are being installed on a ROOF or in an ATTIC. Units of greater weight than the unit being replaced will require structural analysis and/or engineering.

I have read the foregoing and understand and agree to what has been stipulated above. I also acknowledge that the information above represents only the general requirements of the 2008 California Energy Code.

<b>Signature Block</b>
Owner/Agent Signature:
Printed Name:
Company/Firm:
Date:

<b>For units to be located at ROOF or ATTIC</b>
Weight of each Unit:
Size of rafter/joist:
Spacing of rafter/joist:
Span of rafter/joist:
Slope of rafter/joist:

**Note:**  
This form is to be attached to inspection record card for review by inspector.