



# Building and Safety Division - Public Information

County of Ventura • Resource Management Agency • [http://www.ventura.org/build\\_safe](http://www.ventura.org/build_safe)  
Main Office • 800 S. Victoria Ave, Ventura, CA. 93009 • 805-654-2771  
East County Office • 3855-F Alamo St., 2nd Fl. # 2019A, Simi Valley, CA 93065 • 805-582-8064

## Residential Building Energy Conservation for New Buildings (Effective October 1, 2005)

Energy Efficiency standards for new Residential Buildings less than four habitable stories, for which a permit application is accepted on or after October 1, 2005, shall comply with the requirements of Title 24 Building Energy Efficiency Standards (California Code of Regulations, Title 24, Part 6, and the Administrative Regulations Title 24, Part 1, Article 1 Energy Building Regulations. It is strongly recommended a consultant, specializing in energy design, be engaged to prepare the energy analysis necessary for showing compliance with the State's requirements.

**Compliance Methods:** There are two acceptable compliance methods:

- a. Performance method: Using California Energy Commission-approved computer programs.
- b. Prescriptive method: Using State-approved alternate component packages indicated below.

**Title 24, Part 6, Code Sections References:**

- General provisions: ..... Section 100
- Mandatory requirements: ..... Sections III through 119(d) and 150
- Performance methods: ..... Section 151(a) through (e)
- Prescriptive methods: ..... Section 151(a)(f)
- Energy Efficiency Standards for Additions and Alteration: ..... Section 152

**Required Documentation:**

Mandatory Measures: Add mandatory notes per Title 24, Sections 110-119 and 150 or completed (MF-1R) to the plans.

**Performance Method:**

- a. Submit State-approved computer analysis.
- b. Certificate of Compliance per Title 24, Part 1, Article 1, Sections 10-103(a) 2A to the plans (CF-1R).
- c. Add mandatory energy conservation features with applicable boxes check-marked to the plans (MR-1R).
- d. Show insulation envelope with R-value called out on the cross-section; show glazing U-value on the door/window schedules, identify thermal mass on the plans corresponding to CF-1R.

**Prescriptive Method:**

- a. Show compliance with the prescriptive package on the plans.
- b. Certificate of Compliance per Title 24, Part 1, Article 1, Sections 10-103(a) 2A to the plans (CF-1R).
- c. Add mandatory energy conservation features with applicable boxes check marked to the plans (MR-1R).
- d. Show insulation envelope with R-value called out on the cross-section; show glazing U-value on the door/window schedules, identify thermal mass on the plans corresponding to CF-1R.

**Helpful State Publications:**

P400-03-001F – 2005 Building Energy Efficiency Standards for Residential and Nonresidential Building\* - CEC-400-2005-005-CMF.  
\*Available on-line from: California Energy Commissions, Media and Public Communication Office, 1516 9<sup>th</sup> Street, MS #29, Sacramento, CA 95814-5512; [www.energy.ca.gov/title24/2005](http://www.energy.ca.gov/title24/2005). Phone: 916/654-5200.

**ASHRAE Handbook – 2001 Fundamentals\*\***

\*\*Available from technical bookstores or order from: ASHRAE, 1791 Tullie Circle N.E., Atlanta, GA 30329, Phone: 404/636-8400.

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Basic and Alternative Component Compliance Packages for New Residential Buildings	Basic Package C			Basic Package D			Alternate Basic Package D		
	Climate Zone			Climate Zone			Climate Zone		
	6	9	16	6	9	16	6	9	16
<b>Building Envelope</b> Insulation Minimums <sup>i</sup>									
Ceiling	R-38	R-38	R-49	R-30	R-30	R-38	R-30	R-30	R-38
Wood-frame walls	R-21	R-21	R-29	R-13	R-13	R-21	R-13	R-13	R-21
“Heavy” mass walls	NA	NA	NA	(R-2.44)	(R-2.44)	(R-4.76)	(R-2.44)	(R-2.44)	(R-4.76)
“Light mass” walls	NA	NA	NA	NA	NA	NA	NA	NA	NA
Below-grade walls	NR	NR	RO	RO	RO	R-13	RO	RO	R-13
Slab Floor, Perimeter	R-7	R-7	R-7	NR	NR	R-7	NR	NR	R-7
Raised floors	R-21	R-21	R-30	R-19	R-19	R-19	R-19	R-19	R-19
Concrete raised floors	NA	NA	NA	RO	REQ	R-8	RO	RO	R-8
Radiant Barrier	NR	REQ	NR	NR		NR	NR	REQ	NR
<b>Fenestration</b>									
Maximum U-Factor <sup>ii</sup>	0.42	0.38	0.42	0.67	0.67	0.55	0.42	0.38	0.42
Maximum Solar Heat Gain Coefficient (SHGC) <sup>iii</sup>	NR	0.40	NR	NR	.40	NR	NR	.31	NR
Maximum Total Area	14%	14%	14%	20%	20%	20%	20%	20%	20%
Maximum West Facing Area	NR	5%	NR	NR	5%	NR	NR	NR	NR
<b>Thermal Mass<sup>iv</sup></b>	REQ	REQ	REQ	NR	NR	NR	NR	NR	NR
<b>Space Heating System<sup>v</sup></b>									
Electric Resistance Allowed	YES <sup>vii</sup>	YES <sup>7</sup>	YES <sup>7</sup>	NO	NO	NO	NO	NO	NO
If Gas, AFUE =	MIN	MIN	MIN	MIN	MIN	MIN	MIN	MIN	90%
If Heat Pump: HSPF <sup>vi</sup> =	MIN	MIN	MIN	MIN	MIN	MIN	MIN	MIN	7.6
<b>Space Cooling System</b>									
SEER =	MIN	MIN	MIN	MIN	MIN	MIN	MIN	MIN	MIN
If split system, refrigerant change measurement or thermostatic expansion valve*	NR	REQ*	NR	NR	REQ*	NR	NR	NR	NR
<b>Ducts*</b>									
Duct Sealing	REQ	REQ	REQ	REQ <sup>10</sup>	REQ <sup>9</sup>	REQ <sup>8</sup>	NR <sup>10</sup>	NR <sup>9</sup>	NR <sup>8</sup>
Duct Installation	R-8	R-8	R-8	R-4.2	R-6	R-8	R-4.2	R-6	R-8
<b>Domestic Water Heating Type</b>	50	50	50	50	50	50	50	50	50
System must meet budget, see sections 151(b) or 151(f)8	Gallons or Meet Budget	Gallons or Meet Budget	Gallons or Meet Budget	Gallons or Meet Budget	Gallons or Meet Budget	Gallons or Meet Budget	Gallons or Meet Budget	Gallons or Meet Budget	Gallons or Meet Budget

Legend: NR = Not Required; NA = Not Applicable; MIN = Minimum Rated Capacity

\* Duct Sealing and thermostatic expansion value shall be field verified by HERS (Home Energy Rating System) rater.

(See Footnotes on the following page.)

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### Footnotes to Prescriptive Packages (for Code Reference, see Publication P400-01-001)

- <sup>1</sup> The heavy mass wall R-value in parentheses is the minimum R-value for the entire wall assembly if the wall weight exceeds 40 pounds per square foot. The light mass wall R-value in brackets is the minimum R-Value for the entire assembly if the heat capacity of the wall meets or exceeds the result of multiplying the bracketed minimum R-value by 0.65. Any insulation installed on heavy or light mass walls must be integral with, or installed on the outside of, the exterior mass. The inside surface of the thermal mass, including plaster or gypsum board in direct contact with the masonry wall, shall be exposed to the room air. The exterior wall used to meet the R-value in parentheses cannot also be used to meet the thermal mass requirement.
- <sup>2</sup> The installed fenestration products shall meet the requirements of Section 151 (f) 3.
- <sup>3</sup> The installed fenestration products shall meet the requirements of Section 151 (f) 4.
- <sup>4</sup> If the package requires thermal mass, the thermal mass shall meet the requirements of Section 151 (f) 5.
- <sup>5</sup> Automatic setback thermostats shall be installed in conjunction with all space-heating systems in accordance with Section 151 (f) 9.
- <sup>6</sup> HSPF means "Heating Seasonal Performance Factor."
- <sup>7</sup> Electric-resistance water heating may be installed as the main water heating source in Package C only if the water heater is located within the building envelope and a minimum of 25 percent of the energy for water heating is provided by a passive or active solar system or a wood stove boiler. A wood stove boiler credit shall not be used in Climate Zones 8, 10.
- <sup>8</sup> As an alternative under Package D in climate zone 16, glazing with a maximum 0.42 U-factor and a 90% AFUE furnace or a 7.6 HSPF heat pump may be substituted for duct sealing. All other requirements of Package D must be met.
- <sup>9</sup> As an alternate under Package D in climate zone 9, glazing with a maximum 0.38 U-factor and maximum 0.31 SHGC may be substituted for duct sealing and either refrigerant charge measurement or a thermostatic expansion valve. All other requirements of Package D must be met.
- <sup>10</sup> As an alternate under Package D in climate zones 6 and 7, glazing with a maximum 0.42 U-factor may be substituted for duct sealing. All other requirements of Package D must be met.

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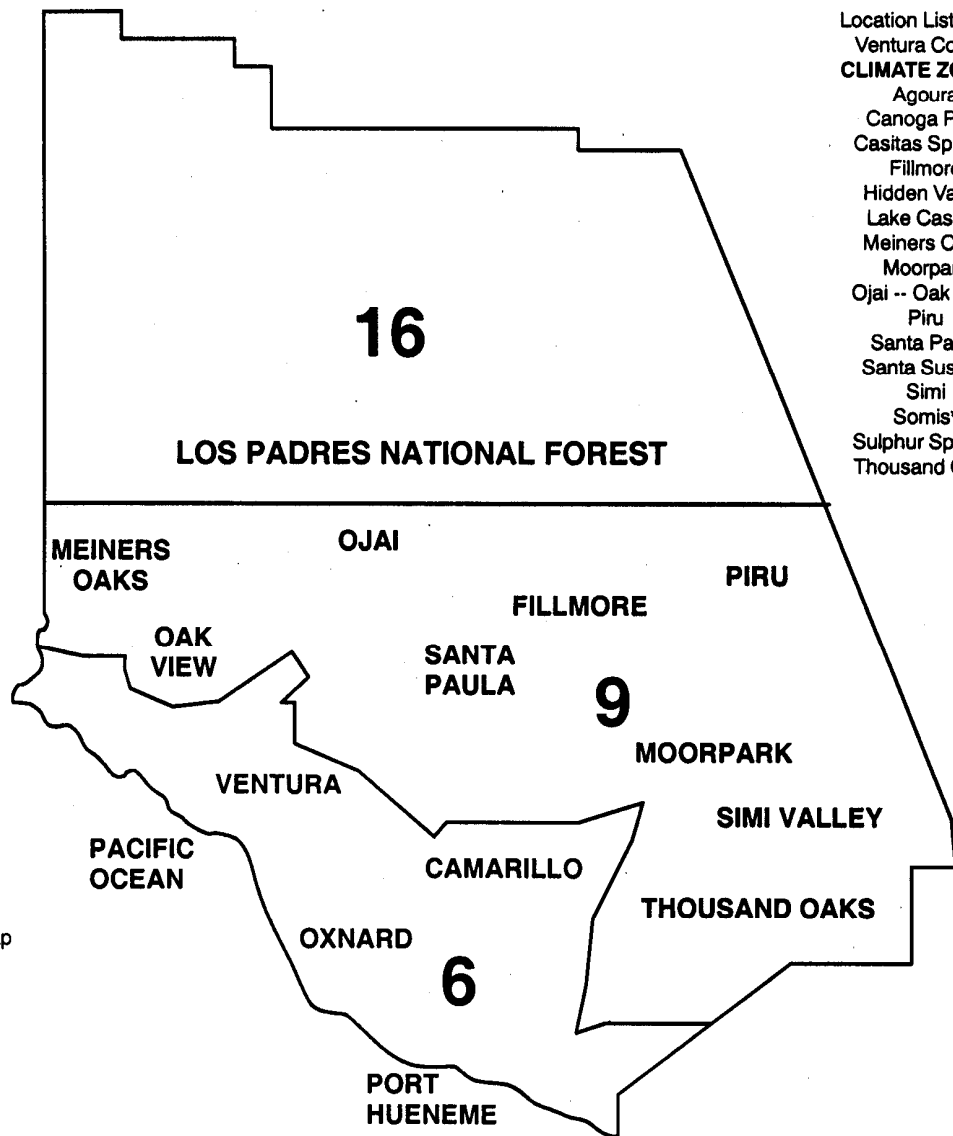
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## VENTURA COUNTY CLIMATE ZONES

Location Listing for  
Ventura County  
**CLIMATE ZONE 16**  
Frazier Mountain  
Lockwood Valley  
Mount Piños  
Pine Mountain  
Wheeler Springs

Location Listing for  
Ventura County  
**CLIMATE ZONE 6**  
Anacapa Island  
Camarillo  
El Rio  
Montalvo  
Oxnard  
Oxnard Beach  
Point Mugu  
Port Hueneeme  
Saticoy  
Solimar  
Somis\*  
Ventura

Location Listing for  
Ventura County  
**CLIMATE ZONE 9**  
Agoura  
Canoga Park  
Casitas Springs  
Fillmore  
Hidden Valley  
Lake Casitas  
Meiners Oaks  
Moorpark  
Ojai -- Oak View  
Piru  
Santa Paula  
Santa Susana  
Simi  
Somis\*  
Sulphur Springs  
Thousand Oaks



\*Verify climate zone on large scale map

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