

# 100.0 100.2 Scope Definitions TDV

## SUBCHAPTER 1

### ALL OCCUPANCIES—GENERAL PROVISIONS

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#### SECTION ~~100~~100.0 – SCOPE

(a) **Buildings Covered.** The provisions of Title 24, Part 6, apply to all buildings:

1. That are of Occupancy Group A, B, E, F, H, M, R, S, or U; and
2. For which an application for a building permit or renewal of an existing permit is filed (or is required by law to be filed) on or after the effective date of the provisions, or which are constructed by a governmental agency; and
3. That are:
  - A. Unconditioned, indirectly or directly conditioned by mechanical heating or mechanical cooling ~~or process spaces~~; or
  - B. Low-rise residential buildings that are heated with a wood heater or another non-mechanical heating system.

**EXCEPTION 1 to Section ~~100~~100.0(a):** Qualified historic buildings, as regulated by the California Historic Building Code (Title 24, Part 8).

**EXCEPTION 2 to Section ~~100~~100.0(a):** Building departments, at their discretion, may exempt temporary buildings, temporary outdoor lighting or temporary lighting in an unconditioned building, or structures erected in response to a natural disaster. Temporary buildings or structures shall be completely removed upon the expiration of the time limit stated in the permit.

(b) **Parts of Buildings Regulated.** The provisions of Title 24, Part 6, apply to the building envelope, space-conditioning systems, water-heating systems, and indoor lighting systems of buildings, and outdoor lighting systems and signs located either indoors or outdoors that are covered by Section ~~100~~100.0(a) as set forth in ~~TABLE 100.0-A~~ ~~TABLE 100.0-A~~.

(c) **Floors and Habitable Stories.**

1. Only habitable floors that have at least 50 percent of their volume above grade as defined in the CBC shall be counted in determining how many habitable stories a building has.
2. All conditioned space in a floor shall comply with Title 24, Part 6, whether or not the floor is above grade and whether or not it is habitable. All unconditioned space in a floor shall comply with the lighting requirements of Title 24, Part 6, whether or not the floor is above grade and whether or not it is habitable.

(d) **Outdoor Lighting and Indoor and Outdoor Signs.** The provisions of Title 24, Part 6, apply to outdoor lighting systems and to signs located either indoors or outdoors as set forth in ~~TABLE 100.0-A~~ ~~TABLE 100.0-A~~.

(e) **Sections Applicable to Particular Buildings.** ~~TABLE 100.0-A~~ ~~TABLE 100.0-A~~ and this subsection list the provisions of Title 24, Part 6, that are applicable to different types of buildings covered by Section ~~100~~100.0(a).

1. **All buildings.** Sections ~~100~~100.0 through 110.9 apply to all buildings.

**EXCEPTION to Section ~~100~~100.0(e)1:** Spaces or requirements not listed in ~~TABLE 100.0-A~~ ~~TABLE 100.0-A~~.

2. **Newly constructed buildings.**

- A. **All newly constructed buildings.** Sections 110.0 through 110.9 apply to all newly constructed buildings within the scope of Section ~~100~~100.0(a). In addition, newly constructed buildings shall meet the requirements of B, C or D, as applicable.

**B. Nonresidential, high-rise residential, and hotel/motel buildings that are mechanically heated or mechanically cooled.**

- i. Sections applicable. Sections 120.0 through 140.8 apply to newly constructed nonresidential buildings, high-rise residential buildings, and hotels/motels that are mechanically heated or mechanically cooled.
- ii. Compliance approaches. In order to comply with Title 24, Part 6, newly constructed nonresidential buildings, high-rise residential buildings, and hotels/motels that are mechanically heated or mechanically cooled must meet the requirements of:
  - a. Mandatory measures: The applicable provisions of Sections 120.0 through 130.9; and
  - b. Either:  
Performance approach: Section 140.1; or  
Prescriptive approach: Sections 140.2 through 140.8.

**C. Unconditioned nonresidential buildings and process spaces.** Sections 110.9, 120.6, 130.0 through 130.4, 140.3(c), 140.6, 140.7, and 140.8 apply to all newly constructed unconditioned buildings and process spaces within the scope of Section 100100.0(a).

**D. Low-rise residential buildings.**

- i. Sections applicable. Sections 150.0 through 150.1 apply to newly constructed low-rise residential buildings.
- ii. Compliance approaches. To comply with Title 24, Part 6, newly constructed low-rise residential buildings must meet the requirements of:
  - a. Mandatory measures: The applicable provisions of Sections 110.0 through 110.9, 120.7, and 150.0; and
  - b. Either:  
Performance approach: Section 150.1(a) through (e); or  
Prescriptive approach: Section 150.1(a) and (f).

**EXCEPTION 1 to Section 100100.0(e)2Diib:** Seasonally occupied agricultural housing limited by state or federal agency contract to occupancy not more than 180 days in any calendar year.

**EXCEPTION 2 to Section 100100.0(e)2Diib:** Low-rise residential buildings that are heated with a wood heater or another non-mechanical heating system and that use no energy obtained from depletable sources for lighting or water heating.

**E. Covered Processes.**

- i. Sections applicable. Sections 120.6 and 140.9 apply to covered processes.
- ii. Compliance approaches. In order to comply with Title 24, Part 6, covered processes must meet the requirements of:
  - a. Mandatory measures: The applicable provisions of Sections 120.6
  - b. Either:  
Performance approach: Section 140.1; or  
Prescriptive approach: Sections 140.9.

Note: If covered processes do not have prescriptive requirements, than only the mandatory measures must be met.

**3. New construction in existing buildings.**

- A. **Nonresidential, high-rise residential, and hotel/motel buildings.** Section 1491.0 applies to new construction in existing buildings that will be nonresidential, high-rise residential, and hotel/motel occupancies.
  - B. **Low-rise residential buildings.** Section 150.2 applies to new construction in existing buildings that will be low-rise residential occupancies.
  - 4. **Installation of insulation in existing buildings.** Section 110.8(d) applies to buildings in which insulation is being installed in existing attics, or on existing water heaters, or existing space conditioning ducts.
  - 5. **Outdoor Lighting.** Sections 110.9, 130.0, 130.2, 130.4, 140.7, and 150.0 apply to newly constructed outdoor lighting systems, and Section 1491.0 applies to outdoor lighting additions and alterations.
  - 6. **Signs.** Sections 130.0, 130.3 and 140.8 apply to newly constructed signs located either indoors or outdoors and Section 1491.0 applies to sign alterations located either indoors or outdoors.
- (f) **Mixed Occupancy.** When a building is designed and constructed for more than one type of occupancy (residential and nonresidential), the space for each occupancy shall meet the provisions of Title 24, Part 6, applicable to that occupancy.

**EXCEPTION 1 to Section 100.0(f):** If one occupancy constitutes at least 80 percent of the conditioned floor area of the building, the entire building envelope, HVAC, and water heating may comply with the provisions of Title 24, Part 6 applicable to that occupancy, provided that the applicable lighting requirements in Sections 140.6 through 140.8 or 150.0(k) are met for each occupancy and space and mandatory measures in Sections 110.0 through 1390.5, and 150.0 are met for each occupancy and space.

**EXCEPTION 2 to Section 100.0(f):** If one occupancy constitutes at least 90 percent of the combined conditioned plus unconditioned floor area of the building, the entire building lighting may comply with the provisions of Title 24, Part 6 applicable to that occupancy.

- (g) **Administrative Requirements.** Administrative requirements relating to permit requirements, enforcement by the Commission, locally adopted energy standards, interpretations, claims of exemption, approved calculation methods, rights of appeal, and certification and labeling requirements of fenestration products and roofing products are specified in California Code of Regulations, Title 24, Part 1, Sections 10-101 to 10-114.
- (h) **Certification Requirements for Manufactured Devices.** Title 24, Part 6, limits the installation of the following manufactured devices to those that have been certified to the Energy Commission by their manufacturer to meet or exceed minimum specifications or efficiencies adopted by the Commission. Certified to the Energy Commission means certified to the California Energy Commission pursuant to the provisions of Section 1606 of Title 20 of the California Code of Regulations.
- 1. Central air-conditioning heat pumps and other central air conditioners (Sections 110.1 and 110.2).
  - 2. Combination equipment: space heating and cooling, or space heating and water heating (Section 110.2(a)3).
  - 3. Fenestration products (Section 110.6).
  - 4. Fluorescent lamp ballasts (Section 110.1).
  - 5. Gas space heaters (Sections 110.1 and 110.2).
  - 6. Insulating materials and roofing products (Section 110.8).
  - 7. Lighting control devices and lighting control systems (Section 110.9).
  - 8. Oil-fired storage water heaters (Section 110.3).
  - 9. Other heating and cooling equipment (Sections 110.1 and 110.2).
  - 10. Plumbing fittings (Section 110.1).
  - 11. Pool heaters (Section 110.4).
  - 12. Refrigerators, refrigerator-freezers, and freezers (Section 110.1).
  - 13. Room air conditioners (Section 110.1).

14. Slab floor perimeter insulation (Section 150.0 (l)).
15. Water heaters (Section 110.3).
16. Track lighting integral current limiter (Section 110.9(~~h~~)).
17. High efficacy LED light sources (Section 110.9(~~m~~)).
18. Ballasts for residential recessed luminaires (Section 110.9(~~m~~)).

~~19. Dimmable fluorescent ballasts for power adjustment factors (Section 119(e)).~~

The certification status of any such manufactured device may be confirmed only by reference to:

1. A directory published or approved by the Commission; or
2. A copy of the application for certification from the manufacturer and the letter of acceptance from the Commission staff; or
3. Written confirmation from the publisher of a Commission-approved directory that a device has been certified; or
4. A Commission-approved label on the device.

**NOTE:** Title 24, Part 6, does not require a builder, designer, owner, operator, or enforcing agency to test any certified device to determine its compliance with minimum specifications or efficiencies adopted by the Commission.

**TABLE 100.0-A APPLICATION OF STANDARDS**

Occupancies	Application	Mandatory	Prescriptive	Performance	Additions/Alterations
General Provisions		100.0, 100.1, 100.2, 110.0, 110.1			
Nonresidential, High-Rise Residential, And Hotels/Motels	General	140.0	140.2	140.1	449141.0
	Envelope (conditioned)	110.6, 110.7, 110.8	140.3		
	Envelope (unconditioned, process spaces)	—	140.3(c)		
	HVAC (conditioned)	110.2, 110.5, 120.0-10.25	140.4		
	Water Heating (conditioned)	110.3, 120.3	140.5		
	Indoor Lighting (conditioned, process spaces)	110.9, 130.0, 130.1, 130.4	140.3(c), 140.6		
	Indoor Lighting (unconditioned)	110.9, 130.0, 130.1, 130.4	140.3(c), 140.6	N.A.	
	Outdoor Lighting	110.9, 130.0, 130.2, 130.4	140.7		
	Building Electrical Power	130.5	N.A.		
	<u>Solar Ready</u>	<u>110.10</u>	<u>N.A.</u>		<u>N.A.</u>
<u>Refrigerated Warehouse Covered Processes</u>	<u>Envelope, Ventilation, Process Loads and HVAC</u>	120.6	<u>N.A., 140.9</u>	140.1	<u>120.6, 140.9, 449141.0</u>
Signs	Indoor and Outdoor	130.0, 130.3	140.8	<u>N.A.</u>	<u>141.0</u>
Low-Rise Residential	General	150.0	150.1(a, f)	150.1(a-e)	150.2
	Envelope (conditioned)	110.6, 110.7, 110.8, 150.0(a-g, l)			
	HVAC (conditioned)	110.2, 110.5, 150.0(h, i, m, o)			
	Water Heating (conditioned)	110.3, 150.0(j, n)			
	Indoor Lighting (conditioned, unconditioned and parking garages)	110.9, 130.0, 150.0(k)			
	Outdoor Lighting	110.9, 130.0, 150.0(k)			
	Pool and Spa Systems	110.4, 150.0(p)	N.A.	N.A.	N.A.
	<u>Solar Ready</u>	<u>110.10</u>	<u>N.A.</u>	<u>N.A.</u>	<u>N.A.</u>

**SECTION 100.1 – DEFINITIONS AND RULES OF CONSTRUCTION**

(a) **Rules of Construction.**

1. Where the context requires, the singular includes the plural and the plural includes the singular.
2. The use of "and" in a conjunctive provision means that all elements in the provision must be complied with, or must exist to make the provision applicable. Where compliance with one or more elements suffices, or where existence of one or more elements makes the provision applicable, "or" (rather than "and/or") is used.

3. "Shall" is mandatory and "may" is permissive.

- (b) **Definitions.** Terms, phrases, words and their derivatives in Title 24, Part 6, shall be defined as specified in Section ~~104~~100.1. Terms, phrases, words and their derivatives not found in Section ~~104~~100.1 shall be defined as specified in Title 24, Part 2, Chapter 2 of the California Code of Regulations. Terms, phrases, words and their derivatives not found in either Title 24, Part 6, or Chapter 2 shall be defined as specified in Title 24, Part 2, Chapter 2 of the *California Building Code*. Where terms, phrases, words and their derivatives are not defined in any of the references above, they shall be defined as specified in *Webster's Third New International Dictionary of the English Language, Unabridged* (1987 edition), unless the context requires otherwise.

**ACCA** is the Air Conditioning Contractors of America.

**ACCA MANUAL D** is the Air Conditioning Contractors of America document entitled "Manual D - Residential Duct Systems" (ANSI/ACCA 1 Manual D – 2009)

**ACCA MANUAL J** is the Air Conditioning Contractors of America document entitled "Manual J - Residential Load Calculation, ~~Eighth Edition~~" (ANSI/ACCA 2 Manual J – 2006~~2003~~).

**ACCA MANUAL S** is the Air Conditioning Contractors of America document entitled "Manual S - Residential Equipment Selection" (ANSI/ACCA 3 Manual S – 2004)

**ACCEPTANCE REQUIREMENTS FOR CODE COMPLIANCE** is a description of test procedures in the Reference Nonresidential Appendices that includes equipment and systems to be tested, functions to be tested, conditions under which the test shall be performed, the scope of the tests, results to be obtained, and measurable criteria for acceptable performance.

~~**ACCENT (LIGHT)** is a directional luminaire designed to highlight or spotlight objects. It can be recessed, surface mounted, or mounted to a pendant, stem, or track.~~

**ACCESSIBLE** is having access thereto, but which first may require removal or opening of access panels, doors, or similar obstructions.

**ADDITION** is any change to a building that increases conditioned floor area and conditioned volume. See also "newly conditioned space." Addition is also any change that increases the floor area ~~or~~and volume of an unconditioned building of an occupancy group or type regulated by Part 6. Addition is also any change that increases the illuminated area of an outdoor lighting application regulated by Part 6.

**AGRICULTURAL BUILDING** is a structure designed and constructed to house farm implements, hay, grain, poultry, livestock or other horticultural products. It is not a structure that is a place of human habitation, a place of employment where agricultural products are processed, treated or packaged, or a place used by the public.

**AIR BARRIER** is combination of interconnected materials and assemblies joined and sealed together to provide a continuous air-tight boundary of the building envelope separating conditioned from unconditioned space, or adjoining conditioned spaces of different occupancies or uses. Insulation must be in substantial contact with the assembly air barrier on one side for it to perform at its rated R-value.

**AIR LEAKAGE** measures how much outside air comes into a home or building through a manufactured fenestration or exterior door products. The lower the Air Leakage, the better the fenestration or exterior product is at keeping air out. Air leakage rates typically fall in a range between 0.1 and 0.3 cfm/ft<sup>2</sup>.

~~**AIR RETARDER** is a material or structural element that inhibits air flow into and out of a building's envelope or shell.~~

**AIR-TO-AIR HEAT EXCHANGER** is a device which will reduce the heat losses or gains that occur when a building is mechanically ventilated, by transferring heat between the conditioned air being exhausted and outside air being supplied.

**ALTERATION** is any change to a building's water-heating system, space-conditioning system, lighting system, or envelope that is not an addition. Alteration is also any change that is regulated by Part 6 to an outdoor lighting system that is not an addition. Alteration is also any change that is regulated by Part 6 to signs located either indoors or outdoors.

**ALTERED COMPONENT** is a component that has undergone an alteration and is subject to all applicable Standards requirements.

**ALTERNATIVE CALCULATION METHODS (ACMS)** are the Commission's Public Domain Computer Programs, one of the Commission's Simplified Calculation Methods, or any other calculation method approved by the Commission. ACMs are also referred to as compliance software.

**ALTERNATIVE CALCULATION METHODS APPROVAL MANUAL** is the document that specifies the procedures and tests required for approval of Alternative Calculation Methods.

**ANNUAL FUEL UTILIZATION EFFICIENCY (AFUE)** is a measure of the percentage of heat from the combustion of gas or oil which is transferred to the space being heated during a year, as determined using the applicable test method in the Appliance Efficiency Regulations or Section 110.2.

**ANNUNCIATED** is a type of visual signaling device that indicates the on, off, or other status of a load.

**ANSI** is the American National Standards Institute.

**ANSI C82.6-2005** is the American National Standards Institute document entitled "Ballasts for High-Intensity Discharge Lamps – Methods of Measurement" (ANSI C82.6-2005)

[ANSI/IES RP-16-10 is the document co-authored by the American National Standards Institute and the Illuminating Engineering Society of North America, Recommended Practice entitled "Nomenclature and Definitions for Illuminating Engineering" \(Supersedes ANSI/IES PR-16-05\) Includes ANSI/IES Addenda listed in Annex B, 2010 \(ANSI/IES RP-16-10\)](#)

**ANSI Z21.10.3** is the American National Standards Institute document entitled "Gas Water Heaters, Volume I, Storage Water Heaters with input ratings above 75,000 Btu per hour," 2001 (ANSI Z21.10.3-2001).

**ANSI Z21.13** is the American National Standards Institute document entitled "Gas-Fired Low Pressure Steam and Hot Water Boilers," 2000 (ANSI Z21.13-2000).

**ANSI Z21.40.4** is the American National Standards Institute document entitled "Performance Testing and Rating of Gas-Fired, Air Conditioning and Heat Pump Appliances," 1996 (ANSI Z21.40.4-1996).

**ANSI Z21.47** is the American National Standards Institute document entitled "Gas-Fired Central Furnaces," 2001 (ANSI Z21.47-2001).

**ANSI Z83.8** is the American National Standards Institute document entitled "Gas Unit Heaters and Gas-Fired Duct Furnaces," 2002 (ANSI Z83.8 -2002).

**APPLIANCE EFFICIENCY REGULATIONS** are the regulations in Title 20, Section 1601 et seq. of the California Code of Regulations.

**APPROVED BY THE COMMISSION** means approval under Section 25402.1 of the Public Resources Code.

**APPROVED CALCULATION METHOD** (See "alternative calculation methods")

**AHRI ARI** is the Air-eConditioning, Heating, and Refrigeration Institute.

**AHRI ARI-210/240** is the Air-conditioning, Heating, and Refrigeration Institute document entitled "Unitary Air-Conditioning and Air-Source Heat Pump Equipment," 2003 (ARI 210/240-2003).

**AHRI ARI-310/380** is the Air-eConditioning, Heating, and Refrigeration Institute document entitled "Packaged Terminal Air-Conditioners and Heat Pumps," 1993 (ARI 310/380-93).

**AHRI ARI-320** is the Air-eConditioning, Heating, and Refrigeration Institute document entitled "Water-Source Heat Pumps," 1998 (ARI 320-98).

**AHRI ARI-325** is the Air-eConditioning, Heating, and Refrigeration Institute document entitled "Ground Water-Source Heat Pumps," 1998 (ARI 325-98).

**AHRI ARI-340/360** is the Air-eConditioning and Refrigeration Institute document entitled "Commercial and Industrial Unitary Air-Conditioning and Heat Pump Equipment," 2000 (ARI 340/360-2000).

**AHRI ARI-365** is the Air-Ceonditioning, Heating, and Refrigeration Institute document entitled, "Commercial and Industrial Unitary Air-Conditioning Condensing Units," 2002 (ARI 365-2002).

**AHRI ARI 460** is the Air-eConditioning, Heating, and Refrigeration Institute document entitled "Remote Mechanical-Draft Air-Cooled Refrigerant Condensers," 2000 (ARI 460-2000).

**AHRI ARI 550/590** is the Air-eConditioning, Heating, and Refrigeration Institute document entitled "Standard for Water Chilling Packages Using the Vapor Compression Cycle," 1998 (ARI 550/590-98).

**AHRI ARI 560** is the Air-eConditioning, Heating, and Refrigeration Institute document entitled "Absorption Water Chilling and Water Heating Packages," 2000 (ARI 560-2000).

**AHRI 680** is the Air-Conditioning, Heating, and Refrigeration Institute document entitled "Performance Rating of Residential Air Filter Equipment," 2009 (ANSI/AHRI Standard 680).

**ASHRAE** is the American Society of Heating, Refrigerating, and Air-conditioning Engineers.

**ASHRAE CLIMATIC DATA FOR REGION X** is the American Society of Heating, Refrigerating and Air-Conditioning Engineers document entitled "ASHRAE Climatic Data for Region X, Arizona, California, Hawaii and Nevada," Publication SPCDX, 1982 and "Supplement," 1994.

**ASHRAE HANDBOOK, APPLICATIONS VOLUME** is the American Society of Heating, Refrigerating and Air-Conditioning Engineers document entitled "ASHRAE Handbook: Heating, Ventilating, and Air-Conditioning Applications" (2003).

**ASHRAE HANDBOOK, EQUIPMENT VOLUME** is the American Society of Heating, Refrigerating and Air-Conditioning Engineers document entitled "ASHRAE Handbook: Heating, Ventilating, and Air-Conditioning Systems and Equipment" (2000).

**ASHRAE HANDBOOK, FUNDAMENTALS VOLUME** is the American Society of Heating, Refrigerating and Air-Conditioning Engineers document entitled "ASHRAE Handbook: Fundamentals" (~~2005~~2009).

**ASHRAE STANDARD 52.2** is the American Society of Heating, Refrigerating and Air-Conditioning Engineers document entitled "Method of Testing General Ventilation Air-Cleaning Devices for Removal Efficiency by Particle Size," 2007 (ANSI/ASHRAE Standard 52.2-2007 including ANSI/ASHRAE Addendum b to ANSI/ASHRAE Standard 52.2-2007).

**ASHRAE STANDARD 55** is the American Society of Heating, Refrigerating and Air-Conditioning Engineers document entitled "Thermal Environmental Conditions for Human Occupancy," 2004 (ASHRAE Standard 55-2004).

**ASHRAE STANDARD 62.2** is the American Society of Heating, Refrigerating and Air-Conditioning Engineers document entitled "Ventilation and Acceptable Indoor Air Quality in Low-Rise Residential Buildings," 2010 (ANSI/ASHRAE Standard 62.2-2010 including ANSI/ASHRAE Addenda b, c, e, g, h, i and l to ANSI/ASHRAE 62.2-2010 published in the 2011 supplement 2007 (ASHRAE Standard 62.2-2007)).

**ASME** is the American Society of Mechanical Engineers.

**ASTM** is the American Society for Testing and Materials.

**ASTM C1167** is the American Society for Testing and Materials document entitled "Standard Specification for Clay Roof Tiles," 1996 (ASTM C1167-96).

**ASTM C1371** is the American Society for Testing and Materials document entitled "Standard Test Method for Determination of Emittance of Materials Near Room Temperature Using Portable Emissometers," 1998 (ASTM C1371-98).

**ASTM C1583** is the American Society of Testing and Materials document entitled, "Standard Test Method for Tensile Strength of Concrete Surfaces and the Bond Strength or Tensile Strength of Concrete Repair and Overlay Materials by Direct Tension" (Pull-off Method)," 2004 (ASTM C1583-04).

**ASTM C177** is the American Society for Testing and Materials document entitled "Standard Test Method for Steady-State Heat Flux Measurements and Thermal Transmission Properties by Means of the Guarded-Hot-Plate Apparatus," 1997 (ASTM C177-97).

**ASTM C272** is the American Society for Testing and Materials document entitled "Standard Test Method for Water Absorption of Core Materials for Structural Sandwich Constructions," 2001 (ASTM C272-01).

**ASTM C335** is the American Society for Testing and Materials document entitled “Standard Test Method for Steady-State Heat Transfer Properties of Horizontal Pipe Insulation,” 1995 (ASTM C335-95).

**ASTM C518** is the American Society for Testing and Materials document entitled “Standard Test Method for Steady-State Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus,” 2002 (ASTM C518-02).

**ASTM C55** is the American Society for Testing and Materials document entitled “Standard Specification for Concrete Brick,” 2001 (ASTM C55-01).

**ASTM C731** is the American Society for Testing and Materials document entitled “Standard Test Method for Extrudability, After Package Aging of Latex Sealants,” 2000 (ASTM C731-00).

**ASTM C732** is the American Society for Testing and Materials document entitled “Standard Test Method for Aging Effects of Artificial Weathering on Latex Sealants,” 2001 (ASTM C732-01).

**ASTM C836** is the American Society of Testing and Materials document entitled, “Standard Specification for High Solids Content, Cold Liquid-Applied Elastomeric Waterproofing Membrane for Use with Separate Wearing Course,” 2005 (ASTM C836-05).

**ASTM D1003** is the American Society for Testing and Materials document entitled “Standard Test Method for Haze and Luminous Transmittance of Transparent Plastics,” 2000 (ANSI/ASTM D1003-00).

**ASTM D1653** is the American Society of Testing and Materials document entitled, “Standard Test Methods for Water Vapor Transmission of Organic Coating Films,” 2003 (ASTM D1653-03).

**ASTM D2370** is the American Society of Testing and Materials document entitled, “Standard Test Method for Tensile Properties of Organic Coatings,” 2002 [ASTM D2370-98 (2002)].

**ASTM D2824** is the American Society of Testing and Materials document entitled “Standard Specification for Aluminum-Pigmented Asphalt Roof Coatings, Nonfibered, Asbestos Fibered, and Fibered without Asbestos,” 2002 (ASTM D2824-02).

**ASTM D3468** is the American Society of Testing and Materials document entitled, “Standard Specification for Liquid-Applied Neoprene and Chlorosulfonated Polyethylene Used in Roofing and Waterproofing,” 1999 (ASTM D3468-99).

**ASTM D3805** is the American Society of Testing and Materials document entitled “Standard Guide for Application of Aluminum-Pigmented Asphalt Roof Coatings,” 1997 (ASTM D3805-97 (reapproved 2003)).

**ASTM D4798** is the American Society for Testing and Materials document entitled “Standard Test Method for Accelerated Weathering Test Conditions and Procedures for Bituminous Materials (Xenon-Arc Method),” 2001 (ASTM D4798-01).

**ASTM D522** is the American Society of Testing and Materials document entitled, “Standard Test Methods for Mandrel Bend Test of Attached Organic Coatings,” 2001 [ASTM D522-93a (2001)].

**ASTM D822** is the American Society of Testing and Materials document entitled, “Standard Practice for Filtered Open-Flame Carbon-Arc Exposures of Paint and Related Coatings,” 2001 (ASTM D822-01).

**ASTM D5870** is the American Society of Testing and Materials document entitled, “Standard Practice for Calculating Property Retention Index of Plastics,” 2003 [ASTM D5870-95 (2003)].

**ASTM D6083** is the American Society of Testing and Materials document entitled, “Standard Specification for Liquid Applied Acrylic Coating Used in Roofing,” 2005 (ASTM D6083-05e1).

**ASTM D6694** is the American Society of Testing and Materials document entitled, “Standard Specification for Liquid-Applied Silicone Coating Used in Spray Polyurethane Foam Roofing,” 2001 (ASTM D6694-01).

**ASTM D6848** is the American Society of Testing and Materials document entitled “Standard Specification for Aluminum-Pigmented Emulsified Asphalt Used as a Protective Coating for Roofing,” 2002 (ASTM D6848-02).

**ASTM E96** is the American Society for Testing and Materials document entitled “Standard Test Methods for Water Vapor Transmission of Materials,” 200 (ASTM E96-00).

**ASTM E283** is the American Society for Testing and Materials document entitled “Standard Test Method for Determining the Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen,” 1991 (ASTM E283-91(1999)).

**ASTM E408** is the American Society for Testing and Materials document entitled, “Standard Test Methods for Total Normal Emittance of Surfaces Using Inspection-Meter Techniques,” 1971 (ASTM E408-71(2002)).

~~ASTM E972 is the American Society for Testing and Materials document entitled, "Standard Test Method for Solar Photometric Transmittance of Sheet Materials Using Sunlight," 1996 (ASTM E972-96(2007)).~~

~~ASTM E2178-03 is the American Society for Testing and Materials document entitled, "Standard Test Method for Air Permeance of Building Materials.~~

~~ASTM E2357-05 is the American Society for Testing and Materials document entitled, "Standard Test Method for determining air leakage of air barrier assemblies.~~

~~ATTIC is an enclosed space directly below the roof deck and above the ceiling beams.~~

**AUTOMATIC** is capable of operating without human intervention.

~~AUTOMATIC MULTI LEVEL DAYLIGHTING CONTROL is a multi level lighting control that automatically reduces lighting in multiple steps or continuous dimming in response to available daylight. This control uses one or more photosensors to detect changes in daylight illumination and then change the electric lighting level in response to the daylight changes.~~

**AUTOMATED TELLER MACHINE (ATM)** is any electronic information processing device which accepts or dispenses currency in connection with a credit, deposit, or convenience account without involvement by a clerk.

~~AUTOMATIC TIME SWITCH CONTROL DEVICES are devices capable of automatically turning loads off and on based on time schedules.~~

**BATHROOM** See “residential space type”.

**BELOW-GRADE WALL** is the portion of a wall, enclosing conditioned space that is below the grade line.

~~BUBBLE POINT is the refrigerant liquid saturation temperature at a specified pressure.~~

**BUILDING** is any structure or space covered by Section 100.0 of the Building Energy Efficiency Standards.

~~BUILDING COMMISSIONING is a systematic quality assurance process that spans the entire design and construction process, including verifying and documenting that building systems and components are planned, designed, installed, tested, operated and maintained to meet the owner’s project requirements.~~

**BUILDING ENVELOPE** is the ensemble of exterior and demising partitions of a building that enclose conditioned space.

**CALL CENTER** is a phone center that handles large number of phone calls including but not limited to help desk, customer and sales support, technical support, emergency response, telephone answering service, and inbound and outbound telemarketing.

~~CAPTIVE KEY OVERRIDE is a type of lighting control in which the key that activates the override cannot be released when the lights are in the on position.~~

**CENTRAL FAN-INTEGRATED VENTILATION SYSTEM** is a central forced air heating and/or cooling system which is intended to operate on a regular basis to bring in outdoor ventilation air and/or distribute air around the home for comfort and ventilation even when heating and cooling are not needed.

~~CERTIFIED TO THE ENERGY COMMISSION means certified to the California Energy Commission pursuant to the provisions of Section 1606 of Title 20 of the California Code of Regulations.~~

**CERTIFYING ORGANIZATION** is an independent organization recognized by the Commission to certify manufactured devices for performance values in accordance with procedures adopted by the Commission.

~~CHANDELIER is a ceiling mounted, close to ceiling, or suspended decorative luminaire that uses glass, crystal, ornamental metals, or other decorative material and that typically is used in hotel/motels, restaurants, or churches as a significant element in the interior architecture~~

**CLIMATE ZONES** are the 16 geographic areas of California for which the Commission has established typical weather data, prescriptive packages and energy budgets. Climate zones are defined by ZIP code and referenced in Joint Appendix JA2 Climate zone boundary descriptions are in the document "California Climate Zone Descriptions" (July 1995), incorporated herein by reference. FIGURE 100.1-A FIGURE 100.1 A is an approximate map of the 16 climate zones.

**CLOSED-CIRCUIT COOLING TOWER** is a closed-circuit cooling tower that utilizes indirect contact between a heated fluid, typically water or glycol, and the cooling atmosphere to transfer the source heat load indirectly to the air, essentially combining a heat exchanger and cooling tower into one relatively compact device.

**CODES, CALIFORNIA HISTORICAL BUILDING CODE** is the California Historical Building Code, California Code of Regulations, Title 24, Part 8 and Part 2 (Chapter 34)

**CODES, CBC** is the 2007 California Building Code.

**CODES, CEC** is the 2007 California Electric Code.

**CODES, CMC** is the 2007 California Mechanical Code.

**CODES, CPC** is the 2007 California Plumbing Code.

**COEFFICIENT OF PERFORMANCE (COP), COOLING**, is the ratio of the rate of net heat removal to the rate of total energy input, calculated under designated operating conditions and expressed in consistent units, as determined using the applicable test method in the Appliance Efficiency Regulations or Section 110.2.

**COEFFICIENT OF PERFORMANCE (COP), HEATING**, is the ratio of the rate of net heat output to the rate of total energy input, calculated under designated operating conditions and expressed in consistent units, as determined using the applicable test method in the Appliance Efficiency Regulations or Section 110.2.

**COEFFICIENT OF PERFORMANCE (COP), HEAT PUMP** is the ratio of the rate of useful heat output delivered by the complete heat pump unit (exclusive of supplementary heating) to the corresponding rate of energy input, in consistent units and as determined using the applicable test method in Appliance Efficiency Regulations or Section 110.2.

**COMBUSTION EFFICIENCY** is a measure of the percentage of heat from the combustion of gas or oil that is transferred to the medium being heated or lost as jacket loss.

**COMMISSION** is the California State Energy Resources Conservation and Development Commission.

**COMPLEX MECHANICAL SYSTEMS** are systems that include 1) fan systems each serving multiple thermostatically controlled zones, or 2) built-up air handler systems (non-unitary or non-packaged HVAC equipment), or 3) hydronic or steam heating systems, or 4) hydronic cooling systems. Complex systems are NOT the following: unitary or packaged equipment listed in Tables 110.2-A, 110.2-B, 110.2-C, and 110.2-E that each serve one zone or two-pipe, heating only systems serving one or more zones.

**COMPLIANCE SOFTWARE** is used to demonstrate compliance with the performance approach to the California Energy Efficiency Standards. The compliance software must meet the requirements for certification described in the Alternative Calculation Method Manual.

**COMPUTER ROOM** is a room whose primary function is to house electronic equipment and that has a design equipment power density exceeding 20 watts/ft<sup>2</sup> of conditioned floor area (215 watts/m<sup>2</sup>).

**CONDENSER SPECIFIC EFFICIENCY** is the Total Heat of Rejection (THR) capacity divided by the fan input electric power at 100% fan speed (including spray pump electric input power for evaporative condensers).

**CONDITIONED FLOOR AREA (CFA)** is the floor area (in square feet) of enclosed conditioned space on all floors of a building, as measured at the floor level of the exterior surfaces of exterior walls enclosing the conditioned space.

**CONDITIONED SPACE** is space in a building that is either directly conditioned or indirectly conditioned.

**CONDITIONED SPACE, DIRECTLY** is an enclosed space that is provided with wood heating, is provided with mechanical heating that has a capacity exceeding 10 Btu/hr-ft<sup>2</sup>, or is provided with mechanical cooling that has a capacity exceeding 5 Btu/hr-ft<sup>2</sup>, ~~unless the space conditioning system is designed for a process space. (See "process space")~~

**CONDITIONED SPACE, INDIRECTLY** is enclosed space, including, but not limited to, unconditioned volume in atria, that (1) is not directly conditioned space; and (2) either (a) has a thermal transmittance area product (UA) to directly conditioned space exceeding that to the outdoors or to unconditioned space and does not have fixed vents or openings to

the outdoors or to unconditioned space, or (b) is a space through which air from directly conditioned spaces is transferred at a rate exceeding three air changes per hour.

**CONDITIONED VOLUME** is the total volume (in cubic feet) of the conditioned space within a building.

**CONTINUOUS AIR BARRIER** (See "air barrier")

**CONTINUOUS DIMMING** (See "dimming, continuous")

**CONTROLLED ATMOSPHERE** is an airtight space maintained at reduced oxygen levels for the purpose of reducing respiration of perishable product in long term storage.

**COOLER** is a space greater than or equal to 28°F but less than 55°F.

**COOL ROOF** is a roofing material with high thermal emittance and high solar reflectance, or low thermal emittance and exceptionally high solar reflectance as specified in Section 110.8(i) that reduces heat gain through the roof.

**COOLING EQUIPMENT** is equipment used to provide mechanical cooling for a room or rooms in a building.

**CRAWL SPACE** is a space immediately under the first floor of a building adjacent to grade.

**CRRC-1** is the Cool Roof Rating Council document entitled "Product Rating Program Manual."

**CTI** is the Cooling Technology Institute.

**CTI ATC-105** is the Cooling Technology Institute document entitled "Acceptance Test Code for Water Cooling Towers," 2000 (CTI ATC-105-00).

**CTI ATC-105S(96)** is the Cooling Technology Institute document entitled "Acceptance Test Code for Closed-Circuit Cooling Towers," 1996 (CTI ATC-105-96).

**CTI STD-201** is the Cooling Technology Institute document entitled "Standard for the Certification of Water-Cooling Tower Thermal Performance," 2004 (CTI STD-201-04).

**CURRENT AIR DEMAND** is a measurement of total airflow, measured in actual cubic feet of air per minute (acfm), necessary for end uses in a compressed air system-

**C-VALUE** (also known as C-factor) is the time rate of heat flow through unit area of a body induced by a unit temperature difference between the body surfaces, in Btu (hr x ft<sup>2</sup> x °F). It is not the same as K-value or K-factor.

**DAYLIGHT AREA-DAYLIT ZONE** is the floor area under skylights or next to windows. The ~~daylight area~~ Daylit Zone includes Primary Sidelit ~~Daylight Area~~ Daylit Zone, Secondary Sidelit ~~Daylight Area~~ Daylit Zone, and Skylit ~~Daylight Area~~ Daylit Zone.

**DEADBAND** is the temperature range within which the HVAC system is neither calling for heating or cooling.

**DECORATIVE GAS APPLIANCE** is a gas appliance that is designed or installed for visual effect only, cannot burn solid wood, and simulates a fire in a fireplace.

**DEGREE DAY, HEATING**, is a unit, based upon temperature difference and time, used in estimating fuel consumption and specifying nominal annual heating load of a building. For any one day, when the mean temperature is less than 65°F, there exist as many degree days as there are Fahrenheit degrees difference in temperature between the mean temperature for the day and 65°F. The number of degree days for specific geographical locations are those listed in the Reference Joint Appendix. For those localities not listed in the Reference Joint Appendix, the number of degree days is as determined by the applicable enforcing agency.

~~**DEMAND RESPONSE** is controlling electricity loads in buildings in response to an electronic signal sent by the local utility requesting their customers to reduce electricity consumption.~~

**DEMAND RESPONSE** is short-term changes in electric usage by end-use customers from their normal consumption patterns in response to changes in the price of electricity over time, or to incentive payments designed to induce lower electricity use at times of high wholesale market prices or when system reliability is jeopardized.

**DEMAND RESPONSE PERIOD** is a period of time during which ~~the local utility is curtailing~~ electricity loads are curtailed in response to ~~by sending out~~ a demand response signal.

~~**DEMAND RESPONSE SIGNAL** is an electronic signal sent out by the local utility indicating a request to their customers to curtail electricity consumption.~~

DEMAND RESPONSE SIGNAL is a signal sent by the local utility, Independent System Operator (ISO), or their designated curtailment service provider or aggregator indicating a price or a request to their customers to curtail electricity consumption for a limited time period.

~~DEMAND RESPONSIVE LIGHTING CONTROL is a control that reduces lighting power consumption in response to a demand response signal.~~

DEMAND RESPONSIVE CONTROL is a control that is capable of receiving and automatically responding to a demand response signal sent via a third-party network or device.

**DEMISING PARTITION** is a wall, fenestration, floor, or ceiling that separates conditioned space from enclosed unconditioned space.

**DESIGN CONDITIONS** are the parameters and conditions used to determine the performance requirements of space-conditioning systems. Design conditions for determining design heating and cooling loads are specified in Section 140.4(b) for nonresidential, high-rise residential, and hotel/motel buildings and in Section 150.0(h) for low-rise residential buildings.

**DESIGN HEAT GAIN RATE** is the total calculated heat gain through the building envelope under design conditions.

**DESIGN HEAT LOSS RATE** is the total calculated heat loss through the building envelope under design conditions.

~~DIMMING, CONTINUOUS is a lighting control method that is capable of varying the light output of lamps over a continuous range from full light output to minimum light output.~~

~~DIMMING, STEPPED is a lighting control method that varies the light output of lamps in one or more predetermined discrete steps between full light output and off.~~

DESIGN REVIEW is defined as a secondary review of the construction documents (drawings and specifications) that seeks to improve compliance with existing Title 24 regulations, encourage adoption of best practices in design, and encourage designs that are constructable and maintainable. It is an opportunity for an experienced design engineer to look at a project with a fresh perspective in an effort to catch missing or unclear design information and to suggest design enhancements.

DEW POINT is the refrigerant vapor saturation temperature at a specified pressure.

**DIRECT DIGITAL CONTROL (DDC)** is a type of control where controlled and monitored analog or binary data, such as temperature and contact closures, are converted to digital format for manipulation and calculations by a digital computer or microprocessor, then converted back to analog or binary form to control mechanical devices.

**DIRECT DIGITAL CONTROL (DDC)** is a type of control where controlled and monitored analog or binary data, such as temperature and contact closures, are converted to digital format for manipulation and calculations by a digital computer or microprocessor, then converted back to analog or binary form to control mechanical devices.

~~DISPLAY LIGHTING is lighting confined to the area of a display that provides a higher level of illuminance than the level of surrounding ambient illuminance.~~

**DISPLAY PERIMETER** is the length of an exterior wall in a Group B; Group F, Division 1; or Group M Occupancy that immediately abuts a public sidewalk, measured at the sidewalk level for each story that abuts a public sidewalk.

**DOOR** is an operable opening in the building envelope that is not a fenestration product component, including swinging and roll-up doors, fire doors, and access hatches. Doors that are more than one-half glass in area are considered a fenestration product glazed door.

**DUCT SEALING** is a procedure for installing a space conditioning distribution system that minimizes leakage of air from or to the distribution system. Minimum specifications for installation procedures, materials, diagnostic testing and field verification are contained in the Reference Residential Appendix RA3 and Reference Nonresidential Appendix NA1.

DUCT SYSTEM Includes all ducts, duct fittings, plenums, and fans assembled to form a continuous passageway for the distribution of air.

ENTIRELY NEW OR REPLACEMENT DUCT SYSTEMS installed as part of an addition or alteration shall be constructed of at least 75% new duct material and may include reused parts from the dwelling unit's existing duct system (e.g. registers, boots, air handler, coil, plenums, duct material, etc.) but only if the reused parts are accessible and they can be sealed to prevent leakage.

DUCTED SYSTEM means an air conditioner or heat pump that is designed to be permanently installed equipment and delivers conditioned air to the indoor space through a duct(s). The air conditioner or heat pump may be either a split system or a single-packaged unit.

**EAST-FACING** (See "orientation")

**ECONOMIZER, AIR**, is a ducting arrangement, including dampers, linkages, and an automatic control system that allows a cooling supply fan system to supply outside air to reduce or eliminate the need for mechanical cooling.

**ECONOMIZER, WATER**, is a system by which the supply air of a cooling system is cooled directly or indirectly by evaporation of water, or other appropriate fluid, in order to reduce or eliminate the need for mechanical cooling.

EFFECTIVE TRIM CAPACITY is the (continuous) range within 15% of the minimum specific power for a compressor (kW/acfm).

~~EFFECTIVE APERTURE (EA) is a measure of the extent that vertical glazing or skylights are effective for providing daylighting.~~

~~EFFICACY, LAMP~~ is the quotient of rated initial lamp lumens divided by the rated lamp power (watts), without including auxiliaries such as ballasts, transformers, and power supplies.

**ELECTRONICALLY-COMMUTATED MOTOR** is a brushless DC motor with a permanent magnet rotor that is surrounded by stationary motor windings, and an electronic controller that varies rotor speed and direction by sequentially supplying DC current to the windings.

**EMITTANCE, THERMAL** is the ratio of the radiant heat flux emitted by a sample to that emitted by a blackbody radiator at the same temperature.

**ENCLOSED SPACE** is space that is substantially surrounded by solid surfaces, including walls, ceilings or roofs, doors, fenestration areas, and floors or ground.

**ENERGY BUDGET** is the maximum amount of Time Dependent Valuation (TDV) energy that a proposed building, or portion of a building, can be designed to consume, calculated with the approved procedures specified in Title 24, Part 6.

**ENERGY EFFICIENCY RATIO (EER)** is the ratio of net cooling capacity (in Btu/hr) to total rate of electrical energy input (in watts), of a cooling system under designated operating conditions, as determined using the applicable test method in the Appliance Efficiency Regulations or Section 110.2.

**ENERGY FACTOR (EF)** of a water heater is a measure of overall water heater efficiency, as determined using the applicable test method in the Appliance Efficiency Regulations.

**ENERGY MANAGEMENT CONTROL SYSTEM (EMCS)** is often a computerized control system designed to regulate the energy consumption of a building by controlling the operation of energy consuming systems, such as the heating, ventilation and air conditioning (HVAC), lighting and water heating systems. The EMCS is also capable of monitoring environmental and system loads, and adjusting HVAC operations in order to optimize energy usage and respond to demand response signals.

**ENERGY OBTAINED FROM DEPLETABLE SOURCES** is electricity purchased from a public utility, or any energy obtained from coal, oil, natural gas, or liquefied petroleum gases.

**ENERGY OBTAINED FROM NONDEPLETABLE SOURCES** is energy that is not energy obtained from depletable sources.

**ENFORCEMENT AGENCY** is the city, county, or state agency responsible for issuing a building permit.

**ENTIRE BUILDING** is the ensemble of all enclosed space in a building, including the space for which a permit is sought, plus all existing conditioned and unconditioned space within the structure.

**ENVELOPE** (See "building envelope")

**EXFILTRATION** is uncontrolled outward air leakage from inside a building, including leakage through cracks and interstices, around windows and doors, and through any other exterior partition or duct penetration.

**EXTERIOR DOOR** is a door through an exterior partition that is opaque or has a glazed area that is less than or equal to one-half of the door area. Doors with a glazed area of more than one half of the door area are treated as a fenestration product.

**EXTERIOR FLOOR/SOFFIT** is a horizontal exterior partition, or a horizontal demising partition, under conditioned space. For low-rise residential occupancies, exterior floors also include those on grade.

**EXTERIOR PARTITION** is an opaque, translucent, or transparent solid barrier that separates conditioned space from ambient air or space that is not enclosed. For low-rise residential occupancies, exterior partitions also include barriers that separate conditioned space from unconditioned space, or the ground.

**EXTERIOR ROOF/CEILING** is an exterior partition, or a demising partition, that has a slope less than 60 degrees from horizontal, that has conditioned space below, and that is not an exterior door or skylight.

**EXTERIOR ROOF/CEILING AREA** is the area of the exterior surface of exterior roof/ceilings.

**EXTERIOR WALL** is any wall or element of a wall, or any member or group of members, which defines the exterior boundaries or courts of a building and which has a slope of 60 degrees or greater with the horizontal plane. An exterior wall or partition is not an exterior floor/soffit, exterior door, exterior roof/ceiling, window, skylight, or demising wall.

**EXTERIOR WALL AREA** is the area of the opaque exterior surface of exterior walls.

**FACTORY ASSEMBLED COOLING TOWERS** are cooling towers constructed from factory-assembled modules either shipped to the site in one piece or put together in the field.

**FENESTRATION definitions include the following:**

**FENESTRATION, BAY WINDOW** is a combination assembly which is composed of three or more individual windows either joined side by side or installed within opaque assemblies and which projects away from the wall on which it is installed. Center windows, if used are parallel to the wall on which the bay is installed. ~~The end panels or~~ two side windows are angled with respect to the center window(s). Common angles are 30° and 45°, although other angles are sometimes employed.

**DOORS** is an operable opening in the building envelope that is not a fenestration component, including swinging and roll-up doors, fire doors, and access hatches. Doors that are more than one-half glass in area are considered glazed doors

**FENESTRATION, CURTAIN WALL /STOREFRONT** is an external nonbearing wall intended to separate the exterior and interior environments, which may consist entirely (or principally) of a combination of framing materials, glass and glazing, opaque in-fill and other surfacing materials supported by or within a framework.

**DUAL-GLAZED GREENHOUSE WINDOWS** are a type of dual-glazed fenestration product which adds conditioned volume but not conditioned floor area to a building.

**FENESTRATION PRODUCT** is any transparent or translucent material plus any sash, frame, mullions and dividers, in the envelope of a building, including, but not limited to, windows, sliding glass doors, French doors, skylights, curtain walls, garden windows, glass block, and other doors with a glazed area of more than one half of the door area.

**FENESTRATION SYSTEM** is a collection of fenestration products included in the design of a building. (See "fenestration product")

**FIELD-FABRICATED** is a fenestration product including a glazed exterior door whose frame is made at the construction site of standard dimensional lumber or other materials that were not previously cut, or otherwise formed with the specific intention of being used to fabricate a fenestration product or exterior door. Field fabricated does not include site-built fenestration with a label certificate or products required to have temporary or permanent labels.

**FIN** is a contiguous opaque surface, oriented vertically and projecting outward horizontally from an exterior vertical surface.

FIN OFFSET is the horizontal distance from the edge of exposed exterior glazing at the jamb of a window to the fin.

FIN PROJECTION is the horizontal distance, measured outward horizontally from the surface of exposed exterior glazing at the jamb of a window to the outward edge of a fin.

FIXED is fenestration that is not designed to be opened or closed.

GLAZED DOOR See DOOR.

**FENESTRATION, GREENHOUSE/ GARDEN WINDOW** is a window unit that consists of a three-dimensional, five-sided structure, with or without an operating sash and creates conditioned volume but no conditioned floor area to a building, also known as greenhouse window.

MANUFACTURED is a fenestration product constructed of materials which are factory cut or otherwise factory formed with the specific intention of being used to fabricate a fenestration product. A manufactured fenestration product is typically factory-assembled before delivery to a job site. However a “knocked-down” or partially assembled product sold as a fenestration product is also a manufactured fenestration product when provided with temporary and permanent labels as described in Section 10-111; otherwise it is a site-built fenestration product when provided with temporary and permanent labels as described in Section 10-111.

NFRC 100 is the National Fenestration Rating Council document entitled “NFRC 100: Procedure for Determining Fenestration Product U-factors.” (2010; NFRC 100 includes procedures for site fenestration formerly included in a separate document, NFRC 100-SB)

NFRC 200 is the National Fenestration Rating Council document entitled “NFRC 200: Procedure for Determining Fenestration Product Solar Heat Gain Coefficients and Visible Transmittance at Normal Incidence.” (2010)

NFRC 202 is the National Fenestration Rating Council document entitled “NFRC 202: Procedure for Determining Fenestration Product Visible Transmittance at Normal Incidence.” (2010)

NFRC 400 is the National Fenestration Rating Council document entitled “NFRC 400: Procedure for Determining Fenestration Product Air Leakage.” (10)

OPERABLE is fenestration that is designed to be opened or closed.

OPERABLE SHADING DEVICE is a device at the interior or exterior of a building or integral with a fenestration product, which is capable of being operated, either manually or automatically, to adjust the amount of solar radiation admitted to the interior of the building.

OVERHANG is a contiguous opaque surface, oriented horizontally and projecting outward horizontally from an exterior vertical surface.

OVERHANG OFFSET is the vertical distance from the edge of exposed exterior glazing at the head of a window to the overhang.

OVERHANG PROJECTION is the horizontal distance, measured outward horizontally from the surface of exposed exterior glazing at the head of a window to the outward edge of an overhang.

SITE-BUILT is fenestration designed to be field-glazed or field assembled units using specific factory cut or otherwise factory formed framing and glazing units. Examples of site-built fenestration include storefront systems, curtain walls, and atrium roof systems.

SOLAR HEAT GAIN COEFFICIENT (SHGC) is the ratio of the solar heat gain entering the space through the fenestration area to the incident solar radiation. Solar heat gain includes directly transmitted solar heat and absorbed solar radiation, which is then reradiated, conducted, or convected into the space.

SOLAR HEAT GAIN COEFFICIENT, CENTER OF GLAZING (SHGC<sub>c</sub>) is the SHGC for the center of glazing area.

SOLAR HEAT GAIN COEFFICIENT, TOTAL FENESTRATION PRODUCT (SHGC or SHGCT) is the SHGC for the total fenestration product.

U-FACTOR, FENESTRATION is the overall coefficient of thermal transmittance of a construction assembly, in Btu/(hr x ft<sup>2</sup> x °F), including air film resistance at both surfaces.

U-FACTOR, CENTER OF GLAZING (U-FACTOR<sub>c</sub>) is the U-Factor for the center of glazing area.

U-FACTOR, TOTAL FENESTRATION PRODUCT (U-FACTOR or U-FACTOR<sub>t</sub>) is the U-Factor for the total fenestration product.

VISIBLE TRANSMITTANCE (VT) is the ratio (expressed as a decimal) of visible light that is transmitted through a glazing fenestration to the light that strikes the material fenestration. as For products with the scope of NFRC 200, visible transmittance shall be calculated in NFRC 200. For products not within the scope of NFRC 200 (diffusing and projecting glazing's), visible transmittance shall be the solar photometric transmittance of the glazing material(s) determined in accordance with NFRC 202 or ASTM E972.

VISIBLE TRANSMITTANCE, CENTER OF GLAZING (VT<sub>c</sub>) is the VT for the center of glazing area.

VISIBLE TRANSMITTANCE, TOTAL FENESTRATION PRODUCT (VT or VT<sub>t</sub>) is the VT for the total fenestration product.

~~**FENESTRATION PRODUCT** is any transparent or translucent material plus any sash, frame, mullions and dividers, in the envelope of a building, including, but not limited to, windows, sliding glass doors, French doors, skylights, curtain walls, garden windows, and other doors with a glazed area of more than one half of the door area.~~

~~**FENESTRATION PRODUCT, FIELD FABRICATED** is a fenestration product including a glazed exterior door whose frame is made at the construction site of standard dimensional lumber or other materials that were not previously cut, or otherwise formed with the specific intention of being used to fabricate a fenestration product or exterior door. Field fabricated does not include site built fenestration with a label certificate or products required to have temporary or permanent labels.~~

~~**FENESTRATION PRODUCT, MANUFACTURED** is a fenestration product constructed of materials which are factory cut or otherwise factory formed with the specific intention of being used to fabricate a fenestration product. A manufactured fenestration product is typically factory assembled before delivery to a job site. However a "knocked down" or partially assembled product sold as a fenestration product is also a manufactured fenestration product when provided with temporary and permanent labels as described in Section 10-111; otherwise it is a site built fenestration product when provided with temporary and permanent labels as described in Section 10-111.~~

~~**FENESTRATION PRODUCT, SITE-BUILT** is fenestration designed to be field glazed or field assembled units using specific factory cut or otherwise factory formed framing and glazing units. Examples of site built fenestration include storefront systems, curtain walls, and atrium roof systems.~~

~~**FENESTRATION SYSTEM** is a collection of fenestration products included in the design of a building. (See "fenestration product")~~

**FIELD ERECTED COOLING TOWERS** are cooling towers which are custom designed for a specific application and which cannot be delivered to a project site in the form of factory assembled modules due to their size, configuration, or materials of construction.

**FIREPLACE** is a hearth and fire chamber or similar prepared place in which a fire may be made and which is built in conjunction with a flue or chimney, including but not limited to factory-built fireplaces, masonry fireplaces, and masonry heaters as further clarified in the CBC.

**FLOOR/SOFFIT TYPE** is a type of floor/soffit assembly having a specific heat capacity, framing type, and U-factor.

**FLUID COOLER** is a fan-powered heat rejection device that includes a water circuit connected by a closed circulation loop to a water-cooled refrigerant condenser, and may be either evaporative-cooled or air-cooled.

**FLUX** is the rate of energy flow per unit area.

**FOOD PREPARATION EQUIPMENT** is cooking equipment intended for commercial use, including coffee machines, espresso coffee makers, conductive cookers, food warmers including heated food servers, fryers, griddles, nut warmers, ovens, popcorn makers, steam kettles, ranges, and cooking appliances for use in commercial kitchens, restaurants, or other business establishments where food is dispensed.

**FREEZER** is a space designed to maintain less than 28°F and space designed to be convertible between cooler and freezer operation.

**GAS COOLING EQUIPMENT** is cooling equipment that produces chilled water or cold air using natural gas or liquefied petroleum gas as the primary energy source.

**GAS HEATING SYSTEM** is a natural gas or liquefied petroleum gas heating system.

**GAS LOG** is a self-contained, free-standing, open-flame, gas-burning appliance consisting of a metal frame or base supporting simulated logs, and designed for installation only in a vented fireplace.

~~**GENERAL LIGHTING** is lighting designed to provide a substantially uniform level of illumination throughout an area, exclusive of any provision for special visual tasks or decorative effect. When designed for lower than task illuminance used in conjunction with other specific task lighting systems, it is also called "ambient" lighting.~~

**GLAZING** (See “fenestration product”)

**GLOBAL WARMING POTENTIAL** or “GWP” is the radiative forcing impact of one mass-based unit of a given greenhouse gas relative to an equivalent unit of carbon dioxide over a given period of time.

**GLOBAL WARMING POTENTIAL VALUE** or “GWP Value” is the 100-yr GWP value first published by the Intergovernmental Panel on Climate Change (IPCC) in its Second Assessment Report (SAR) (IPCC, 1995; or if a 100-yr GWP value was not specified in the IPCC SAR, it means the GWP value published by the IPCC in its Fourth Assessment A-3 Report (AR4) (IPCC, 2007); or if a 100-yr GWP value was not specified in the IPCC AR4, then the GWP value will be determined by the Commission based on data, studies and/or good engineering or scientific judgment. Both the 1995 IPCC SAR values and the 2007 IPCC AR4 values are published in table 2.14 of the 2007 IPCC AR4. The SAR GWP values are found in column “SAR (100-yr)” of Table 2.14.; the AR4 GWP values are found in column “100 yr” of Table 2.14.”

**GOVERNMENTAL AGENCY** is any public agency or subdivision thereof, including, but not limited to, any agency of the state, a county, a city, a district, an association of governments, or a joint power agency.

**GROSS EXTERIOR ROOF AREA** is the sum of the skylight area and the exterior roof/ceiling area.

**GROSS EXTERIOR WALL AREA** is the sum of the window area, door area, and exterior wall area.

~~**GU-24** is the designation of a lamp holder and socket configuration, based on a coding system by the International Energy Consortium, where “G” indicates the broad type of two or more projecting contacts, such as pins or posts, “U” distinguishes between lamp and holder designs of similar type but that are not interchangeable due to electrical or mechanical requirements, and “24” indicates 24 millimeters center to center spacing of the electrical contact posts.~~

**HABITABLE SPACE** is building space intended for continual human occupancy; such space generally includes areas used for living, sleeping, dining, and cooking but does not generally include bathrooms, toilets, hallways, storage areas, closets, or utility rooms.

**HABITABLE STORY** is a story that contains space in which humans may work or live in reasonable comfort, and that has at least 50 percent of its volume above grade.

**HEAT CAPACITY (HC)** is the amount of heat necessary to raise the temperature of all the components of a unit area in an assembly by 1°F. It is calculated as the sum of the average thickness times the density times the specific heat for each component, and is expressed in Btu/ft<sup>2</sup>-°F.

**HEAT PUMP** is a device that is capable of heating by refrigeration, and that may include a capability for cooling.

**HEATED SLAB FLOOR** is a concrete slab floor or a lightweight concrete topping slab lay over a raised floor, with embedded space heating by any means. The heating system using the heated slab floor is sometimes referred to as radiant slab floors or radiant heating.

**HEATING EQUIPMENT** is equipment used to provide mechanical heating for a room or rooms in a building.

**HEATING SEASONAL PERFORMANCE FACTOR (HSPF)** is the total heating output of a central air-conditioning heat pump (in Btu) during its normal use period for heating divided by the total electrical energy input (in watt-hours) during the same period, as determined using the applicable test method in the Appliance Efficiency Regulations.

**HI** is the Hydronics Institute of the Gas Appliance Manufacturers Association (GAMA).

**HI HTG BOILER STANDARD** is the Hydronics Institute document entitled “Testing and Rating Standard for Rating Boilers,” 1989.

**HIGH-RISE RESIDENTIAL BUILDING** is a building, other than a hotel/motel, of Occupancy Group R, Division 1 with four or more habitable stories.

**HOOD** is a device designed to capture and contain cooking effluent including, grease, smoke, steam, heat, and vapor until it is exhausted through a duct or recirculating system. Hoods are categorized as Type 1 or Type 2:

**TYPE I HOOD** is a hood used for collecting and removing convective heat, grease particulate, condensable vapor, and smoke. It includes listed grease filters, baffles, or extractors for removing the grease and a fire-suppression system. Type I hoods are installed over cooking appliances, such as ranges, fryers, griddles, broilers, and ovens, that produce smoke or grease-laden vapors. For Type I hoods, the following types of hoods are commonly available:

**WALL-MOUNTED CANOPY HOOD** is mounted against a wall above a single appliance or a line of appliances, or it may be free-standing with a vertical back panel extending from the rear of the appliance(s) to the hood. It typically extends beyond the front and sides of the appliance(s) on all open sides. The wall acts as a back panel, forcing replacement air to be drawn across the front and/or side(s) of the cooking appliance, thus increasing the effectiveness of the hood to capture and contain effluent generated by the cooking operations.

**SINGLE ISLAND CANOPY HOOD** is placed over a single appliance or line of appliances. It is open on all sides and overhangs the front, rear, and sides of the appliance(s). A single island canopy is more susceptible to cross-drafts and requires a greater exhaust airflow than an equivalent sized wall-mounted canopy to capture and contain effluent generated by the cooking operations.

**DOUBLE ISLAND CANOPY HOOD** is placed over back-to-back appliances or lines of appliances. It is open on all sides and overhangs the front and the sides of the appliance(s). It may have a wall panel between the backs of the appliances.

**BACKSHELF or PROXIMITY HOOD** is also referred to as a low-proximity hood or as a sidewall hood where wall mounted. Its front lower lip is low over the appliance(s) and is typically set back from the front of the appliance(s). It is always closed to the rear of the appliances by a panel where freestanding or by a panel or wall when wall mounted, and its height above the cooking surface varies. This style of hood can be constructed with partial end panels to increase its effectiveness in capturing the effluent generated by the cooking operations.

**EYEBROW HOOD** is mounted directly to the face or top of an appliance above the opening(s) or door(s) from which effluent is emitted, overhanging the front of the opening(s) to capture the effluent.

**PASS OVER HOOD** is a backshelf hood constructed and installed low enough to allow food to be passed over the top.

**TYPE II HOOD** is a hood that collects and removes steam, heat, and products of combustion where grease or smoke is not present. It may or may not have grease filters or baffles and typically does not have a fire-suppression system. They can be used where the cooking operation from each appliance underneath the hood does not produce grease in excess of 5 mg/m when measured at 500 cfm exhaust airflow.

**HOTEL/MOTEL** is a building or buildings incorporating six or more guest rooms or a lobby serving six or more guest rooms, where the guest rooms are intended or designed to be used, or which are used, rented, or hired out to be occupied, or which are occupied for sleeping purposes by guests, and all conditioned spaces within the same building envelope. Hotel/motel also includes all conditioned spaces which are (1) on the same property as the hotel/motel, (2) served by the same central heating, ventilation, and air-conditioning system as the hotel/motel, and (3) integrally related to the functioning of the hotel/motel as such, including, but not limited to, exhibition facilities, meeting and conference facilities, food service facilities, lobbies, and laundries.

**HVAC SYSTEM** (See “space-conditioning system”)

**IESNAIES HB** (See **IESNAIES** Lighting Handbook)

**IESNAIES LIGHTING HANDBOOK** is the Illuminating Engineering Society National Association document entitled “The **IESNAIES** Lighting Handbook: Reference and Applications, Ninth-Tenth Edition” (2000/2010).

**INFILTRATION** is uncontrolled inward air leakage from outside a building or unconditioned space, including leakage through cracks and interstices, around windows and doors, and through any other exterior or demising partition or pipe or duct penetration.

**INTEGRATED PART LOAD VALUE (IPLV)** is a single-number figure of merit based on part load EER or COP expressing part load efficiency for air-conditioning and heat pump equipment on the basis of weighted operation at various load capacities for the equipment as determined using the applicable test method in the Appliance Efficiency Regulations or Section 110.2.

**ISO 13256-1** is the International Organization for Standardization document entitled "Water-source heat pumps -- Testing and rating for performance -- Part 1: Water-to-air and brine-to-air heat pumps," 1998.

**LARGEST NET INCREMENT** is the largest increase in capacity when switching between combinations of base compressors that is expected to occur under the system control scheme.

**KITCHEN** (See residential space type.)

**LIGHT EMITTING DIODE (LED)** is a pn junction semiconductor device that emits incoherent optical radiation when biased in the forward direction. The acronym "LED" typically refers to an LED Component, LED Device, or LED Package.

~~Hybrid LED Luminaire is a complete lighting unit consisting of a light source and driver together with parts to distribute light, to position and protect the light source, and to connect the light source to a branch circuit. The light sources in the Hybrid LED Luminaire contain both LED Source Systems, or LED Lamps, as well as other types of light sources such as incandescent or fluorescent lamps. The Hybrid LED Luminaire is intended to be connected directly to a branch circuit.~~

~~LED Array is an assembly of LED Components, LED Devices or LED Packages on a printed circuit board or substrate, possibly with optical elements and additional thermal, mechanical, and electrical (LED Control Circuitry) interfaces that are connected to the load side of LED Driver (Power Source). LED Array does not contain an LED Driver (Power Source) and is not connected directly to the branch circuit.~~

~~LED Component (or LED Device, or LED Package) is a semiconductor die that contains wire bond connections, possibly with an optical element, or a thermal, mechanical, or electrical interface. LED Component, LED Device, or LED Package does not contain an LED Driver (Power Source) and is not connected directly to the branch circuit.~~

~~LED Control Circuitry is electronic components located between the Power Source (LED Driver) and the LED Component, or LED Device, or LED Package designed to limit voltage and current, to dim, to switch or otherwise control the electrical energy to the LED. The circuitry does not include a Power Source.~~

~~LED Driver is a power source with integral LED control circuitry designed to meet the specific requirements of an LED Lamp, an LED Array, or an LED Module. Typically LED Driver (Power Source) contains the LED Control Circuitry.~~

~~LED Lamp is an LED Component, LED Device, or LED Package and other optical, thermal, mechanical and electrical (LED Control Circuitry) components with an integrated LED Driver (Power Source) and a standardized base that is designed to connect to the branch circuit via a standardized base, lamp holder, or socket.~~

~~In North America, "a standardized base" refers to an ANSI standard base. In the U.S. "branch circuit" is used to describe the "mains voltage" in IEC documents.~~

~~NOTE: Non-integrated type of LED Lamp should not be defined, it is a LED Module.~~

~~LED Light Engine with Integral Heat Sink (or LED Light Source System) is a subsystem of an LED Luminaire that includes one or more LED Components, LED Devices or LED Packages, an LED Array, or LED Module; an LED Driver (Power Source); electrical and mechanical interfaces; and an integral heat sink to provide thermal dissipation. An LED Source System may be designed to accept additional components that provide aesthetic, optical, and environmental control (other than thermal dissipation). An LED Source System with standardized base is an LED Lamp.~~

~~LED Luminaire is a complete LED lighting unit consisting of a light source and driver together with parts to distribute light, to position and protect the light source, and to connect the light source to a branch circuit. The light source itself may be an LED Component, LED Packages or LED Devices, LED Array, an LED Module, an LED Source System, or an LED Lamp. The LED Luminaire is intended to be connected directly to a branch circuit.~~

~~LED Module is a component part of an LED Source System that includes one or more LED Components, LED Devices or LED Packages, possibly with optical elements and additional thermal, mechanical, and electrical (LED Control Circuitry) interfaces that are connected to the load side of LED Drive (Power Source). The LED Module does not contain a power source. An LED Array is equivalent to an LED Module.~~

LIGHTING definitions include the following:

Accent Light is directional lighting designed to highlight or spotlight objects. It can be recessed, surface mounted, or mounted to a pendant, stem, or track.

Chandelier is a ceiling-mounted, close-to-ceiling, or suspended decorative luminaire that uses glass, crystal, ornamental metals, or other decorative material and that typically is used in hotel/motels, restaurants, or churches as a significant element in the interior architecture.

Compact Fluorescent Lamp is a fluorescent lamp less than 9 inches long, with a small diameter glass tube (T5 or less) that is folded, bent, or bridged to create a long discharge path in a small volume. The lamp designs generally include an amalgam and a cold chamber, or a cold spot, to control the mercury vapor pressure and light output.

Decorative Lighting is lighting used in a decorative manner that does not serve as display lighting or general lighting.

Display Lighting is lighting confined to the area of a display that provides a higher level of illuminance than the level of surrounding ambient illuminance.

General Lighting is lighting designed to provide a substantially uniform level of illumination throughout an area, exclusive of any provision for special visual tasks or decorative effect. When designed for lower-than-task illuminance used in conjunction with other specific task lighting systems, it is also called "ambient" lighting.

GU-24 is the designation of a lamp holder and socket configuration, based on a coding system by the International Energy Consortium, where "G" indicates the broad type of two or more projecting contacts, such as pins or posts, "U" distinguishes between lamp and holder designs of similar type but that are not interchangeable due to electrical or mechanical requirements, and "24" indicates 24 millimeters center to center spacing of the electrical contact posts.

Lantern is an outdoor luminaire that uses an electric lamp to replicate a pre-electric lantern, which used a flame to generate light.

Light Emitting Diode (LED) definitions used in Title 24 Part 6 are in section 6.8 of ANSI/IES RP-16-10.

Luminaire is a complete lighting unit consisting of a lamp(s) and the parts designed to distribute the light, to position and protect the lamp(s), and to connect the lamp(s) to the power supply.

Lumen Maintenance is a lighting control strategy to provide a precise constant level of lighting from a lighting system regardless of the age of the lamps or the maintenance of the luminaires.

Marquee lighting is a permanent lighting system consisting of one or more rows of many small lights, including light emitting diodes (LEDs), or fiber optic lighting, attached to a canopy.

Ornamental lighting for compliance with Title 24, Part 6 is the following:

Luminaires installed outdoor which are rated for 100 watts or less that are post-top luminaires, lanterns, pendant luminaires, chandeliers, and marquee lighting.

Luminaires installed indoor that are chandeliers, sconces, lanterns, neon and cold cathode, light emitting diodes, theatrical projectors, moving lights, and light color panels when used in a decorative manner that does not serve as display lighting or general lighting.

Pendant is a mounting method in which the luminaire is suspended from above.

**Permanently Installed lighting** includes all luminaires attached to the inside or outside of a building or site, including track and flexible lighting system; lighting attached to walls, ceilings, columns, inside or outside of permanently installed cabinets, internally illuminated case work, mounted on poles, in trees, or in the ground; attached to ceiling fans and integral to exhaust fans that are other than exhaust hoods for cooking equipment. Permanently installed luminaires may have either plug-in or hardwired connections for electric power. Permanently installed lighting does not include portable lighting or lighting that is installed by the manufacturer in refrigerators, stoves, microwave ovens, exhaust hoods for cooking equipment, refrigerated cases, vending machines, food preparation equipment, and scientific and industrial equipment.

**Portable Lighting** is lighting with plug-in connections for electric power that is table and freestanding floor lamps, attached to modular furniture, workstation task lights, lights attached to workstation panels, movable displays, and other equipment that is not permanently installed lighting.

**Post top luminaire** is an outdoor luminaire that is mounted directly on top of a lamp-post.

**Precision Lighting** is task lighting for general commercial or industrial work of low contrast, fine detail, or fast moving objects.

**Task Lighting** is lighting that is designed specifically to illuminate a task location, and that is generally confined to the task location.

**Temporary Lighting** is a lighting installation with plug-in connections that does not persist beyond 60 consecutive days or more than 120 days per year.

**Track Lighting** is a system that includes small luminaires and a track, rails, or cables that are designed to provide both mounting and deliver electric power. Track is generally made of linear extruded aluminum containing copper wires, or may be a low-voltage cable system, to form a continuous electrical raceway. Some varieties can be joined, or cut, and others set into a variety of patterns with connectors. Track is available in line-voltage or low-voltage

**Line-Voltage Track** is equipped with luminaires that use line-voltage lamps or are equipped with integral transformers at each luminaire.

**Low-Voltage Track** is equipped with remote transformers for use with low-voltage equipment along the entire length of track

**Track Mounted Luminaires** are small luminaires designed to be attached at any point along a track lighting system. Track mounted luminaires may be line-voltage or low-voltage.

**Tuning** is the ability to set maximum light levels at a lower level than full lighting power, to which the space occupants are generally not aware.

**LIGHTING CONTROLS** include the following:

**Astronomical Time-Switch Control** is a lighting control that controls lighting based on the time of day or based on astronomical events such as sunset and sunrise, accounting for geographic location and day of the year.

**Automatic Daylight Control** is a lighting control that automatically adjusts lighting levels in response to available daylight. This control uses one or more photosensors to detect changes in daylight illumination and then changes the electric lighting level in response to the daylight changes.

**Automatic Multi-Level Daylight Control** is a lighting control that automatically adjusts lighting levels in multiple steps or continuous dimming in response to available daylight. This control uses one or more photosensors to detect changes in daylight illumination and then changes the electric lighting level in response to the daylight changes.

**Automatic Time Switch Control** is a lighting control that controls lighting based on the time of day.

**Countdown Timer Switch** is a control that turns lights or other loads ON when activated using one or more selectable count-down time periods and then automatically turns lights or other loads OFF when the selected time period had elapsed.

**Daylighting Control** is an Automatic Daylighting Control, or a Photo Control.

**Dimmer** is a lighting control that varies the current through an electric light in order to control the level of illumination and the energy use.

**Dimmer, Full-Range** means varying the light output of lamps over a continuous range from full light output to minimum light output.

**Dimmer, Stepped** means varying the light output of lamps in one or more predetermined discrete steps between full light output and OFF.

**Energy Management Control System (EMCS)** see ENERGY MANAGEMENT CONTROL SYSTEM

**Lighting Control, Self Contained** is a unitary lighting control module where no additional components are required for a fully functional lighting control.

**Lighting Control System** is a lighting control where two or more components are required to be installed in the field to provide all of the functionality required to make up a fully functional and compliant lighting control.

**Multi-Level Astronomical Time Switch** is an Astronomical Time Switch Control that reduces lighting power in multiple steps.

**Multi-Level Lighting Control** is a lighting control that reduces lighting power in multiple steps.

**Multiscene Programmable Control** is a lighting control that allows for two or more pre-defined lighting settings, in addition to all-OFF, for two or more groups of luminaires to suit multiple activities in the space, and allows convenient recall of those settings.

**Occupant Sensing Controls** are lighting controls which automatically control light as described below, and allow for complete manual operation, and includes the following types:

**Occupant Sensor** is used indoors and automatically turns lights OFF when an area is vacated, and automatically turns the lights ON when the area is occupied.

**Motion Sensor** is used outdoors and automatically turns lights OFF when an area is vacated, and automatically turns the lights ON when the area is occupied.

**Partial-ON Occupant/Motion/Vacancy Sensor** automatically turns lights OFF when an area is vacated, capable of automatically turning ON part of the lighting load and manually turning ON part of the lighting load when an area is occupied.

**Partial-OFF Occupant/Motion/Vacancy Sensor** automatically turns OFF part of the lighting load when an area is vacated, and capable of automatically turning ON the lighting load when an area is occupied.

**Vacancy Sensor** automatically turns lights OFF when an area is vacated and requires lighting loads to be manually turned ON.

**Part-Night Outdoor Lighting Control** is a time or occupancy-based lighting control device or system that reduces or turns off the lighting power to an outdoor luminaire for a portion of the night. An example of a part-night outdoor lighting control would be to dim the lamp halfway through the night, and turn the lamp back up to full output sometime before dawn if needed to address morning commute requirements. Another example may turn the lamp completely off half way through the night.

**Photo Control** is an Automatic Daylighting Control that automatically turns lights ON and OFF, or automatically adjusts lighting levels, in response to the amount of daylight that is available. A Photo Control may also be one component of a field assembled lighting system, the component having the capability to provide a signal proportional to the amount of daylight to a Lighting Control System for the purpose of continuously dimming the electric lights.

**Time Switch Control** is an Automatic Time Switch Control, Astronomical Time Switch Control, or Multi-Level Astronomical Time Switch Control.

**Track Lighting Integral Current Limiter** is a lighting control device in which a current limiter is integral to the end-feed housing of a manufactured line-voltage track lighting system, where the end-feed housing and connecting track are manufactured by the same company to be exclusively used together.

**Track Lighting Supplementary Overcurrent Protection Panel** is a listed electrical panel that provides limited overcurrent protection for use only with line voltage track lighting. This limited protection is in addition to the protection provided in the required branch circuit overcurrent protective device, and cannot be used as a substitute for required branch-circuit overcurrent devices, or in place of the required branch-circuit protection.

**LISTED** is equipment, materials, or services included in a list published by an organization that is recognized to have the authority to evaluate and test the equipment, material or services. The organization performs periodic inspection and evaluation to ensure that the listed equipments, material, or services meet identified standards or has been tested and found suitable for a specified purpose. The recognized organizations include Underwriters Laboratories (UL) and other nationally recognized testing/rating laboratories.

**LOW-GWP REFRIGERANT** is a compound used as a heat transfer fluid or gas that is: (A) any compound or blend of compounds, with a GWP Value less than 150; and (B) U.S. EPA Significant New Alternatives Policy (SNAP)-approved; and (C) not an ozone depleting substance as defined in Title 40 of the Code of Federal Regulations, Part 82, §82.3 (as amended March 10, 2009).

**LOW-RISE RESIDENTIAL BUILDING** is a building, other than a hotel/motel that is of Occupancy Group R, Division 1, and is multi-family with three stories or less, or a single family residence of Occupancy Group R, Division 3, or an Occupancy Group U building located on a residential site.

**LPG** is liquefied petroleum gas. Propane is one type of LPG.

**LUMINAIRE** is a complete lighting unit consisting of a lamp(s) and the parts designed to distribute the light, to position and protect the lamp(s), and to connect the lamp(s) to the power supply; commonly referred to as "lighting fixtures."

**MAKEUP AIR** is outdoor air deliberately brought into the building from the outside and supplied to the vicinity of an exhaust hood to replace air, vapor, and contaminants being exhausted. Makeup air is generally filtered and fan-forced, and it may be heated or cooled depending on the requirements of the application. Makeup air may be delivered through outlets integral to the exhaust hood or through outlets in the same room.

**MANUAL** is capable of being operated by personal intervention.

**MANUFACTURED DEVICE** is any heating, cooling, ventilation, lighting, water heating, refrigeration, cooking, plumbing fitting, insulation, door, fenestration product, or any other appliance, device, equipment, or system subject to Sections 110.0 through 110.9 of Title 24, Part 6.

**MECHANICAL COOLING** is lowering the temperature within a space using refrigerant compressors or absorbers, desiccant dehumidifiers, or other systems that require energy from depletable sources to directly condition the space. In nonresidential, high-rise residential, and hotel/motel buildings, cooling of a space by direct or indirect evaporation of water alone is not considered mechanical cooling.

**MECHANICAL HEATING** is raising the temperature within a space using electric resistance heaters, fossil fuel burners, heat pumps, or other systems that require energy from depletable sources to directly condition the space.

**MERV** is the Minimum Efficiency Reporting Value as determined by ASHRAE Standard 52.2 Method of Testing General Ventilation Air-Cleaning Devices for Removal Efficiency by Particle Size.

**METAL BUILDING** is a complete integrated set of mutually dependent components and assemblies that form a building, which consists of a steel-framed superstructure and metal skin. This does not include structural glass or metal panels such as in a curtainwall system.

**MICRO-CHANNEL CONDENSER** is an air-cooled condenser for refrigeration systems which utilizes multiple small parallel gas flow passages in a flat configuration with unitized fin surface between the gas passages, rather than round tubes arranged at a right angle to separate plate fins.

**MINI-SPLIT AIR CONDITIONERS AND HEAT PUMPS** are systems that have a single outdoor section and one or more indoor sections. The indoor sections cycle on and off in unison in response to a single indoor thermostat.

**MULTIPLE-SPLIT AIR CONDITIONERS AND HEAT PUMPS** are systems that have two or more indoor sections. The indoor sections operate independently and can be used to condition multiple zones in response to multiple indoor thermostats.

**MODELING ASSUMPTIONS** are the conditions (such as weather conditions, thermostat settings and schedules, internal gain schedules, etc.) that are used for calculating a building's annual energy consumption as specified in the Alternative Calculation Methods Manuals.

**MOVABLE SHADING DEVICE** (See “operable shading device”)

**MULTIPLE ZONE SYSTEM** is an air distribution system that supplies air to more than one thermal zone each of which has one or more devices (such as dampers, cooling coils, and heating coils) that regulate airflow, cooling, or heating capacity to the zone.

**NET EXHAUST FLOW RATE** is the exhaust flow rate for a hood, minus any internal discharge makeup air flow rate.

**NEWLY CONDITIONED SPACE** is any space being converted from unconditioned to directly conditioned or indirectly conditioned space. Newly conditioned space must comply with the requirements for an addition. See Section 149.141.0 for nonresidential occupancies and Section 150.2 for residential occupancies.

**NEWLY CONSTRUCTED BUILDING** is a building that has never been used or occupied for any purpose.

**NON-DUCTED SYSTEM** is an air conditioner or heat pump that is designed to be permanently installed equipment and directly heats or cools air within the conditioned space using one or more indoor coils that are mounted on room walls and/or ceilings. The unit may be of a modular design that allows for combining multiple outdoor coils and compressors to create one overall system.

**NFRC 100** is the National Fenestration Rating Council document entitled “NFRC 100: Procedure for Determining Fenestration Product U factors.” (2007; NFRC 100 includes procedures for site fenestration formerly included in a separate document, NFRC 100-SB)

**NFRC 200** is the National Fenestration Rating Council document entitled “NFRC 200: Procedure for Determining Fenestration Product Solar Heat Gain Coefficients and Visible Transmittance at Normal Incidence.” (2007)

**NFRC 400** is the National Fenestration Rating Council document entitled “NFRC 400: Procedure for Determining Fenestration Product Air Leakage.” (2007)

**NONRESIDENTIAL BUILDING** is any building which is a Group A, B, E, F, H, M, or S; and is a U Occupancy when the Group U Occupancy is on a nonresidential site.

**NOTE:** Requirements for high-rise residential buildings and hotels/motels are included in the nonresidential sections of Title 24, Part 6.

**NONRESIDENTIAL BUILDING OCCUPANCY TYPES** are buildings in which a minimum of 90 percent of the area functions as one of the following:

**Auditorium Building** is a public building with fixed seating used for public meetings or gatherings, not specifically for the viewing of dramatic performances.

**Classroom Building** is a building used by an organization that provides instruction to students for which a minimum of 90 percent of the building floor area is classrooms, educational workshops, and educational labs; and supporting corridors, stairways, and restrooms.

**Commercial and Industrial Storage Building** is a building used for storing items.

**Convention Center Building** is a building for which the primary function is for meetings, conventions and multiple purposes, and that have neither fixed seating nor fixed staging.

**Financial Institution Building** is a public building for conducting financial transactions including the custody, loan, exchange, or issue of money, for the extension of credit, and for facilitating the transmission of funds.

**General Commercial and Industrial Work Building** is a building for an art, craft, assembly or manufacturing operation is performed.

**Grocery Store Building** is a building for the sale of foodstuffs requiring additional preparation prior to consumption.

**Library Building** is a building which is primarily a repository for literary materials, such as books, periodicals, newspapers, pamphlets and prints, kept for reading or reference.

Medical Buildings and Clinic Buildings are non-“I” occupancy buildings where medical or clinical care is provided, does not provide overnight patient care, and is used to provide physical and mental care through medical, dental, or psychological examination and treatment.

Office Building is a building of CBC Group B Occupancy which is other than a restaurant.

Parking Garage Building is a building for the purpose of parking vehicles, which consists of at least a roof over the parking area enclosed with walls on all sides. Parking garages may have fences, rails, partial walls, or other barriers in place of one or more walls. The building has an entrance(s) and exit(s), and includes areas for vehicle maneuvering to reach the parking spaces. If the roof of a parking structure is also used for parking, the section without an overhead roof is considered a parking lot instead of a parking garage.

Religious Facility Building is a building in which the primary function is for assembly of people to worship.

Restaurant Building is a building in which the primary function is a food establishment as defined in Section 27520 of the Health and Safety Code.

School Building is a building that is used by an organization that provides instruction to students, which is not a Classroom Building as defined in Section 100.1, and may include an auditorium, gymnasium, kitchen, library, multi-purpose room, dining and cafeteria, student union, or maintenance staff workroom. A maintenance or storage building is not a school building.

Theater Building is a building in which the primary function is assembly, having tiers of rising seats or steps for the viewing of motion pictures, dramatic performances, lectures, musical events and similar live performances.

**NONRESIDENTIAL COMPLIANCE MANUAL** is the manual developed by the Commission, under Section 25402.1(e) of the Public Resources Code, to aid designers, builders, and contractors in meeting the energy efficiency requirements for nonresidential, high-rise residential, and hotel/motel buildings.

**NONSTANDARD PART LOAD VALUE (NPLV)** is a single-number part-load efficiency figure of merit for chillers referenced to conditions other than IPLV conditions. (See “integrated part load value”)

**NORTH-FACING** (See “orientation”).

**NONRESIDENTIAL FUNCTION AREA** ~~S OR TYPE OF USE IS ONE OF~~ INCLUDE THE FOLLOWING:

Aisle Way is a warehouse facility term describing a long, usually narrow space between storage racks.

**Atrium** is a large-volume space created by openings connecting two or more stories and is used for purposes other than an enclosed stairway, an elevator hoistway, an escalator opening, or as a utility shaft for plumbing, electrical, air-conditioning or other equipment and is not a mall.

**Auditorium Room** is ~~the part of a public building where an audience sits in fixed seating, or a room, area, or building~~ with fixed seats used for public meetings or gatherings not specifically for the viewing of dramatic performances.

**Auto Repair** is ~~the portion of a building a room or area~~ used to repair automotive equipment and/or vehicles, exchange parts, and may include work using an open flame or welding equipment.

**Beauty Salon** is a room or area in which the primary activity is manicures, pedicures, facials, or the cutting or styling of hair. Also may be known as a beauty shop or beauty parlor.

**Civic Meeting Place** is a room or area which is a city council or board of supervisors meeting chamber, courtroom, or other official meeting space-area accessible to the public.

~~Classroom building~~ is a building or group of buildings that is predominately classrooms used by an organization that provides instruction to students, which may include corridors and stairways, restrooms and small storage closets, faculty offices, and workshops and labs. A classroom building does not include buildings that are not predominantly classroom, including auditorium, gymnasium, kitchen, library, multi purpose, dining and cafeteria, student union, maintenance staff workroom, or storage buildings.

**Classroom, Lecture, Training, Vocational Room** is a room or area where an audience or class receives instruction.

**Commercial and Industrial Storage Area** is a room, or area, or building used for storing items.

**Commercial and Industrial Storage Area (refrigerated)** is a room or area used for storing items where mechanical refrigeration is used to maintain the space temperature at 55° F or less.

**Convention, eConference, Multipurpose and Meeting Centers** is an assembly room, or area, or building that is used for meetings, conventions and multiple purposes, including, but not limited to, dramatic performances, and that has neither fixed seating nor fixed staging.

**Corridor** is a passageway or route into which compartments or rooms open.

**Dining** is a room or rooms or area in a restaurant or hotel/motel (other than guest rooms) where meals that are served to the customers will be consumed.

~~**Dormitory** is a building consisting of multiple sleeping quarters and having interior common areas such as dining rooms, reading rooms, exercise rooms, toilet rooms, study rooms, hallways, lobbies, corridors, and stairwells, other than high-rise residential, low-rise residential, and hotel/motel occupancies.~~

**Electrical/Mechanical/Telephone Room** is a room in which the building's electrical switchbox or control panels, telephone switchbox, and/or HVAC controls or equipment is located.

**Exercise Center, Gymnasium** is a room or building or area equipped for gymnastics, exercise equipment, or indoor athletic activities.

**Exhibit** is a room or area that has for its primary purpose that is used for exhibition exhibitions, that has neither fixed seating nor fixed staging. An exhibit does not include a gallery or other place where art is for sale. An exhibit does not include a lobby, conference room, or other occupancies where the primary function is not exhibitions.

~~**Financial institution** is a public establishment used for conducting financial transactions including the custody, loan, exchange, or issue of money, for the extension of credit, and for facilitating the transmission of funds.~~

**Financial Transaction Areas** is a room or area for the tellers, work stations, and customers waiting areas; to complete financial transactions. Financial transaction areas do not include private offices, hallways, restrooms, or other support areas.

**General eCommercial and Industrial Work Area** is a room, or area, or building in which an art, craft, assembly or manufacturing operation is performed.

**High bay:** Where the luminaires are 25 feet or more above the floor.

**Low bay:** Where the luminaires are less than 25 feet above the floor.

**Precision:** Where involving visual tasks of small size or fine detail such as electronic assembly, fine woodworking, metal lathe operation, fine hand painting and finishing, egg processing operations, or tasks of similar visual difficulty are done.

**Grocery Sales Area** is a room, or area, or building that has as its primary purpose the sale of foodstuffs requiring additional preparation prior to consumption.

~~**Grocery store** is a building that has as its primary purpose the sale of foodstuffs requiring additional preparation prior to consumption.~~

**Hotel Function Area** is a hotel room or area such as a hotel ballroom, meeting room, exhibit hall or conference room, together with pre-function areas and other spaces ancillary to its function.

~~**Housing, Public and Commons Areas** is housing other than Occupancy Group I that are living quarters. Commons areas may include dining, reading, study, library or other community spaces and/or medical treatment or hospice facilities.~~

~~**Multi-family:** A multi-family building contains multiple dwelling units that share common walls and may also share common floors or ceilings (apartments).~~

**Dormitory:** A space in a building where group sleeping accommodations are provided in one room, or in a series of closely associated rooms, for persons not members of the same family group, under joint occupancy and single management, as in college dormitories or fraternity houses.

**Senior housing:** Is specifically for habitation by seniors, including but not limited to independent living quarters, and assisted living quarters.

**Kitchen/Food Preparation** is a room or area with cooking facilities and/or an area where food is prepared.

**Laboratory, Scientific** is a space or facility room or area where research, experiments, and measurement in medical and physical sciences are performed requiring examination of fine details. The space area may include workbenches, countertops, scientific instruments, and associated floor spaces. Scientific laboratory does not refer to film, computer, and other laboratories where scientific experiments are not performed.

**Laundry** is a place room or area where laundering activities occur.

**Library Area** is a room or area with a repository for literary materials, such as books, periodicals, newspapers, pamphlets and prints, kept for reading or reference.

**Reading Areas:** Is a library facility term describing room or areas within a prescribed building space in a library containing tables, chairs, or desks for library patrons to use for the purpose of reading books and other reference documents. Library reading areas include reading, circulation, and checkout areas. Reading areas do not include private offices, meeting, photocopy, or other rooms not used specifically for reading by library patrons.

**Stacks Area:** Is a room or area in a library facility term describing a with large grouping of shelving sections within a prescribed building space. Stack aisles include pedestrian paths located in stack areas. Book stack aisle lighting is typically a central aisle luminaire distributing light to stack faces on both sides of an aisle.

**Lobby,**

**Hotel:** Is the contiguous space area in a hotel/motel between the main entrance and the front desk, including reception, waiting and seating areas.

**Main eEntry:** Is the contiguous space area in buildings other than hotel/motel that is directly located by the main entrance of the building through which persons must pass, including reception, waiting and seating areas.

**Locker/Dressing Room** is a room or area for changing clothing, sometimes equipped with lockers.

**Lounge/Recreation** is a room or area used for leisure activities which may be associated with a restaurant or bar.

**Mall** is a roofed or covered common pedestrian area within a mall building that serves as access for two or more tenants.

**Medical and eClinical Ceare Area** is a non "I" occupancy room or area in a building that does not provide overnight patient care and that is used to provide physical and mental care through medical, dental, or psychological examination and treatment, including, but not limited to, laboratories and treatment spaces.

**Medical buildings and clinics** is a building where medical and clinical care is provided.

**Museum** is a space room or area in which the primary function is the care or exhibit of works of artistic, historical, or scientific value. A museum does not include a gallery or other place where art is for sale. A museum does not include a lobby, conference room, or other occupancies where the primary function is not the care or exhibit of works of artistic, historical, or scientific value.

**Office Area** is a room, area, or building of CBC Group B Occupancy other than restaurants.

**Open Area** is a warehouse facility term describing a large unobstructed area that is typically used for the handling and temporary storage of goods.

**Parking gGarage Area** is a covered building or structure for the purpose of parking vehicles, which consists of at least a roof over the parking area enclosed with walls on all sides. Parking garages may have fences, rails, partial walls, or other barriers in place of one or more walls. The structure has an entrance(s) and exit(s), and includes areas for vehicle maneuvering to reach the parking spaces. If the roof of a parking structure is also used for parking, the section without an overhead roof is considered a parking lot instead of a parking garage. Parking garages may include the following areas:

**Daylight Transition Zone** is the interior path of travel for vehicles to enter a parking garage as needed to transition from exterior daylight levels to interior light levels. Daylight Transition Zones only include the path of vehicular travel and do not include adjacent Parking Areas.

**Dedicated Ramps** are driveways specifically for the purpose of moving vehicles between floors of a parking garage and which have no adjacent parking. Dedicated ramps do not include sloping floors of a parking structure, which are considered Parking Areas.

**Parking Area** is the area of a parking garage used only for the purpose of parking and maneuvering of vehicles on a single floor. Parking areas include sloping floors of a parking structure. Parking areas do not include Daylight Transition Zones, Dedicated Ramps, or and which is not the roof of a parking structure.

**Ramps and entries** are driveways for the purpose of moving vehicles between floors of a parking garage. Parking entries are driveways for the purpose of vehicles entering into a parking garage.

**Religious facility** is a building in which the primary function is for an assembly of people to worship. Religious facilities do not include classroom, housing, or gymnasium buildings.

**Religious ~~w~~Worship Area** is a room, or area, or building in which the primary function is for an assembly of people to worship. Religious worship does not include classrooms, offices, or other areas in which the primary function is not for an assembly of people to worship.

**Restaurant** is a room, area, or building that is a food establishment as defined in Section 27520 of the Health and Safety Code.

**Restroom** is a room or suite of rooms providing personal facilities such as toilets and washbasins.

**Retail ~~M~~Merchandise ~~S~~Sales Area** is a room or area, or building in which the primary activity is the sale of merchandise.

**School** is a building or group of buildings that is used by an organization that provides instruction to students, which is predominately classroom buildings but may also include auditorium, gymnasium, kitchen, library, multi purpose rooms, dining and cafeteria, student union, maintenance staff workroom, and small storage spaces.

**Stairs** is a series of steps providing passage from one level of a building to another, including escalators.

**Stairwell** is a vertical shaft in which stairs are located

**Support Area** is a room or area used as a passageway, utility room, storage space, or other type of space associated with or secondary to the function of an occupancy that is listed in these regulations.

**Tenant Lease spaceArea** is a portion of room or area in a building intended for lease for which a specific tenant is not identified at the time of permit application.

**Theater, Area**

**Motion ~~p~~Picture** is an assembly room or area, a hall, or a building with tiers of rising seats or steps for the showing of motion pictures.

**Performance** is an assembly room or area, a hall, or a building with tiers of rising seats or steps for the viewing of dramatic performances, lectures, musical events and similar live performances.

**Transportation ~~f~~Function Area** is the ticketing area, waiting area, baggage handling areas, concourse, or other areas not covered by primary functions in TABLE 146 C in an airport terminal, bus or rail terminal or station, subway or transit station, or a marine terminal.

**Videoconferencing ~~s~~Studio** is a room with permanently installed videoconferencing cameras, audio equipment, and playback equipment for both audio-based and video-based two-way communication between local and remote sites.

**Vocational ~~r~~roomArea** is a room or area used to provide training in a special skill to be pursued as a trade.

**Waiting Area** is an area other than a hotel lobby or main entry lobby normally provided with seating and used for people waiting.

**Wholesale ~~S~~showroom** is a room or area where samples of merchandise are displayed.

**OCCUPIABLE SPACE** is any enclosed space inside the pressure boundary and intended for human activities, including, but not limited to, all habitable spaces, toilets, closets, halls, storage and utility areas, and laundry areas.

**OPEN COOLING TOWER** is an open, or direct contact, cooling tower which exposes water directly to the cooling atmosphere, thereby transferring the source heat load from the water directly to the air by a combination of heat and mass transfer.

**OPERABLE SHADING DEVICE** is a device at the interior or exterior of a building or integral with a fenestration product, which is capable of being operated, either manually or automatically, to adjust the amount of solar radiation admitted to the interior of the building.

**ORIENTATION, CARDINAL** is one of the four principal directional indicators, north, east, south, and west, which are marked on a compass. Also called cardinal directions.

**ORIENTATION, EAST-FACING** is oriented to within 45 degrees of true east, including 45°00'00" south of east (SE), but excluding 45°00'00" north of east (NE).

**ORIENTATION, NORTH-FACING** is oriented to within 45 degrees of true north, including 45°00'00" east of north (NE), but excluding 45°00'00" west of north (NW).

**ORIENTATION, SOUTH-FACING** is oriented to within 45 degrees of true south including 45°00'00" west of south (SW), but excluding 45°00'00" east of south (SE).

**ORIENTATION, WEST-FACING** is oriented to within 45 degrees of true west, including 45°00'00" north of due west (NW), but excluding 45°00'00" south of west (SW).

**OUTDOOR AIR (Outside air)** is air taken from outdoors and not previously circulated in the building.

**OUTDOOR LIGHTING** ~~definitions is electrical lighting used to illuminate outdoor areas, include and includes~~ the following areas:

**Building entrance** is any operable doorway in or out of a building, including overhead doors. Any doorway, set of doors (including elevator doors such as in parking garages), turnstile, vestibule, or other form of portal that is ordinarily used to gain access to the building by its users and occupants. Where buildings have separate one-way doors to enter and to leave, this also includes any doors ordinarily used to leave the building.

**Building façade** is the exterior surfaces of a building, not including horizontal roofing, signs, and surfaces not visible from any reasonable viewing location.

**Canopy** is a permanent structure, other than a parking garage as defined in Section ~~401~~100.1, consisting of a roof and supporting building elements, with the area beneath at least partially open to the elements. A canopy may be freestanding or attached to surrounding structures. A canopy roof may serve as the floor of a structure above.

**Carport** is a covered, open-sided structure used solely for the purpose of parking vehicles, consisting of a roof over the parking area. Typically, carports are free-standing or projected from the side of the building and are only two or fewer car lengths deep.

**Hardscape** is an improvement to a site that is paved or has other structural features, including but not limited to, curbs, plazas, entries, parking lots, site roadways, driveways, walkways, sidewalks, bikeways, water features and pools, storage or service yards, loading docks, amphitheaters, outdoor sales lots, and private monuments and statuary.

**Landscape lighting** is lighting that is recessed into or mounted on the ground, paving, or raised deck, which is mounted less than 42" above grade or mounted onto trees or trellises, and that is intended to be aimed only at landscape features.

~~Lantern is an ornamental outdoor luminaire that uses an electric lamp to replicate a pre electric lantern, which used a flame to generate light.~~

~~Lighting zone is a geographic area designated by the California Energy Commission that determines requirements for outdoor lighting, including lighting power densities and specific control, equipment or performance requirements. Lighting zones are numbered LZ1, LZ2, LZ3, and LZ4.~~

~~Marquee lighting is a permanent lighting system consisting of one or more rows of many small lights, including light emitting diodes (LEDs), or fiber optic lighting, attached to a canopy.~~

~~**Ornamental lighting** is post top luminaires, lanterns, pendant luminaires, chandeliers, and marquee lighting.~~

~~**Outdoor lighting** is all electrical lighting used to illuminate outdoor areas, including but not limited to lighting for parking lots, signs, building entrances, outdoor sales areas, outdoor canopies, landscape lighting, lighting for building facades and hardscape lighting.~~

**Outdoor sales frontage** is the portion of the perimeter of an outdoor sales area immediately adjacent to a street, road, or public sidewalk.

**Outdoor sales lot** is an uncovered paved area used exclusively for the display of vehicles, equipment or other merchandise for sale. All internal and adjacent access drives, walkway areas, employee and customer parking areas, vehicle service or storage areas are not outdoor sales lot areas, but are considered hardscape.

**Parking lot** is an uncovered area for the purpose of parking vehicles. Parking lot is a type of hardscape.

**Paved area** is an area that is paved with concrete, asphalt, stone, brick, gravel, or other improved wearing surface, including the curb.

~~**Pendant** is a mounting method in which the luminaire is suspended from above.~~

~~**Post top luminaire** is an ornamental outdoor luminaire that is mounted directly on top of a lamp post.~~

**Principal viewing location** is anywhere along the adjacent highway, street, road or sidewalk running parallel to an outdoor sales frontage.

**Public monuments** are statuary, buildings, structures, and/or hardscape on public land.

**Sales canopy** is a canopy specifically to cover and protect an outdoor sales area.

**Stairways and ramps.** Stairways are one or more flights of stairs with the necessary landings and platforms connecting them to form a continuous and uninterrupted passage from one level to another. An exterior stairway is open on at least one side, except for required structural columns, beams, handrails and guards. The adjoining open areas shall be either yards, courts or public ways. The other sides of the exterior stairway need not be open. Ramps are walking surfaces with a slope steeper than 5 percent.

**Vehicle service station** is a gasoline, natural gas, diesel, or other fuel dispensing station.

**OUTDOOR LIGHTING ZONE** is a geographic area designated by the California Energy Commission that determines requirements for outdoor lighting, including lighting power densities and specific control, equipment or performance requirements. Lighting zones are numbered LZ1, LZ2, LZ3, and LZ4.

~~**PERMANENTLY INSTALLED LIGHTING** includes all luminaires attached to the inside or outside of a building or site, including track and flexible lighting system; lighting attached to walls, ceilings, columns, inside or outside of permanently installed cabinets, internally illuminated case work, mounted on poles, in trees, or in the ground; attached to ceiling fans and integral to exhaust fans that are other than exhaust hoods for cooking equipment. Permanently installed luminaires may have either plug-in or hardwired connections for electric power. Permanently installed lighting does not include portable lighting or lighting that is installed by the manufacturer in refrigerators, stoves, microwave ovens, exhaust hoods for cooking equipment, refrigerated cases, vending machines, food preparation equipment, and scientific and industrial equipment.~~

**PARALLEL FAN-POWERED TERMINAL UNIT** is a terminal unit that combines a VAV damper in parallel with a fan that only runs when the terminal unit is providing heating to the space.

**PART-LOAD OPERATION** occurs when a loaded air compressor is operating below its maximum rated capacity.

**PARTICLE SIZE EFFICIENCY** is the fraction (percentage) of particles that are captured on air filter equipment as determined during rating tests conducted in accordance with ASHRAE Standard 52.2 or AHRI Standard 680. Particle Size Efficiency is measured in three particle size ranges: 0.3-1.0, 1.0-3.0, 3.0-10 microns.

**PRIMARY STORAGE** is compressed air storage located between the compressors and any dryers or other conditioning equipment.

**POOLS, ANSI/NSPI-5** is the American National Standards Institute and National Spa and Pool Institute document entitled "American National Standard for Residential Inground Swimming Pools" 2003 (ANSI/NSPI-5 2003).

**POOLS, AUXILIARY POOL LOADS** are features or devices that circulate pool water in addition to that required for pool filtration, including, but not limited to, solar pool heating systems, filter backwashing, pool cleaners, waterfalls, fountains, and spas.

**POOLS, BACKWASH VALVE** is a diverter valve designed to backwash filters located between the circulation pump and the filter, including, but not limited to, slide, push-pull, multi-port, and full-flow valves.

**POOLS, MULTI-SPEED PUMP** is a pump capable of operating at two (2) or more speeds and includes two-speed and variable-speed pumps.

**POOLS, NSF/ANSI 50** is the NSF International (formerly National Sanitation Foundation) Standard and American National Standards Institute document entitled "Circulation System Components and Related Materials for Swimming Pools, Spas/Hot Tubs" 2005 (NSF/ANSI 50 – 2005).

**POOLS, RESIDENTIAL** are permanently installed residential in-ground swimming pools intended for use by a single-family home for noncommercial purposes and with dimensions as defined in ANSI/NSPI-5.

~~**PORTABLE LIGHTING** is lighting with plug-in connections for electric power that is table and freestanding floor lamps, attached to modular furniture, workstation task lights, lights attached to workstation panels, movable displays, and other equipment that is not permanently installed lighting.~~

**PRESSURE BOUNDARY** is the primary air enclosure boundary separating indoor and outdoor air. For example, a volume that has more leakage to the outside than to the conditioned space would be considered outside the pressure boundary. Exposed earth in a crawlspace or basement shall not be considered part of the pressure boundary.

**PRIMARY AIRFLOW** is the airflow (cfm or L/s) supplied to the zone from the air-handling unit at which the outdoor air intake is located. It includes outdoor intake air and recirculated air from that air-handling unit but does not include air transferred or air recirculated to the zone by other means.

**PROCESS** is an activity or treatment that is not related to the space conditioning, lighting, service water heating, or ventilating of a building as it relates to human occupancy.

~~**PROCESS SPACE** is a space that is thermostatically controlled to maintain a process environment temperature less than 55° F or to maintain a process environment temperature greater than 90° F for the whole space that the system serves, or that is a space with a space conditioning system designed and controlled to be incapable of operating at temperatures above 55° F or incapable of operating at temperatures below 90° F at design conditions.~~

**PROCESS, COVERED** are processes that are regulated under Part 6, which include datacom equipment, laboratory exhaust, garage exhaust, commercial kitchen ventilation, refrigerator warehouses, supermarket refrigeration systems, compressed air systems, process cooling towers, process boilers.

**PROCESS, EXEMPT** is process that is not listed as a covered process.

~~**PROCESS LOAD** is a load resulting from a process.~~

**PROCESS LOAD, COVERED** is a load resulting from a covered process

**PROCESS LOAD, EXEMPT** is a load resulting from an exempt process.

**PROPOSED DESIGN BUILDING** is the proposed building being modeled using rules described in the Alternative Calculation Method Manual. In order for a building to comply with the standards, the proposed building energy use must be less than or equal to the Standard Design Building energy use and meet the mandatory requirements in the Title 24 Building Energy Efficiency Standards.

**PUBLIC AREAS** are spaces generally open to the public at large, customers or congregation members, or similar spaces where occupants need to be prevented from controlling lights for safety, security, or business reasons.

**R-VALUE** is the measure of the thermal resistance of insulation or any material or building component expressed in ft<sup>2</sup>-hr-oF/Btu.

**RADIANT BARRIER** is a highly reflective, low emitting material installed at the underside surface of the roof deck and the inside surface of gable ends or other exterior vertical surfaces in attics to reduce solar heat gain. ~~into the attic.~~

**RAISED FLOOR** is a floor (partition) over a crawl space, or an unconditioned space, or ambient air.

**READILY ACCESSIBLE** is capable of being reached quickly for operation, repair or inspection, without requiring climbing or removing obstacles, or resorting to access equipment.

**RECOOL** is the cooling of air that has been previously heated by space-conditioning equipment or systems serving the same building.

**RECOVERED ENERGY** is energy used in a building that (1) is recovered from space conditioning, service water heating, lighting, or process equipment after the energy has performed its original function; (2) provides space conditioning, service water heating, or lighting; and (3) would otherwise be wasted.

**REFERENCE APPENDICES** is the support document for the Building Energy Efficiency Standards and the ACM Approval Manuals. The document consists of three sections: the Reference Joint Appendices (JA), the Reference Residential Appendices (RA), and the Reference Nonresidential Appendices (NA).

**REFLECTANCE, SOLAR** is the ratio of the reflected solar flux to the incident solar flux.

**REFRIGERATED CASE** is a manufactured commercial refrigerator or freezer, including but not limited to display cases, reach-in cabinets, meat cases, and frozen food and soda fountain units.

**REFRIGERATED WAREHOUSE** is a building or a space constructed for storage of products, where mechanical refrigeration is used to maintain the space temperature at 55° F or less.

**REFRIGERATED SPACE** is a building or a space that is a refrigerated warehouse, walk-in cooler, or a freezer.

**REHEAT** is the heating of air that has been previously cooled by cooling equipment or supplied by an economizer.

**RELATIVE SOLAR HEAT GAIN** is the ratio of solar heat gain through a fenestration product (corrected for external shading) to the incident solar radiation. Solar heat gain includes directly transmitted solar heat and absorbed solar radiation, which is then reradiated, conducted, or convected into the space.

**RELOCATABLE PUBLIC SCHOOL BUILDING** is a relocatable building as defined by Title 24, Part 1, Section 4-314, which is subject to Title 24, Part 1, Chapter 4, Group 1.

**REPAIR** is the reconstruction or renewal for the purpose of maintenance of any component, system, or equipment of an existing building. Repairs shall not increase the preexisting energy consumption of the repaired component, system, or equipment. Replacement of any component, system, or equipment for which there are requirements in the Standards is considered an alteration and not a repair.

REPLACEMENT AIR is outdoor or indoor air that is used to replace air removed from a building through an exhaust system. Replacement air may be derived from one or more of the following: makeup air, supply air, transfer air, and infiltration. However, the ultimate source of all replacement air is outdoor air. When replacement air exceeds exhaust, the result is exfiltration.

MAKEUP AIR is dedicated replacement air deliberately brought into the building from the outdoors and supplied to the vicinity of an exhaust hood to replace the air and cooking effluent being exhausted. Makeup air is generally filtered and fan-forced, and it may be heated or cooled depending on the requirements of the application. Makeup air may be delivered through outlets integral to the exhaust hood (compensating hoods) or through outlets in the same room.

SUPPLY AIR is air entering a space from an air-conditioning, heating, or ventilating system for the purpose of comfort conditioning. Supply air is generally filtered, fan-forced, and heated, cooled, humidified or dehumidified as necessary to maintain specified temperature and humidity conditions. Only the quantity of outdoor air within the supply airflow is used as replacement air.

TRANSFER AIR is air transferred from one room to another through openings in the room envelope, whether it is transferred intentionally or not. The driving force for transfer air is generally a small pressure differential between the rooms, although one or more fans may be used.

INFILTRATION is leakage or flow of outdoor air into the building or space through openings in the building or space envelope, whether intentional or unintentional. The driving force for infiltration is a negative pressure in a space or building relative to the exterior of the building envelope.

**RESIDENTIAL BUILDING** (See “high-rise residential building” and “low-rise residential building”)

**RESIDENTIAL COMPLIANCE MANUAL** is the manual developed by the Commission, under Section 25402.1 of the Public Resources Code, to aid designers, builders, and contractors in meeting Energy Efficiency Standards for low-rise residential buildings.

**RESIDENTIAL SPACE TYPE** is one of the following:

**Bathroom** is a room or area containing a sink used for personal hygiene, toilet, shower, or a tub.

**Closet** is a non-habitable room used for the storage of linens, household supplies, clothing, non-perishable food, or similar uses, and which is not a hallway or passageway.

**Garage** is a non-habitable building or portion of building, attached to or detached from a residential dwelling unit, in which motor vehicles are parked.

**Kitchen** is a room or area used for cooking, food storage and preparation and washing dishes, including associated counter tops and cabinets, refrigerator, stove, ovens, and floor area.

**Laundry** is a non-habitable room or space which contains plumbing and electrical connections for a washing machine or clothes dryer.

**Storage building** is a non-habitable detached building used for the storage of tools, garden equipment, or miscellaneous items.

**Utility room** is a non-habitable room or building which contains only HVAC, plumbing, or electrical controls or equipment; and which is not a bathroom, closet, garage, or laundry room.

**ROOF** is the outside cover of a building or structure including the structural supports, decking, and top layer that is exposed to the outside with a slope less than 60 degrees from the horizontal.

**ROOF, LOW-SLOPED** is a roof that has a ratio of rise to run of 2:12 or less (9.5 degrees from the horizontal).

**ROOF, STEEP-SLOPED** is a roof that has a ratio of rise to run of greater than 2:12 (9.5 degrees from the horizontal).

**ROOFING PRODUCT** is the top layer(s) of the roof that is exposed to the outside, which has properties including but not limited to solar reflectance, thermal emittance, and mass.

ROOF RECOVER BOARD is a rigid type board, typically 1/4 inch to 3/4 inch thick, installed directly below a low-sloped roof membrane, with or without above deck thermal insulation, to improve a roof system's compressive strength or to physically separate the roof membrane from the thermal insulation or to physically separate a new roof covering from an underlying roof membrane as part of a roof overlay project.

**RUNOUT** is piping that is no more than 12 feet long and connects to a fixture or an individual terminal unit.

SATURATED CONDENSING TEMPERATURE (CONDENSING TEMPERATURE) is the saturation temperature corresponding to the refrigerant pressure at the condenser entrance for single component and azeotropic refrigerants. For zeotropic refrigerants, the arithmetic average of the Dew Point and Bubble Point temperatures corresponding to the refrigerant pressure at the condenser entrance.

**SCIENTIFIC EQUIPMENT** is measurement, testing or metering equipment used for scientific research or investigation, including but not limited to manufactured cabinets, carts and racks.

**SCONCE** is a wall mounted ~~ornamental~~ luminaire.

**SEASONAL ENERGY EFFICIENCY RATIO (SEER)** is the total cooling output of an air conditioner in Btu during its normal usage period for cooling divided by the total electrical energy input in watt-hours during the same period, as determined using the applicable test method in the Appliance Efficiency Regulations.

SERIES FAN-POWERED TERMINAL UNIT is a terminal unit that combines a VAV damper in series with a downstream fan which runs at all times that the terminal unit is supplying air to the space.

**SERVICE WATER HEATING** is heating of water for sanitary purposes for human occupancy, other than for comfort heating.

**SHADING** is the protection from heat gains because of direct solar radiation by permanently attached exterior devices or building elements, interior shading devices, glazing material, or adherent materials.

**SHADING COEFFICIENT (SC)** is the ratio of the solar heat gain through a fenestration product to the solar heat gain through an unshaded 1/8-inch-thick clear double strength glass under the same set of conditions. For nonresidential, high-rise residential, and hotel/motel buildings, this shall exclude the effects of mullions, frames, sashes, and interior and exterior shading devices.

**SHOWER HEAD** is a fixture for directing the spray of water in a shower. A shower head may incorporate one or more sprays, nozzles or openings. All components that are supplied standard together and function from one inlet (i.e., after the mixing valve) form a single shower head.

**SIGN** definitions include the following:

**Electronic Message Center (EMC)** is a pixilated image producing electronically controlled sign formed by any light source. Bare lamps used to create linear lighting animation sequences through the use of chaser circuits, also known as “chaser lights” are not considered an EMC.

**Illuminated face** is a side of a sign that has the message on it. For an exit sign it is the side that has the word “EXIT” on it.

**Sign, cabinet** is an internally illuminated sign consisting of frame and face(s), with a continuous translucent message panel, also referred to as a panel sign

**Sign, channel letter** is an internally illuminated sign with multiple components, each built in the shape of an individual three dimensional letters or symbol that are each independently illuminated, with a separate translucent panel over the light source for each element.

**Sign, double-faced** is a sign with two parallel opposing faces.

**Sign, externally illuminated** is any sign or a billboard that is lit by a light source that is external to the sign directed towards and shining on the face of the sign.

**Sign, internally illuminated** is a sign that is illuminated by a light source that is contained inside the sign where the message area is luminous, including cabinet signs and channel letter signs.

**Sign, traffic** is a sign for traffic direction, warning, and roadway identification.

**Sign, unfiltered** is a sign where the viewer perceives the light source directly as the message, without any colored filter between the viewer and the light source, including neon, cold cathode, and LED signs.

**SINGLE PACKAGE VERTICAL AIR CONDITIONER (SPVAC):** Is a type of air-cooled small or large commercial package air-conditioning and heating equipment; factory assembled as a single package having its major components arranged vertically, which is an encased combination of cooling and optional heating components; is intended for exterior mounting on, adjacent interior to, or through an outside wall; and is powered by single or three-phase current. It may contain separate indoor grille(s), outdoor louvers, various ventilation options, indoor free air discharge, ductwork, wall plenum, or sleeve. Heating components may include electrical resistance, steam, hot water, gas, or no heat but may not include reverse cycle refrigeration as a heating means.

**SINGLE PACKAGE VERTICAL HEAT PUMP (SPVHP):** Is an SPVAC that utilizes reverse cycle refrigeration as its primary heat source, with secondary supplemental heating by means of electrical resistance, steam, hot water, or gas.

**SINGLE ZONE SYSTEM** is an air distribution system that supplies air to one thermal zone.

**SITE-BUILT FENESTRATION** is fenestration designed to be field-glazed or field assembled units using specific factory cut or otherwise factory formed framing and glazing units that are manufactured with the intention of being assembled at the construction site and are provided with an NFRC label certificate for site-built fenestration. Examples of site-built fenestration include storefront systems, curtain walls, and atrium roof systems.

**SITE SOLAR ENERGY** is thermal, chemical, or electrical energy derived from direct conversion of incident solar radiation at the building site.

**SKYLIGHT** is fenestration installed on a roof less than 60 degrees from the horizontal.

**SKYLIGHT AREA** is the area of the rough opening for the skylight.

**SKYLIGHT TYPE** is one of the following three types of skylights: glass mounted on a curb, glass not mounted on a curb or plastic (assumed to be mounted on a curb).

**SMACNA** is the Sheet Metal and Air-Conditioning Contractors National Association.

**SMACNA RESIDENTIAL COMFORT SYSTEM INSTALLATION STANDARDS MANUAL** is the Sheet Metal Contractors' National Association document entitled "Residential Comfort System Installation Standards Manual, Seventh Edition." (1998).

**SOCIAL SERVICES BUILDING** is a space where public assistance and social services are provided to individuals or families.

~~**SOLAR HEAT GAIN COEFFICIENT (SHGC)** is the ratio of the solar heat gain entering the space through the fenestration area to the incident solar radiation. Solar heat gain includes directly transmitted solar heat and absorbed solar radiation, which is then reradiated, conducted, or convected into the space.~~

~~**SOLAR HEAT GAIN COEFFICIENT, CENTER OF GLAZING (SHGCC)** is the SHGC for the center of glazing area.~~

~~**SOLAR HEAT GAIN COEFFICIENT, TOTAL FENESTRATION PRODUCT (SHGC OR SHGC<sub>T</sub>)** is the SHGC for the total fenestration product.~~

**SOLAR REFLECTANCE INDEX (SRI)** is a measure of the roof's ability to reject solar heat which includes both reflectance and emittance.

**SOLAR ZONE** is a section of the roof designated and reserved for the future installation of a solar electric or solar thermal system.

**SOUTH-FACING** (See "orientation")

**SPA** is a vessel that contains heated water in which humans can immerse themselves, is not a pool, and is not a bathtub.

**SPACE-CONDITIONING SYSTEM** is a system that provides heating, ventilating, or cooling within or associated with conditioned spaces in a building, that and may consist of but not limited to incorporate use of components such as chillers/compressors, distribution systems (air ducts, water piping, refrigerant piping), pumps, air handlers, unit, cooling and heating coils, air and/or water cooled condensers, economizers, terminal units, and associated controls and the air distribution system, which provide either collectively or individually heating, ventilating, or cooling within or associated with conditioned spaces in a building.

**New or Replacement Space Conditioning Systems** for alterations to dwelling units include all of the system heating/cooling equipment (e.g. condensing unit(s) and cooling or heating coil(s) for split systems; or complete replacement of a package unit); and an entirely new or replacement duct system (see definition); and an entirely new or replacement air handler.

**STANDARD DESIGN BUILDING** is derived from a proposed building using the modeling rules described in the Alternative Calculation Method Manual and by meeting the mandatory and prescriptive requirements in the Title 24 Building Energy Efficiency Standards. In order for a building to comply with the standards, the proposed building energy use must be less than or equal to the Standard Design Building energy use.

**STORAGE, COLD**, is a storage area within a refrigerated warehouse where space temperatures are maintained at or above 32° F.

**STORAGE, FROZEN** is a storage area within a refrigerated warehouse where the space temperatures are maintained below 32° F.

**SYSTEM** is a combination of equipment, controls, accessories, interconnecting means, or terminal elements by which energy is transformed to perform a specific function, such as space conditioning, service water heating, or lighting; or an assembly of individual components when in aggregate provide a specific function and has specific thermal characteristics, such as a wall, roof, or floor.

~~**TASK LIGHTING** is lighting that is designed specifically to illuminate a task location, and that is generally confined to the task location.~~

~~**TEMPORARY LIGHTING** is a lighting installation with plug-in connections that does not persist beyond 60 consecutive days or more than 120 days per year.~~

**TENANT SPACE** is a portion of a building intended for occupancy by a single tenant.

**THERMAL MASS** is solid or liquid material used to store heat for later heating use or for reducing cooling requirements.

**THERMAL RESISTANCE (R)** is the resistance of a material or building component to the passage of heat in  $(\text{hr} \times \text{ft}^2 \times ^\circ\text{F})/\text{Btu}$ .

**THERMOSTATIC EXPANSION VALVE (TXV)** is a refrigerant metering valve, installed in an air conditioner or heat pump, which controls the flow of liquid refrigerant entering the evaporator in response to the superheat of the gas leaving it.

**THROW DISTANCE** is the distance between the luminaire and the center of the plane lit by the luminaire on a display.

**TIME DEPENDENT VALUATION (TDV) ENERGY** is the time varying energy caused to be used by the building to provide space conditioning and water heating and for specified buildings lighting. TDV energy accounts for the energy used at the building site and consumed in producing and in delivering energy to a site, including, but not limited to, power generation, transmission and distribution losses.

**TOTAL HEAT OF REJECTION (THR)** is the heat absorbed at the evaporator plus the heat picked up in the suction line plus the heat added to the refrigerant in the compressor.

**TRANSFER AIR** is air transferred from one room to another through openings in the room envelope, whether it is transferred intentionally or not. The driving force for transfer air is generally a small pressure differential between the rooms, although one or more fans may be used.

**TRIM COMPRESSOR** is a compressor that is designated for part-load operation, handling the short term variable trim load of end uses, in addition to the fully loaded base compressors.

**U-FACTOR, ENVELOPE** is the overall coefficient of thermal transmittance of a construction assembly, in  $\text{Btu}/(\text{hr} \times \text{ft}^2 \times ^\circ\text{F})$ , including air film resistance at both surfaces.

~~**U-FACTOR, CENTER OF GLAZING (U-FACTOR<sub>C</sub>)** is the U Factor for the center of glazing area.~~

~~**U-FACTOR, TOTAL FENESTRATION PRODUCT (U-FACTOR OR U-FACTOR<sub>T</sub>)** is the U Factor for the total fenestration product.~~

**UL®** is the Underwriters Laboratories.

**UL 181** is the Underwriters Laboratories document entitled "Standard for Factory-Made Air Ducts and Air Connectors," 1996.

**UL 181A** is the Underwriters Laboratories document entitled "Standard for Closure Systems for Use With Rigid Air Ducts and Air Connectors," 1994.

**UL 181B** is the Underwriters Laboratories document entitled "Standard for Closure Systems for Use With Flexible Air Ducts and Air Connectors," 1995.

**UL 723** is the Underwriters Laboratories document entitled "Standard for Test for Surface Burning Characteristics of Building Materials," 1996.

**UL 727** is the Underwriters Laboratories document entitled "Standard for Oil-Fired Central Furnaces," 1994.

**UL 731** is the Underwriters Laboratories document entitled "Standard for Oil-Fired Unit Heaters," 1995.

**UL 1574** is the Underwriters Laboratories document entitled "Track Lighting Systems.," 2000.

**UL 1598** is the Underwriters Laboratories document entitled "Standard for Luminaires," 2000.

**UL 2108** is the Underwriters Laboratories document entitled "Low Voltage Lighting Systems," 2008.

**UNCONDITIONED SPACE** is enclosed space within a building that is not directly conditioned, or indirectly conditioned.

**UNIT INTERIOR MASS CAPACITY (UIMC)** is the amount of effective heat capacity per unit of thermal mass, taking into account the type of mass material, thickness, specific heat, density and surface area.

~~**VAPOR BARRIER-RETARDER CLASS** is a material that has a permeance of one perm or less and that provides resistance to the transmission of water vapor. is a measure of the ability of a material or assembly to limit the amount of~~

moisture that passes through the material or assembly. Vapor retarder class shall be defined using the desiccant method with Procedure A of ASTM E96 as follows:

Class I: 0.1 perm or less

Class II:  $0.1 < \text{perm} < 1.0$  perm

Class III:  $1.0 < \text{perm} < 10$  perm

**VARIABLE AIR VOLUME (VAV) SYSTEM** is a space-conditioning system that maintains comfort levels by varying the volume of supply air to the zones served.

**VENDING MACHINE** is a machine for vending and dispensing refrigerated or non-refrigerated food and beverages or general merchandise.

**VERTICAL GLAZING** (See “window”)

**VERY VALUABLE MERCHANDISE** is rare or precious objects, including, but not limited to, jewelry, coins, small art objects, crystal, ceramics, or silver, the selling of which involves customer inspection of very fine detail from outside of a locked case.

~~**VISIBLE TRANSMITTANCE (VT)** is the ratio (expressed as a decimal) of visible light that is transmitted through a glazing to the light that strikes the material as calculated in NFRC 200.~~

~~**VISIBLE TRANSMITTANCE, CENTER OF GLAZING (VTC)** is the VT for the center of glazing area.~~

~~**VISIBLE TRANSMITTANCE, TOTAL FENESTRATION PRODUCT (VT OR VTT)** is the VT for the total fenestration product.~~

**WALL TYPE** is a type of wall assembly having a specific heat capacity, framing type, and U-factor.

**WEST-FACING** (See “orientation”)

**WINDOW** is fenestration that is not a skylight.

**WINDOW AREA** is the area of the surface of a window, plus the area of the frame, sash, and mullions.

**WINDOW TYPE** is a window assembly having a specific solar heat gain coefficient, relative solar heat gain, and U-factor.

**WINDOW WALL RATIO** is the ratio of the window area to the gross exterior wall area.

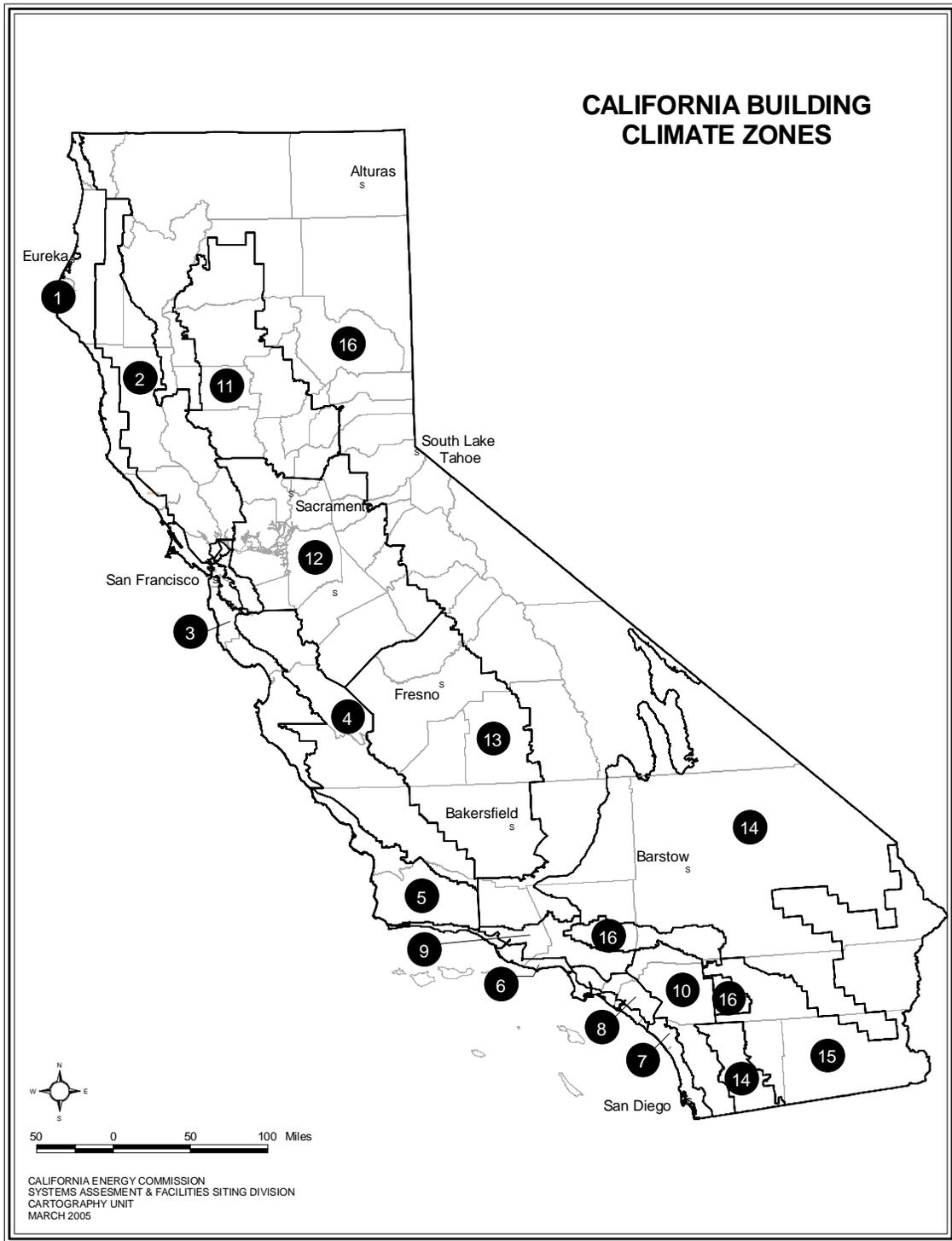
**WOOD HEATER** is an enclosed wood-burning appliance used for space heating and/or domestic water heating.

**WOOD STOVE** (See “wood heater”)

**ZONE, CRITICAL** is a zone serving a process where reset of the zone temperature setpoint during a demand shed event might disrupt the process, including but not limited to data centers, telecom and private branch exchange (PBX) rooms, and laboratories.

**ZONE, NON-CRITICAL** is a zone that is not a critical zone.

**ZONE, SPACE-CONDITIONING**, is a space or group of spaces within a building with sufficiently similar comfort conditioning requirements so that comfort conditions, as specified in Section 140.4(b)3 or 150.0(h), as applicable, can be maintained throughout the zone by a single controlling device.



**FIGURE 100.1-A—CALIFORNIA CLIMATE ZONES**  
*Climate Zones for Residential and Nonresidential Occupancies*

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## **SECTION 100.2 – CALCULATION OF TIME DEPENDENT VALUATION (TDV) ENERGY**

Time Dependent Valuation (TDV) energy shall be used to compare proposed designs to their energy budget when using the performance compliance approach. TDV energy is calculated by multiplying the site energy use (electricity kWh, natural gas therms, or fuel oil or LPG gallons) for each energy type times the applicable TDV multiplier. TDV multipliers vary for each hour of the year and by energy type (electricity, natural gas or propane), by climate zone and by building type (low-rise residential or nonresidential, high-rise residential or hotel/motel). TDV multipliers are summarized in Reference Joint Appendix 3. TDV multipliers for propane shall be used for all energy obtained from depletable sources other than electricity and natural gas.

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**~~SECTION 103 – RESERVED.~~**

**~~SECTION 104 – RESERVED.~~**

**~~SECTION 105 – RESERVED.~~**

**~~SECTION 106 – RESERVED.~~**

**~~SECTION 107 – RESERVED.~~**

**~~SECTION 108 – RESERVED.~~**

**~~SECTION 109 – RESERVED.~~**

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