



CALGREEN MANDATORY CHECKLIST

RESIDENTIAL PROJECTS

THESE REQUIREMENTS APPLY TO BUILDING PERMITS SUBMITTED ON OR AFTER JANUARY 1, 2017

Following is a standardized checklist of the 2016 California Green Building Standards Code (CalGreen) requirements that may be used to demonstrate compliance with the CalGreen Mandatory Measures (chapter 4). This checklist is required for all new buildings and additions/alterations that increase the building's conditioned area. The requirements shall apply only to and/or within the specific area of the addition or alteration.

CALGreen Reference	Description	Designer's Comments with Plan Sheet Reference	City Use Only Field Insp. Verification
4.1 Planning and Design	4.106.2 Storm water drainage and retention during construction. A plan is developed and implemented to manage storm water drainage during construction.	Sheet:	Initials: _____ Date: _____
4.1 Planning and Design	4.106.3 Grading and paving. Construction plans shall indicate how site grading or a drainage system will manage all surface water flows keep water from entering buildings.	Sheet:	Initials: _____ Date: _____
4.1 Planning and Design	4.106.4 EV Charging. Provide capability for electric vehicle charging in one- and two-family dwellings and in townhouses with attached private garages; and 12.5% of total parking spaces, as specified, for multi-family dwellings.	Sheet:	Initials: _____ Date: _____
4.2 Energy Efficiency	4.201.1 Scope Building meets or exceeds the requirements of the California Building Energy Efficiency Standards	Sheet:	Initials: _____ Date: _____

<p>4.3 Water Efficiency and Conservation</p>	<p>4.303.1 Water conserving plumbing fixtures and fittings. Plumbing fixtures (water closets and urinals) and fittings (faucets and showerheads) installed in residential buildings shall comply with the prescriptive requirements of Sections 4303.1.1 through 4303.1.4.4.</p> <p>4.303.1.1 Water closets. The effective flush volume of all water closets shall not exceed 1.28 gallons per flush. Tank-type water closets shall be certified to the performance criteria of the U.S. EPA WaterSense Specification for Tank-type Toilets. Note: The effective flush volume of dual flush toilets is defined as the composite, average flush volume of two reduced flushes and one full flush.</p> <p>4.303.1.2 Urinals. The effective flush volume of wall mounted urinals shall not exceed 0.125 gallons per flush. The effective flush volume of all other urinals shall not exceed 0.5 gallons per flush.</p> <p>4.303.1.3 Showerheads.</p> <p>4.303.1.3.1 Single showerhead. Showerheads shall have a maximum flow rate of not more than 2.0 gallons per minute at 80 psi. Showerheads shall be certified to the performance criteria of the U.S. EPA WaterSense Specification for Showerheads.</p> <p>4.303.1.3.2 Multiple showerheads serving one shower. When a shower is served by more than one showerhead, the combined flow rate of all showerheads and/or other shower outlets controlled by a single valve shall not exceed 2.0 gallons per minute at 80 psi, or the shower shall be designed to allow only one shower outlet to be in operation at a time. Note: A hand-held shower shall be considered a Showerhead.</p> <p>4.303.1.4 Faucets.</p> <p>4.303.1.4.1 Residential lavatory faucets. The maximum flow rate of residential lavatory faucets shall not exceed 1.2 gallons per minute at 60 psi. The minimum flow rate of residential lavatory faucets shall not be less than 0.8 gallons per minute at 20 psi.</p> <p>4.303.1.4.2 Lavatory faucets in common and public use areas. The maximum flow rate of lavatory faucets installed in common and public use areas (outside of dwellings or sleeping units) in residential buildings shall not exceed 0.5 gallons per minute at 60 psi.</p> <p>4.303.1.4.3 Metering faucets. Metering faucets when installed in residential buildings shall not deliver more than 0.25 gallons per cycle.</p> <p>4.303.1.4.4 Kitchen faucets. The maximum flow rate of kitchen faucets shall not exceed 1.8 gallons per minute at 60 psi. Kitchen faucets may temporarily increase the flow above the maximum rate, but not to exceed 2.2 gallons per minute at 60 psi, and must default to a maximum flow rate of 1.8 gallons per minute at 60 psi. Note: Where complying faucets are unavailable, aerators or other means may be used to achieve reduction.</p>	<p>Sheet:</p>	<p>Initials: _____</p> <p>Date: _____</p>
<p>4.3 Water Efficiency and Conservation</p>	<p>4.303.2 Standards for plumbing fixtures and fittings. Plumbing fixtures and fittings required in Section 4.303.1 shall be installed in accordance with the California Plumbing Code, and shall meet the applicable referenced standards.</p>	<p>Sheet:</p>	<p>Initials: _____</p> <p>Date: _____</p>

4.3 Water Efficiency and Conservation	<p>4.304.1 Outdoor potable water use in landscape areas. After December 1, 2015, new residential developments with an aggregate landscape area equal to or greater than 500 square feet shall comply with one of the following options:</p> <ol style="list-style-type: none"> 1. A local water efficient landscape ordinance or the current California Department of Water Resources' Model Water Efficient Landscape Ordinance (MWELo), whichever is more stringent; or 2. Projects with aggregate landscape areas less than 2,500 square feet may comply with the MWELo's Appendix D Prescriptive Compliance Option. <p>Notes:</p> <ol style="list-style-type: none"> 1. The Model Water Efficient Landscape Ordinance (MWELo) and supporting documents are available at: www.water.ca.gov/wateruseefficiency/landscapeordinance/ 2. A water budget calculator is available at: www.water.ca.gov/wateruseefficiency/landscapeordinance/ 	Sheet:	Initials: _____ Date: _____
4.4 Material Conservation and Resource Efficiency	<p>4.406.1 Rodent proofing. Annular spaces around pipes, electric cables, conduits or other openings in sole/bottom plates at exterior walls shall be protected against the passage of rodents by closing such openings with cement mortar, concrete masonry or a similar method acceptable to the enforcing agency.</p>	Sheet:	Initials: _____ Date: _____
4.4 Material Conservation and Resource Efficiency	<p>4.408.1 Construction waste management. Recycle and/or salvage for reuse a minimum of 65 percent of the nonhazardous construction and demolition waste in accordance with one of the following:</p> <ol style="list-style-type: none"> 1. Comply with a more stringent local construction and demolition waste management ordinance; or 2. A construction waste management plan, per Section 4.408.2; or 3. A waste management company, per Section 4.408.3; or 4. The waste stream reduction alternative, per Section 4.408.4. 	Sheet:	Initials: _____ Date: _____
4.4 Material Conservation and Resource Efficiency	<p>4.410.1 Operation and maintenance manual. An operation and maintenance manual shall be provided to the building occupant or owner.</p>	Sheet:	Initials: _____ Date: _____
4.4 Material Conservation and Resource Efficiency	<p>4.410.2 Recycling by Occupants. Where 5 or more multifamily dwelling units are constructed on a building site, provide readily accessible area(s) that serves all buildings on the site and is identified for the depositing, storage and collection of non-hazardous materials for recycling, including (at a minimum) paper, corrugated cardboard, glass, plastics, organic waste, and metals, or meet a lawfully enacted local recycling ordinance, if more restrictive.</p>	Sheet:	Initials: _____ Date: _____
4.5 Environmental Quality	<p>4.503.1 Fireplace. Any installed gas fireplace shall be a direct vent sealed-combustion type. Any installed woodstove or pellet stove shall comply with U.S. EPA New Source Performance Standards (NSPS) emission limits as applicable, and shall have a permanent label indicating they are certified to meet the emission limits. Woodstoves, pellet stoves and fireplaces shall also comply with applicable local ordinances.</p>	Sheet:	Initials: _____ Date: _____

4.504.1 Covering of duct openings and protection of mechanical equipment during construction. Duct openings and other related air distribution component openings shall be covered during construction.

4.504.2 Finish material pollutant control.

4.504.2.1 Adhesives, sealants and caulks. Adhesives, sealants and caulks shall be compliant with VOC and other toxic compound limits.

4.504.2.2 Paints and coatings. Paints, stains and other coatings shall be compliant with VOC limits.

4.504.2.3 Aerosol paints and coatings. Aerosol paints and coatings shall be compliant with product weighted MIR limits for ROC and other toxic compounds.

4.504.2.4 Verification. Documentation shall be provided to verify that compliant VOC limit finish materials have been used.

4.504.3 Carpet systems. All carpet installed in the building interior shall meet the testing and product requirements of one of the following:

1. Carpet and Rug Institute's Green Label Plus Program.
2. California Department of Public Health, "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers," Version 1.1, February 2010 (also known as Specification 01350.)
3. NSF/ANSI 140 at the Gold level.
4. Scientific Certifications Systems Indoor Advantage™ Gold.

4.504.3.1 Carpet cushion. All carpet cushion installed in the building interior shall meet the requirements of the Carpet and Rug Institute's Green Label program.

4.504.3.2 Carpet adhesive. All carpet adhesive shall meet the requirements of Table 4.504.1.

4.504.4 Resilient flooring systems. Where resilient flooring is installed, at least 80 percent of floor area receiving resilient flooring shall comply with one or more of the following:

1. Products compliant with the California Department of Public Health, "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers," Version 1.1, February 2010 (also known as Specification 01350), certified as a CHPS Low-Emitting Material in the Collaborative for High Performance Schools (CHPS) High Performance Products Database.
2. Products certified under UL GREENGUARD Gold (formerly the Greenguard Children & Schools program).
3. Certification under the Resilient Floor Covering Institute (RFCI) FloorScore program.
4. Meet the California Department of Public Health, "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers," Version 1.1, February 2010 (also known as Specification 01350).

4.504.5 Composite wood products. Hardwood plywood, particleboard and medium density fiberboard composite wood products used on the interior or exterior of the building shall meet the requirements for formaldehyde as specified in ARB's Air Toxics Control Measure for Composite Wood (17 CCR 93J20 et seq.), by or before the dates specified in those sections, as shown in Table 4.504.5.

Sheet:

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4.5 Environmental Quality	<p>4.505.2 Concrete slab foundations. Vapor retarder and capillary break is installed at slab-on-grade foundations.</p> <p>4.503.3 Moisture content of building materials. Moisture content of building materials used in wall and floor framing is checked before enclosure.</p>	Sheet:	Initials: _____ Date: _____
4.5 Environmental Quality	<p>4.507.2 Heating and air-conditioning system design. Duct systems are sized, designed, and equipment is selected using the following methods:</p> <ol style="list-style-type: none"> 1. Establish heat loss and heat gain values according to ANSIIACCA 2 Manual J-2011 or equivalent. 2. Size duct systems according to ANSI! ACCA 1 Manual D-2014 or equivalent. 3. Select heating and cooling equipment according to ANSI/ACCA 3 Manual S-2014 or equivalent. 	Sheet:	Initials: _____ Date: _____
Chapter 7 Installer and Special Inspector Qualifications	<p>702.1 Installer Training. HVAC system installers are trained and certified in the proper installation of HVAC systems.</p> <p>702.2 Special Inspection. Special inspectors employed by the enforcing agency must be qualified and able to demonstrate competence in the discipline they are inspecting.</p> <p>703.1 Documentation. Verification of compliance with this code may include construction documents, plans, specifications builder or installer certification, inspection reports, or other methods acceptable to the enforcing agency which show substantial conformance.</p>	Sheet:	Initials: _____ Date: _____