



California Green Building Standards Code 2010
Residential CALGreen Code

As Amended by the City of Beverly Hills 2010 Code Adoption Committee
Appendix A4 Section A4.602
Residential Occupancies (less than 7 stories) Application Checklist
Effective January 1, 2011

Introduction

As part of the California Building Standards Code (California Code of Regulations, Title 24), the California Green Building Standards Code (Part 11) is intended by the State of California “to improve public health, safety and general welfare by enhancing the design and construction of buildings through the use of building concepts having a reduced negative impact or positive environmental impact and encouraging sustainable construction practices”. The requirements contained in the California Green Building Standards Code, also known as the CALGreen Code, apply to every newly constructed building or structure in the State of California.

In addition to the mandatory requirements specified in the CALGreen Code, several optional tiers are included “that may, at the discretion of any city, county, or city and county, be applied”. As part of its 2010 Code adoption process, the City of Beverly Hills has adopted several amendments, additions, and deletions to the CALGreen Code to more accurately reflect local “climactic, topographical or geological conditions”. The City of Beverly Hills encourages sustainable building practices. Its amendments are intended go above and beyond the CALGreen Code to further promote environmental sustainability.

The following checklist contains the green building mandatory and optional requirements for residential buildings under 7 stories in height as amended by the Beverly Hills Municipal Code. The checklist allows its users to identify the mandatory requirements and which voluntary requirements have been met. The measures listed in the checklist refer to sections of the amended code where further information can be found. Amendments to the CALGreen Code along with optional tiers adopted as mandatory are noted in **red** and amended language is underlined.

For further information contact:

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CITY OF BEVERLY HILLS
RESIDENTIAL OCCUPANCIES
 (LESS THAN 7 STORIES)
APPLICATION CHECKLIST

FEATURE OR MEASURE	LEVELS APPLICANT TO SELECT ELECTIVE MEASURES			VERIFICATIONS ENFORCING AGENCY TO SPECIFY VERIFICATION METHOD			APPLICABLE FORMS ^{F1}
	Mandatory	Prerequisites and electives ¹		Enforcing Agency	Installer or Designer	Third party	
		Tier 1	Tier 2				
PLANNING AND DESIGN							
Site Selection							
A4.103.1 A site which complies with at least one of the following characteristics is selected: 1. An infill site is selected. 2. A greyfield site is selected. 3. An EPA-recognized Brownfield site is selected.		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>					
Site Preservation							
A4.104.1 An individual with oversight responsibility for the project can demonstrate knowledge in environmentally friendly design or development by obtaining a recognized certification and has provided a written guideline and instruction on the construction documents specifying the green goals of the project and disseminated it to all parties involved with the development process. ^{BH1}		<input type="checkbox"/>					
Deconstruction and Reuse of Existing Materials							
A4.105.2 The proposed structure utilizes reused items that meet current standards for at least 15% for Tier I and 25% for Tier II in one of the following categories, or a combination of multiple categories totaling that required percentage. ^{BH1} 1. Light fixtures 2. Plumbing fixtures 3. Doors and trim 4. Masonry 5. Electrical devices 6. Appliances 7. Foundations or portions of foundations		<input type="checkbox"/>					
Site Development							
4.106.2 A plan is developed and implemented to manage storm water drainage during construction.	<input checked="" type="checkbox"/>						SL-1
4.106.3 The site shall be planned and developed to keep surface water away from buildings. Construction plans shall indicate how site grading or a drainage system will manage all surface water flows.	<input checked="" type="checkbox"/>						
A4.106.1 Orient building to optimize the use of solar energy with the long side of the house oriented within 30° of south.		<input type="checkbox"/>					
A4.106.2.1 Soil analysis is performed by a licensed design professional and the findings utilized in the structural design of the building.		<input type="checkbox"/>					
A4.106.2.2 Soil disturbance and erosion are minimized by at least one of the following: 1. Natural drainage patterns are evaluated and erosion controls are implemented to minimize erosion during construction and after occupancy. 2. Site access is accomplished by minimizing the amount of cut and fill needed to install access roads and driveways. 3. Underground construction activities are coordinated to utilize the same trench, minimize the amount of time the disturbed soil is exposed and the soil is replaced using accepted compaction methods.		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>					
A4.106.2.3 Topsoil shall be protected or saved for reuse as specified in this section. Tier 1. Displaced topsoil shall be stockpiled for reuse in a	<input checked="" type="checkbox"/> ^{BH2}	<input checked="" type="checkbox"/> ^{BH2}	<input checked="" type="checkbox"/> ^{BH2}	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
		<input checked="" type="checkbox"/> ²					

1. Green building measures listed in this table may be mandatory if adopted by a city, county, or city and county as specified in Section 101.7.
 2. Required prerequisite for this Tier.
 BH1.City of Beverly Hills code amendment
 BH2.City of Beverly Hills amended this section as part of the mandatory minimum code requirements.
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		Tier 1	Tier 2				
designated area and covered or protected from erosion. Tier 2. The construction area shall be identified and delineated by fencing or flagging to limit construction activity to the construction area.			<input checked="" type="checkbox"/> ²				
A4.106.3 Landscaping completed prior to the final inspection accomplishes one or more of the following: ^{BH1} 1. Areas disrupted during construction are restored to be consistent with native vegetation species and patterns. 2. Limit turf areas to the greatest extent possible. a. Not more than 50% of landscaped area for Tier 1. b. Not more than 25% of landscaped area for Tier 2. 3. Utilize at least 75% native Californian or drought tolerant plant and tree species appropriate for the climate zone region. 4. Hydrozoning irrigation techniques are incorporated into the landscape design.		<input type="checkbox"/>					
4.106.4 Electric vehicle charging. Provide facilities meeting Section 406.7 (Electric Vehicle) of the California Building Code and as follows: 4.106.4.1 Electric vehicle supply wiring. One 120 VAC 20 amp and one 208/240 V 40 amp, grounded AC outlets or panel capacity for one 120 VAC 20 amp and one 208/240 V 40 amp, grounded AC outlet and conduit installed for future outlets for each dwelling unit. Electric vehicle supply shall be provided and may be installed in a stall provided to comply with the code minimum parking requirements. Dwelling unit shall be defined by the California Building Code. Exception: Apartment Buildings and Apartment Units.	<input checked="" type="checkbox"/> ^{BH2}	<input checked="" type="checkbox"/> ^{BH2}	<input checked="" type="checkbox"/> ^{BH2}				
A4.106.4 Permeable paving is utilized for the parking, walking, or patio surfaces in compliance with the following. Tier 1. Not less than 20% of the total parking, walking, or patio surfaces shall be permeable. Tier 2. Not less than 30% of the total parking, walking, or patio surfaces shall be permeable.		<input checked="" type="checkbox"/> ²	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
A4.106.5 Roofing materials shall have a minimum 3-year aged solar reflectance and thermal emittance or a minimum Reflectance Index (SRI) equal to or greater than the values specified in Tables A4.106.5 (1) and A4.106.5 (2). Tier 1 roof covering shall meet or exceed the values contained in Table A4.106.5 (1). Tier 2 roof covering shall meet or exceed the values contained in Table A4.106.5 (2).		<input checked="" type="checkbox"/> ²	<input type="checkbox"/>				
Innovative Concepts and Local Environmental Conditions							
A4.107.1 Items in this section are necessary to address innovative concepts or local environmental conditions. Item 1. Item 2. Item 3.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>						
ENERGY EFFICIENCY							
General							
4.201.1 Low-rise residential buildings shall meet or exceed the minimum standard design required by the California Energy Standards.	<input checked="" type="checkbox"/>						
A4.203.1 Exceed the California Energy Code requirements, based on the 2008 Energy Efficiency Standards requirements by 15%.	<input checked="" type="checkbox"/> ^{BH2}	<input checked="" type="checkbox"/> ²					
A4.203.1 Exceed the California Energy Code requirements, based on the 2008 Energy Efficiency Standards requirements by 30%.			<input checked="" type="checkbox"/> ²				

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	Mandatory	Prerequisites and electives ¹		Enforcing Agency	Installer or Designer	Third party	
		Tier 1	Tier 2				
Prescriptive Approach							
Building Envelope							
A4.205.1 Radiant roof barrier is installed in Climate Zones 2, 4, and 8 through 15.		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
A4.205.2 Exterior shading at least 18 inches in depth is provided on south and west windows.		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Air Sealing Package							
A4.206.1 Third party blower door test is conducted and passed to verify building envelope tightness.		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
HVAC Design, Equipment and Installation							
A4.207.1 Radiant, hydronic, ground source and other innovative space heating and cooling systems included in the proposed design shall be designed using generally accepted industry-approved guidelines and design criteria.		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
A4.207.2 An HVAC system commissioning plan is developed and the following items, as appropriate, pertaining to the heating and cooling systems are inspected and certified by an independent third party agency: 1. Verify compliance with the manufacturers recommended start-up procedures. 2. Verify refrigerant charge by super-heat or other methods specified by the manufacturer. 3. Burner is set to fire at the nameplate input rating. 4. Temperature drop across the evaporator is within the manufacturers recommended range. 5. Test and verify air flow to be within 10% of the initial design air flow. 6. Static pressure within the duct system is within the manufacturers' acceptable range. 7. Verify that the whole house and exhaust ventilation systems meet Title 24 requirements. 8. Verify that the recommended maintenance procedures and schedules are documented and provided to the home owner.		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
A4.207.2.3 Results of the commissioning inspection shall be included in the Operation and Maintenance Manual required in Section 4.410.1.		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	OMM
A4.207.4 Install gas-fired (natural or propane) space heating equipment with an Annual Fuel Utilization Ratio (AFUE) of .90 or higher.		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
A4.207.5 If an electric heat pump must be used, select equipment with a Heating Seasonal Performance Factor (HSPF) of 8.0 or higher.		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
A4.207.6 When climatic conditions necessitate the installation of cooling equipment, select cooling equipment with a Seasonal Energy Efficiency Ratio (SEER) higher than 13.0 and an Energy Efficiency Ratio (EER) of at least 11.5.		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
A4.207.7 Install ductwork to comply with at least one of the following: 1. Install ducts within the conditioned envelope of the building. 2. Install ducts in an underfloor crawl space. 3. Use ducts with an R-6 insulation value or higher. 4. Install ductwork which is buried in the ceiling insulation.		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
A4.207.8 Perform duct leakage testing to verify a total leakage rate of less than 6% of the total fan flow.		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
A4.207.9 In cooling Climate Zones 2, 4, and 8 through 15 install a whole-house fan with insulated louvers or an insulated cover.		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
A4.207.10 ENERGY STAR ceiling fans are installed in all bedrooms and living areas.		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Water Heating Design, Equipment and Installation							

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	Mandatory	Prerequisites and electives ¹		Enforcing Agency	Installer or Designer	Third party	
		Tier 1	Tier 2				
A4.208.1 The Energy Factor (EF) for a gas fired storage water heater is higher than .60.		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
A4.208.2 The Energy Factor (EF) for a gas fired tankless water heater is .80 or higher.		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
A4.208.3 Where the hot water source is more than 10 feet from a fixture, the potable water distribution system shall convey hot water using a method designed to minimize wait time for hot water to arrive at the fixture.		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Lighting							
A4.209.1 Building lighting consists of at least 90% ENERGY STAR qualified hard-wired fixtures.		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Appliances							
A4.210.1 Each appliance provided by the builder meets ENERGY STAR if an ENERGY STAR designation is applicable for that appliance.		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Renewable Energy							
<p>A4.211.1 Install a solar photovoltaic (PV) system in compliance with the California Energy Commission New Solar Homes Partnership (NSHP). 1, 2 Install energy efficiency measures meeting either Tier I or Tier II below^{F2}.</p> <p>Tier 1. Exceed the California Energy Code requirements, based on the 2008 Energy Efficiency Standards requirements by 15%.</p> <p>Tier 2. Exceed the California Energy Code requirements, based on the 2008 Energy Efficiency Standards requirements by 30%.</p> <p>Solar water heating may be used to assist in meeting the energy efficiency requirements of either Tier I or Tier II.</p> <p>1. In addition, for either Tier I or II, each appliance provided by the builder must be Energy Star if an Energy Star designation is applicable for that appliance.</p> <p>2. Information on NSHP incentives available through the California Energy Commission may be obtained at the "Go Solar California" website: http://www.gosolarcalifornia.org/about/nshp.php</p> <p>Notwithstanding, a single family residential property is exempt from the requirements of installing a solar photovoltaic (PV) system if the property meets the requirements of section A4.211.3 and A4.211.4. This exception, however, does not apply if the property owner of a single family residential property chooses to voluntarily comply with CALGreen Tier 1 or Tier 2 requirements.</p>	<input checked="" type="checkbox"/> BH2	<input checked="" type="checkbox"/> BH2	<input checked="" type="checkbox"/> BH2			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
A4.211.2 A solar water heating system is installed.		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
A4.211.3 Space on the roof surface and penetrations through the roof surface are provided for future solar installation.		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
A4.211.4 A minimum one inch conduit is provided from the electrical service equipment for the future installation of a photovoltaic (PV) system.	<input checked="" type="checkbox"/> BH2	<input checked="" type="checkbox"/> BH2	<input checked="" type="checkbox"/> BH2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Elevators, Escalators and Other Equipment							
Innovative Concepts and Local Environmental Conditions							
<p>A4.213.1 Items in this section are necessary to address innovative concepts or local environmental conditions.</p> <p>Item 1.</p> <p>Item 2.</p> <p>Item 3.</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
WATER EFFICIENCY AND CONSERVATION							

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	Mandatory	Prerequisites and electives ¹		Enforcing Agency	Installer or Designer	Third party	
		Tier 1	Tier 2				
Indoor Water Use							
4.303.1 Indoor water use shall be reduced by at least 20% using one of the following methods. 1. Water saving fixtures or flow restrictors shall be used. 2. A 20% reduction in baseline water use shall be demonstrated.	<input checked="" type="checkbox"/> 7/21/2011			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	WS-1 , WS-2
4.303.2 When using the calculation method specified in Section 4.303.1, multiple showerheads shall not exceed maximum flow rates.	<input checked="" type="checkbox"/> 7/21/2011			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	WS-1 , WS-4
4.303.3 Plumbing fixtures (water closets and urinals) and fittings (faucets and showerheads) shall comply with specified performance requirements.	<input checked="" type="checkbox"/> 7/21/2011			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
A4.303.1 Kitchen faucets and dishwashers shall comply with this section. Tier 1. The maximum flow rate at a kitchen sink faucet shall not be greater than 1.5 gallons per minute at 60 psi. Tier 2. In addition to the kitchen faucet requirements for Tier 1, dishwashers in Tier 2 buildings shall be ENERGY STAR qualified and not use more than 5.8 gallons of water per cycle		<input checked="" type="checkbox"/> ²	<input checked="" type="checkbox"/> ² <input checked="" type="checkbox"/> ²	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	WS-4
A4.303.2 Non-water supplied urinals or waterless toilets are installed.		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Outdoor Water Use							
4.304.1 Automatic irrigation systems controllers installed at the time of final inspection shall be weather-based.	<input checked="" type="checkbox"/> ^{BH1}			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
A4.304.1 Install a low-water consumption irrigation system which minimizes the use of spray type heads.		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
A4.304.2 A rainwater capture, storage and re-use system is designed and installed.		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
A4.304.3 A water budget shall be developed for landscape irrigation.		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
A4.304.4 Provide water efficient landscape irrigation design that reduces the use of potable water. Tier 1. Does not exceed 65% of ETo times the landscape area. Tier 2. Does not exceed 60% of ETo times the landscape area.		<input checked="" type="checkbox"/> ²	<input checked="" type="checkbox"/> ²	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
A4.304.5 A landscape design is installed which does not utilize potable water.		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
WATER REUSE SYSTEMS							
A4.305.1 Piping is installed to permit future use of a graywater irrigation system served by the clothes washer or other fixtures.	<input checked="" type="checkbox"/> ^{BH2}	<input checked="" type="checkbox"/> ^{BH2}	<input checked="" type="checkbox"/> ^{BH2}	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
A4.305.2 Recycled water piping is installed.		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
A4.305.3 Recycled water is used for landscape irrigation.		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Innovative Concepts and Local Environmental Conditions							
A4.306.1 Items in this section are necessary to address innovative concepts or local environmental conditions. Item 1. Item 2. Item 3.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
MATERIAL CONSERVATION AND RESOURCE EFFICIENCY							
Foundation Systems							
A4.403.1 A Frost-Protected Shallow Foundation (FPSF) is designed and constructed. ^{BH1}							
A4.403.2 Cement use in foundation mix design is reduced. Tier 1. Not less than a 20% reduction in cement use. Tier 2. Not less than a 25% reduction in cement use.		<input checked="" type="checkbox"/> ²	<input checked="" type="checkbox"/> ²	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Efficient Framing Techniques							
A4.404.1 Beams and headers and trimmers are the minimum size to adequately support the load.		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
A4.404.2 Building dimensions and layouts are designed to		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

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		Tier 1	Tier 2				
minimize waste.							
A4.404.3 Use pre-manufactured building systems to eliminate solid sawn lumber whenever possible.		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
A4.404.4 Material lists are included in the plans which specify material quantity and provide direction for on-site cuts.		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Material Sources							
A4.405.1 One or more of the following building materials, that do not require additional resources for finishing are used: 1. Exterior trim not requiring paint or stain. 2. Windows not requiring paint or stain. 3. Siding or exterior wall coverings which do not require paint or stain.		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
A4.405.2 Floors that do not require additional coverings are used including but not limited to stained, natural, or stamped concrete floors.		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
A4.405.3 Post-consumer or pre-consumer recycled content value (RCV) materials are used on the project. Tier 1. Not less than a 10% recycled content value. Tier 2. Not less than a 15% recycled content value.		<input checked="" type="checkbox"/> ²	<input checked="" type="checkbox"/> ²	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
A4.405.4 Renewable source building products are used.		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Enhanced Durability and Reduced Maintenance							
4.406.1 Joints and openings. Annular spaces around pipes, electric cables, conduits, or other openings in plates at exterior walls shall be protected against the passage of rodents by closing such openings with cement mortar, concrete masonry or similar method acceptable to the enforcing agency.	<input checked="" type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Water Resistance and Moisture Management							
A4.407.1 Install foundation and landscape drains.		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
A4.407.2 Install gutter and downspout systems to route water at least 5 feet away from the foundation or connect to landscape drains which discharge to a dry well, sump, bioswale, rainwater capture system or other approved on-site location.		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
A4.407.3 Provide flashing details on the building plans and comply with accepted industry standards or manufacturer's instructions.		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
A4.407.4 Protect building materials delivered to the construction site from rain and other sources of moisture.	<input checked="" type="checkbox"/> ^{BH2}	<input checked="" type="checkbox"/> ^{BH2}	<input checked="" type="checkbox"/> ^{BH2}	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
A4.407.5 Deleted. ^{BH1}		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
A4.407.6 Exterior doors to the dwelling are protected to prevent water intrusion.		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
A4.407.7 A permanent overhang or awning at least 2 feet in depth is provided.		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Construction Waste Reduction, Disposal and Recycling							
4.408.1 A minimum of 50% of the construction waste generated at the site is diverted to recycle or salvage.	<input checked="" type="checkbox"/>			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	All CW forms
4.408.2 Where a local jurisdiction does not have a construction and demolition waste management ordinance, a construction waste management plan shall be submitted for approval to the enforcing agency.	<input checked="" type="checkbox"/>			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	CW-1
A4.408.1 Construction waste generated at the site is diverted to recycle or salvage in compliance with one of the following: 1. Tier 1 at least a 65% reduction 2. Tier 2 at least a 75% reduction Exception: Equivalent waste reduction methods are developed by working with local agencies.		<input checked="" type="checkbox"/> ²	<input checked="" type="checkbox"/> ²	<input type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	All CW forms
Building Maintenance and Operation							
4.410.1 An operation and maintenance manual shall be provided to the building occupant or owner.	<input checked="" type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	OMM
Innovative Concepts and Local Environmental Conditions							
A4.411.1 Items in this section are necessary to address							

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FEATURE OR MEASURE	LEVELS APPLICANT TO SELECT ELECTIVE MEASURES			VERIFICATIONS ENFORCING AGENCY TO SPECIFY VERIFICATION METHOD			APPLICABLE FORMS ^{F1}
	Mandatory	Prerequisites and electives ¹		Enforcing Agency	Installer or Designer	Third party	
		Tier 1	Tier 2				
innovative concepts or local environmental conditions. Item 1. Item 2. Item 3.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>						
ENVIRONMENTAL QUALITY							
Fireplaces							
4.503.1 Any installed gas fireplace shall be a direct vent sealed-combustion type. Any installed woodstove or pellet stove shall comply with US EPA Phase II emission limits where applicable. Woodstoves, pellet stoves and fireplaces shall also comply with applicable local ordinances.	<input checked="" type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Pollutant Control							
4.504.1 Duct openings and other related air distribution component openings shall be covered during construction.	<input checked="" type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.504.2.1 Adhesives, sealants and caulks shall be compliant with VOC and other toxic compound limits.	<input checked="" type="checkbox"/>			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	PC-1r
4.504.2.2 Paints, stains and other coatings shall be compliant with VOC limits.	<input checked="" type="checkbox"/>			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	PC-2r
4.504.2.3 Aerosol paints and coatings shall be compliant with product weighted MIR limits for ROC and other toxic compounds.	<input checked="" type="checkbox"/>			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	PC-2r
4.504.2.4 Documentation shall be provided to verify that compliant VOC limit finish materials have been used.	<input checked="" type="checkbox"/>			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	PC-2r
4.504.3 Carpet and carpet systems shall be compliant with VOC limits.	<input checked="" type="checkbox"/>			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	PC-4r
4.504.4 50 percent of floor area receiving resilient flooring shall comply with the VOC-emission limits defined in the Collaborative for High Performance Schools (CHPS) Low-emitting Materials List or be certified under the Resilient Floor Covering Institute (RCFI) FloorScore program.	<input checked="" type="checkbox"/>						PC-4r
4.504.5 Particleboard, medium density fiberboard (MDF), and hardwood plywood used in interior finish systems shall comply with low formaldehyde emission standards.	<input checked="" type="checkbox"/>			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	PC-3r
A4.504.1 Meet the formaldehyde limits contained in Table 4.504.5 before the mandatory compliance date, or use composite wood products made with either California Air Resources Board approved no-added formaldehyde (NAF) resins or ultra-low emitting formaldehyde (ULEF) resins.		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	PC-3r
A4.504.2 Install VOC compliant resilient flooring systems. Tier 1. At least 80% of the resilient flooring installed shall comply. Tier 2. At least 90% of the resilient flooring installed shall comply.	<input checked="" type="checkbox"/> ^{BH2}	<input checked="" type="checkbox"/> ²	<input checked="" type="checkbox"/> ²	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	PC-4r
A4.504.3 Thermal insulation installed in the building shall meet the following requirements: Tier 1. Install thermal insulation in compliance with the VOC-emission limits defined in Collaborative for High Performance Schools (CHPS) Low-emitting Materials List. Tier 2. Install insulation which contains No-Added Formaldehyde (NAF) and is in compliance with the VOC-emission limits defined in Collaborative for High Performance Schools (CHPS) Low-emitting Materials List.	<input checked="" type="checkbox"/> ^{BH2}	<input checked="" type="checkbox"/> ²	<input checked="" type="checkbox"/> ²	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Interior Moisture Control							
4.505.2 Vapor retarder and capillary break is installed at slab on grade foundations.	<input checked="" type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.505.3 Moisture content of building materials used in wall and floor framing is checked before enclosure.	<input checked="" type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Indoor Air Quality and Exhaust							
4.506.1 Exhaust fans which terminate outside the building are provided in every bathroom.	<input checked="" type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
A4.506.1 Higher than MERV 6 filters are installed on central air	<input checked="" type="checkbox"/> ^{BH2}	<input checked="" type="checkbox"/> ^{BH2}	<input checked="" type="checkbox"/> ^{BH2}	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

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	Mandatory	Prerequisites and electives ¹		Enforcing Agency	Installer or Designer	Third party	
		Tier 1	Tier 2				
or ventilation systems.							
A4.506.2 Direct vent appliances are used or isolated from the conditioned space.		<input type="checkbox"/>					
Environmental Comfort							
4.507.1 Whole house exhaust fans shall have insulated louvers or covers which close when the fan is off. Covers or louvers shall have a minimum insulation value of R-4.2.	<input checked="" type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.507.2. Duct systems are sized, designed, and equipment is selected using the following methods: 1. Establish heat loss and heat gain values according to ACCA Manual J or equivalent. 2. Size duct systems according to ACCA 29-D (Manual D) or equivalent. 3. Select heating and cooling equipment according to ACCA 36-S (Manual S) or equivalent.	<input checked="" type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Outdoor Air Quality Reserved							
Innovative Concepts and Local Environmental Conditions							
A4.509.1 Items in this section are necessary to address innovative concepts or local environmental conditions. Item 1. Item 2. Item 3.		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>					
INSTALLER AND SPECIAL INSPECTOR QUALIFICATIONS							
Qualifications							
702.1 HVAC system installers are trained and certified in the proper installation of HVAC systems.	<input checked="" type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
702.2 Special inspectors employed by the enforcing agency must be qualified and able to demonstrate competence in the discipline they are inspecting.	<input checked="" type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Verifications							
703.1 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.	<input checked="" type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

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