

Accessory Dwelling Units (ADUs) and CALGreen

The State of California is leading the way in supporting housing for all. With the passage of Senate Bill 9 (SB 9), there is more support for ADUs to be built to assist in addressing the housing crisis. This State Law took effect on Jan 1, 2022, paving the way for more ADUs to be designed and constructed in coming years. In addition to the California **Building Code and other** applicable codes, ADU projects must also meet the required measures in CALGreen.

Inside:

What is an ADU?

We will explore all the applicable ADU configurations that require CALGreen compliance.

How to comply with CALGreen

Get guidance on how to approach an ADU project and how to verify compliance using the CALGreen checklist. Take a look at how measures will be verified by the plans examiner or inspector, and receive a primer on the permitting process.

CALGreen Mandatory Measures

Explore each of the requirements that will be included in the design of an ADU and included on the drawings/plans.

Need Help?

Check out these tools and resources to help you get started on your next ADU project.

What is an ADU?

An Accessory Dwelling Unit (ADU) is a secondary dwelling unit on residential lot, either **attached** to the existing dwelling unit, **detached**, or **converted**. It is an independent living space and falls under Residential "R" occupancy building code designation.¹ An ADU, as defined by the scenarios in the table below, must comply with all requirements of Title 24.²

The California Department of Housing and Community Development (HCD), the agency that oversees CALGreen for residential projects, further defines an ADU as a residential dwelling unit that is located on a lot with a proposed or existing primary residence and includes permanent provisions for living, sleeping, eating, cooking, and sanitation. Junior ADU: According to HCD, Junior Accessory Dwelling Units (JADUs) are allowed to be **created** within the walls of a proposed or existing single-family residence and shall contain no more than 500 square feet. They may share central systems, contain a basic kitchen utilizing

Types of ADUs

Attached: The unit is attached to the primary structure.

Detached: The unit is separated from the primary structure.

Converted Existing Space: A space on the lot of the primary residence that is converted into an independent living unit (can be attached or detached to primary residence).

ADUs have many names:

- » Carriage house
- » Garage apartment
- » Garden cottage
- » Granny flat
- » In-law unit
- » Junior ADU
- » Secondary suite
- » Tiny house

small plug-in appliances, may share a bathroom with the primary dwelling, all to reduce development costs. JADUs present no additional stress on utility services or infrastructure because they simply repurpose existing space within the residence and do not expand the dwellings planned occupancy. A JADU is a specific type of conversion of existing space that is contained entirely within an existing or proposed single-family residence.

ADU Type	Attached	Detached	Converted Existing Space
Possible Features	 Connected to the existing dwelling Common wall, ceiling, floor Addition: newly constructed or newly conditioned space Alteration: previously conditioned space Attached garage being converted 	 Separate from the existing dwelling No shared walls, ceilings, floors Newly constructed: built from the ground up Addition: newly conditioned space Detached garage being converted Modular ADU = new construction Tiny house = new construction 	 Master bedroom Attached garage Storage area, or similar use Accessory structure on the lot of the primary residence that is converted into an independent living unit
Need to Comply with CALGreen?	Yes	Yes	Yes

1 From: https://www.energy.ca.gov/sites/default/files/2021-06/2019%20Energy%20Code%20-%20ADUs_ADA.pdf

2 Title 24 of the California Code of Regulations, known as the California Building Standards Code or just "Title 24," contains the regulations that govern structural safety and sustainability for California's buildings. <u>https://www.dgs.ca.gov/DSA/Resources/Page-Content/</u> <u>Resources-List-Folder/Overview-Title-24-Building-Standards-Code</u>

Types of ADUs



Interior (lower level)









Above Garage



Garage Conversion

What is not an ADU?

• A Movable Tiny House (MTH) which is registered with the DMV, considered to be a Recreational Vehicle (RV) and has wheels.

For more information on permitting and code compliance for Tiny Homes, see the HCD Bulletin.

- Additional units in a multifamily dwelling (some caveats).
- Addition to a manufactured home which is used as a primary residence. This type of addition would be permitted as a Manufactured Home (MH) with HCD.

Who enforces CALGreen by ADU type

ADUs require approval of project plans typically through the local jurisdiction—City, County, or Authority Having Jurisdiction (AHJ)—for compliance with all Building Codes including Structural, Fire and Life Safety, Mechanical, Plumbing, Electrical, Energy, CALGreen and others. But that is not always the case.

Ground up ADUs (on-site construction): These types of ADUs will need to meet building code requirements and follow the permit process for residential projects through their local AHJ. State law requires AHJs to have a streamlined, ministerial review process for ADUs, meaning there is a shorter permit timeline with discretionary design review. **Note:** Solar will be required for detached ADUs, with some exceptions, per Title 24, Part 6 requirements.

Prefabricated or Factory Built ADUs: These types of ADUs are considered Factory-Built Housing (FBH) and are permitted and approved by HCD. Although HCD is responsible for enforcement of the FBH standards of the building itself, the local AHJs are responsible for approval of the installation including inspections for final occupancy.

Pre-approved ADU plans: A few jurisdictions around California have pre-approved ADU plans available free of charge. These plans save time and money during design and streamline the estimating process for a contractor to bid. Since they are still constructed on-site, they will need to follow the permit process through the local building department as well.

How to comply with CALGreen

As a homeowner or developer of ADUs, it is important to understand the process and how CALGreen is incorporated into the permit process. Here is a quick overview of important steps to building an ADU.

You'll want to budget and plan for a professional team to help you develop your ADU. Most projects need at least an architect, a structural engineer, a civil engineer, and a contractor. You can minimize your team by going the prefabricated route. All ADU projects, including garage conversions, need a permit. Without a permit, you may be subject to additional fees, having to tear down work completed, and your ADU cannot be considered in your property value during an appraisal.

STEP 1 Do your Research

Unless you have a background in architecture and construction, and are familiar with the California Building codes, you will most likely will be working with an architect, designer, contractor, builder, or remodeler for design and construction of your ADU. Before contacting a professional, be clear on your goals for the ADU— including what type you envision. Get familiar with all the resources available through the California Department of Housing and Community Development (HCD) ADU website, especially the <u>ADU Handbook</u> which answers several FAQs.

STEP 2 Contact your Building Department

ADU projects require pulling a building permit. All municipalities will require a checklist that outlines the code measures required by CALGreen and the associated verifications by the enforcing agency. Contact your municipality to ask if they have their own checklist for CALGreen, otherwise you can use the 2019 checklist or the AIA Checklist. This checklist is typically required to be inserted into the plan set on its own sheet. Your enforcing agency will specify who is allowed to verify particular provisions on the checklist: the enforcing agency, the installer or designer, or third-party. You should also inquire about any reach codes (above and beyond State codes) or higher levels of performance, including locally adopted Tier 1 and Tier 2 levels of CALGreen.

 You can also check this interactive map from localenergycodes.com to find out if there are additional reach codes that you need to follow.
 Note: Certain types of ADUs may qualify for an exemption from local reach code ordinances.

STEP 3 Review the Checklist

Familiarize yourself with the checklist. The checklist outlines the code measures required by CALGreen and the associated verifications by the enforcing agency. This process will enable you to better understand your designer's recommendations versus what is required and be able to ask informed questions.

STEP 4 Find Incentives

Familiarize yourself with the <u>incentives</u> that are offered for ADU construction and discuss these with your designer and/or builder. There are several state grants including the CalHFA's ADU Grant Program providing up to \$40,000 in assistance, as well as ADU funding laws and local incentives. Senate Bill 9 (SB9) has made constructing and permitting ADUs easier in California, but local jurisdictions have also made changes to zoning code requirements to allow for larger or more ADUs on one existing single-family lot.

STEP 5 Hire a Professional

Find a professional designer and/or contractor with local ADU experience. Typically, your architect or contractor will be responsible for designing the ADU to meet CALGreen and other building codes, permitting the project through the local jurisdiction, and completing the permit application, checklists, calculations, and other documentation to show compliance. Some jurisdictions also have pre-approved ADU building plans and ADU checklists to help streamline the ADU development process.

STEP 6 Apply for a Permit

Once the design for the ADU is decided and building plans are created, it is time to apply for a permit through a permit application. Permitting is done through your local Building Department or AHJ and requires a plan set, verification of code compliance through checklists, calculations, and other documentation. **A copy of the CALGreen checklist will be required for a permit.** The plans examiner will review the project plans to verify code compliance with CALGreen and other required codes.

Every jurisdiction is different; however several cities and counties have online permitting processes for ADUs. Make sure to check the Building Department website for online permitting details, fee schedules, and permit processing timelines. Getting approval on your building permit in order to start construction could take a few weeks to a few months depending on the project.

Exception: If the ADU is factory-built, the project would need to follow the HCD review and approval process. Coordination with your local Building Department for site permits and inspections may be required.

STEP 7 Compliance with Codes

Follow your jurisdiction's instructions to meet applicable codes including CALGreen. Modifications to the plans may need to occur. After construction has commenced, local building inspectors will be onsite to verify compliance with codes, via visual inspection or measurement. It is important to have all permit documents including a set of plans onsite during construction for inspector review. In some jurisdictions, AHJs will require a 3rd party green inspector, so make sure to inquire with your Building Department to find out.

STEP 8 Certificate of Occupancy

Once construction is complete and the building inspector signs off that the project has met all applicable codes and is safe, the building will receive the certificate of occupancy. The ADU is ready for use.

As part of this process, the CALGreen checklist will be an important document to check for compliance. This fact sheet has outlined the Mandatory requirements for ADUs in each section of the code. In addition, it is important to review separate Energy code requirements, located in Title 24, Part 6.



What is SB 9?

SB 9, or Senate Bill 9, is one of two new laws in California that affect single-family zoning throughout the state. Similar to previous state legislation on ADUs, SB 9 overrides existing density limits in singlefamily zones. SB 9 is intended to support increased supply of starter, modestly priced homes by encouraging building of smaller houses on small lots. SB 9 now allows for two dwellings to be built on a singlefamily lot, and single-family lots can be split in two to allow a two-family dwelling on each of the new lots. One of the reasons this is so beneficial in fighting the affordable housing crisis is that now there can be up to four dwellings on a lot that used to allow only one dwelling.

All cities and counties across California will be required to approve any development proposal that fits into the provisions of Senate Bill 9. Municipalities can only deny applications if they're considered a hazard to public health and/or the environment.

CALGreen Mandatory Requirements

There are mandatory CALGreen requirements for all for residential buildings, new construction, additions and alterations that apply to ADUs. Any addition or alteration that increases the building's conditioned area, volume, or size triggers CALGreen. However, the CALGreen requirements only apply to the scope of the specific area of the addition or alteration. If the scope of the project does not change the site grading, offsite parking, or add landscaping, some related measures may not apply.

Some municipalities have chosen to adopt reach codes, going beyond just the mandatory requirements, to meet local energy or climate action goals. CALGreen makes it easy to reach beyond the mandatory provisions by offering voluntary Tier 1 and Tier 2 pathways. Check with your local jurisdiction to see if additional voluntary measures are required under Tier 1 or 2.

CALGreen is separated into five divisions of residential building construction (Chapter 4)—all are applicable to ADUs:

- 1. Planning and Design
- 2. Energy Efficiency
- 3. Water Efficiency and Conservation
- 4. Material Conservation and Resource Efficiency
- 5. Environmental Quality

Within each of these divisions are additional voluntary Tier 1 and Tier 2 requirements, located in Appendix A4. Division 7 includes Installer and Special Inspection Instructions. Let's take a look at how the mandatory measures apply to ADUs.

Planning and Design (Section 4.1)— 2019 and 2022

SITE DEVELOPMENT (SECTION 4.106)

4.106.2 Stormwater management during construction will be relatively simple and will be implemented by your contractor. Typical measures may include a retention basin to collect rainwater, filter fabric and sandbags at downstream storm drain inlets, straw wattles or silt fences at site perimeter, and slope stabilization like hydroseeding slopes or straw wattles if steep grading is occurring.

4.106.3 Site must be graded to drain from the new ADU and divert away from existing buildings to the storm collection systems. Grading and drainage will be shown on site plans. Examples may include swales,



SECTION A4.602 Effective January 1,2020 HCD SHL 615C (New 01/20)								
	LEVELS APPLICANT TO SELECT ELECTIVE MEASURES			VERIFICATIONS ENFORCING AGENCY TO SPECIFY VERIFICATION METHOR				
FEATURE OR MEASURE		Prerequisites and Electives		Enforcing Agency	Installer or Designer	Third- Party		
	Mandatory	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.								
A4.103.2 Facilitate community connectivity by one of the following methods: Locate project within a 1/4-mile true walking distance of at least 4 basic services; Locate project within 1/2-mile true walking distance of at least 7 basic services; or Other methods increasing access to additional resources.								
Site Preservation								
A4.104.1 An individual with oversight responsibility for the project has participated in an educational program promoting environmentally friendly design or development and has provided training or instruction to appropriate entities.								
Deconstruction and Reuse of Existing Materials								
A4.105.2 Existing buildings are disassembled for reuse or recycling of building materials. The proposed structure utilizes at least one of the following materials which can be easily reused: 1. Light fictures 2. Pumbing fictures 3. Masonny 4. Masonny 5. Electrical devices 6. Appliances 7. Foundations or portions of foundations								
Site Development								
4.106.2 A plan is developed and implemented to manage storm water drainage during construction.								
4.106.3 Construction plans shall indicate how site grading or a drainage system will manage all surface water flows to keep water from entering buildings.								
4.106.4 Provide capability for electric vehicle charging for one- and two-family dwellings; townhouses with attached private garages; multifamily dwellings; and hotels/motels in accordance with Section 4.106.4.1, 4.106.4.2, or 4.106.4.3,								

French drains, pervious paving, and water retention gardens. **Exception:** Additions and alterations not altering the drainage path.

4.106.4 Provide capability for electric vehicle charging in accordance with Section 4.106.4.1, 4.106.4.2, or 4.106.4.3, as applicable. **Exception:** ADUs and JADUs without additional parking facilities.

VOLUNTARY MEASURES: TIER 1 AND TIER 2

Options include selecting an infill or greyfield site (A4.103.1), locating the ADU within walking distance (1/4-1/2 mile) to 4-7 basic services (A4.103.2), teaching all parties on a project about green construction concepts (A4.104.1), onsite salvage and reuse of materials (A4.105.2), soil analysis (A4.106.2), protection of soil by minimizing erosion and balancing earthwork (A4.106.2.2), reuse of topsoil and/ or minimizing construction perimeter (A4.106.2.3), restore disturbed areas with native vegetation or use native planting for 75% of species (A4.106.3), 20-30% of paving for parking, walking, or patio must be permeable paving (A4.106.4), high SRI roofing materials (A4.106.5), vegetated roof for 50% of roof area (A4.106.6), reduction of heat island effect for nonroof

areas (A4.106.7), and for ADUs that include garage space, install dedicated 208/240-volt branch circuit with overcurrent protection for future EV charging (A4.106.8.1).

Energy Efficiency (Section 4.2)— 2019 and 2022

4.201.1 Building meets or exceeds the requirements of the *California Building Energy Efficiency Standards.*

VOLUNTARY MEASURES: TIER 1 AND TIER 2

Options include using the performance approach to meet Total Energy Design Rating (Total EDR) and Energy Efficiency Design Rating (Efficiency EDR) for the Proposed Design Building (A4.206.1.1.1), following Quality Insulation Installation (QII) procedures (A4.20X), requirements including one to two of the following: roof deck insulation or ducts in conditioned space, high performance walls, HERS-verified compact hot water distribution system, HERS-verified drain water heat recovery, high performance vertical fenestration, heat pump water heater demand management, battery storage system controls, and heat pump space and water heating (A4.203.1.2).



Water Efficiency and Conservation (Section 4.3)–2019 and 2022

WATER EFFICIENCY AND CONSERVATION		<u> </u>	 	 <u> </u>
Indoor Water Use	1			
4.303.1 Plumbing fixtures (water closets and urinals) and fittings (faucets and showerheads) installed in residential buildings shall comply with the prescriptive requirements of Sections 4.303.1.1 through 4.303.1.4.4.				
	5			
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2019 CALGREEN RESIDENTIAL OC SECT Effective . HCD SHL	CUPANCI ION A4.60 January 1, 615C (New 0	ES AP 2 2020 11/20)	PLICA	TION CHE	CKLIST	
	L APPLICAI ELECTIV	EVELS NT TO SE E MEASU	LECT	VERIFICATIONS ENFORCING AGENCY TO SPECIFY VERIFICATION METHO		
FEATURE OR MEASURE		Prerequisites and Electives ¹		Enforcing Agency	Installer or Designer	Third- Party
	Mandatory	Tier 1	Tier 2			
4.303.2 Plumbing fixtures and fittings required in Section 4.303.1 shall be installed in accordance with the <i>California</i> <i>Plumbing Code</i> , and shall meet the applicable referenced standards.	⊠					
A4.303.1 The maximum flow rate of kitchen faucets shall not exceed 1.5 gallons per minute at 60 psi. Kitchen faucets may temporahijk 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 1.5 gallons per minute at 60 psi. Note: Where comcIving faucets are unavailable, aerators						
or other means may be used to achieve reduction. 4.303.1.4.3 Metering faucets in residential buildings shall not deliver more than 0.2 gallons per cycle.						
A4.303.2 Alternate water source for nonpotable applications. Alternate nonpotable water sources are used for indoor potable water reduction. Alternate nonpotable water sources shall be installed in accordance with the <i>California Plumbing Code</i> .						
A4.303.3 Install at least one qualified ENERGY STAR dishwasher or clothes washer.						
A4.303.4 Nonwater urinals or waterless toilets are installed.						
A4.303.5 One- and two-family dwellings shall be equipped with a demand hot water recirculation system.						
Outdoor Water Use						
4.304.1 Residential developments shall comply with a local water efficient landscape ordinance or the current California Department of Vater Resources' Model Water Efficient Landscape Ordinance (MWELO), whichever is more stringent.						

INDOOR WATER USE (SECTION 4.303)

4.303.1 There are water flow restrictions on newly installed plumbing fixtures within the ADU build out. Plumbing fixtures outside of the ADU project limits do not need to be upgraded.

- Water closets: Max of 1.28 GPF and WaterSense labeled (tank type)
- Wall Mounted Urinals: Max of 0.125 GPF and 0.5 GPF for all other urinals
- Showers: Max 1.8 GPM at 80psi, WaterSense labeled, and multiple shower heads combined max rate of 1.8 GPM
- Bathroom faucets: Min of 0.8 GPM at 20 psi and max of 1.2 GPM at 60 psi
- Metered (timer) faucets: Max of 0.3 gallons per cycle
- Kitchen faucets: Max of 1.8 GPM at 60 psi with temporary increase to 2.2 GPM at 60 psi.
- Additional requirements for pre-rinse spray valves.

4.303.2 Plumbing fixtures must also meet the California Plumbing Code so double check your fixture purchases.

OUTDOOR WATER USE (SECTION 4.304)

4.304.1 If installing new or rehabilitating existing landscape areas with the ADU project, the scope of the landscaping must meet the outdoor water use requirements under Model Water Efficient Landscape Ordinance (MWELO) or the local landscape ordinance. Landscaping areas include planting areas, turf areas, water features like pools, spas, ponds, waterfalls, fountains, and artificial streams.

- For new or rehabilitated landscaping area under 500 SF, MWELO does not apply. Check that your local landscape ordinance doesn't have a lower compliance threshold.
- New construction of an ADU with at least 500 SF of new landscaping must comply with the prescriptive pathway under MWELO.
- Any type of ADU built with at least 2,500 SF of landscaping being rehabilitated must comply with the performance pathway under MWELO. Rehabilitated landscape is existing landscape area, which may or may not be irrigated, getting renovated or remodeled.
- Compliance should follow whichever is more stringent:
 - » Local water efficient landscape ordinance (which may require performance or prescriptive pathways that differ from the area thresholds above).
 - » The current version of the <u>California Department of</u> <u>Water Resources' Model Water Efficient Landscape</u> <u>Ordinance</u> (MWELO).
- Both pathways include water reduction measures such as installing drought tolerant plants, mulching, limiting turf areas, efficient irrigation, and smart irrigation controllers.

VOLUNTARY MEASURES: TIER 1 AND TIER 2

Options include kitchen faucet max flow rate of 1.89 GPM at 60 psi (A4.303.1), alternative water sources for nonpotable applications (A4.303.2), ENERGY STAR dishwashers or clothes washer (A4.303.3), nonwater urinals and waterless toilets (A4.303.4), demand hot water recirculation systems (A4.303.5), rainwater catchment systems receiving 65% of roof area (A4301.1), potable water elimination by using captured rainwater, recycled water, greywater, drought tolerant plants, or treated water for irrigation (A4.304.2), irrigation meter on landscaping (A4.304.3),

and water reuse systems such as onsite greywater for landscaping, dual plumbing, or recycled water for irrigation (A4.305).

Tip: See the Indoor and Outdoor Water Requirement Fact Sheet for more information on CALGreen compliance.

Material Conservation and Resource Efficiency (Section 4.4)–2019 and 2022

ENHANCED DURABILITY AND REDUCED MAINTENANCE (4.406)

4.406.1 Ensure any exterior wall openings or penetrations in the ADU are fully sealed to limit unwanted pests.

CONSTRUCTION WASTE REDUCTION, DISPOSAL AND RECYCLING (4.408)

4.408.1 At least 65% of all nonhazardous waste by weight or volume must be recycled or salvaged. This includes all construction and demolition (C&D) waste during the ADU project, including enabling projects like tear downs or phased demolition. You may need two smaller dumpsters onsite, one for recyclables and one for trash. Sometimes local construction and demolition waste management ordinances are more stringent so ask your local building department prior to starting work.

4.408.2 To ensure the ADU project meets the diversion rates outlined above, a construction waste management (CWM) plan outlining the process for recycling and limiting landfill waste must be developed. A CWM template, worksheet, and foreman acknowledgment form are available from CALGreen Chapter 8: Compliance Forms, Worksheets and Reference Material.

4.408.3 The waste management company used must provide verifiable documentation for recycling and diversion rates. Make sure haul tickets and invoices are reviewed and show which hauls were recycled and to what extent. Typically, the waste processing facility will have a monthly diversion rate (%) for all commingled or mixed C&D waste which may or may not be on the documentation received.



	LI APPLICAI ELECTIV	EVELS NT TO SEI E MEASU	LECT RES	VERIFICATIONS ENFORCING AGENCY TO SPECIFY VERIFICATION METHOD			
FEATURE OR MEASURE		Prerequisites and Electives ¹		Enforcing Agency	Installer or Designer	Third- Party	
	Mandatory	Tier 1	Tier 2				
Enhanced Durability and Reduced Maintenance							
4.406.1 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 motar, concrete masonry or a similar method acceptable to the enforcing agency.							
Water Resistance and Moisture Management							
A4.407.1 Install foundation and landscape drains.							
AA.40/.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.							
A4.407.3 Provide flashing details on the building plans and comply with accepted industry standards or manufacturer's instructions.							
A4.407.4 Protect building materials delivered to the construction site from rain and other sources of moisture.							
A4.407.5 In Climate Zone 16, an ice/water barrier is installed at roof valleys, eaves and wall to roof intersections.							
A4.407.6 Exterior doors to the dwelling are protected to prevent water intrusion.							
A4.407.7 A permanent overhang or awning at least 2 feet in depth is provided at all exterior walls.							
Construction Waste Reduction, Disposal and Recycling							
 4.408.1 Recycle and/or salvage for reuse a minimum of 65% of the nonharatodus construction and demolition waste in accordance with one of the following: 1. Comply with a more stimgent local construction and demolition waste management ordinance, or 3. A waste management company, per Section 4.408.2; or 4. The waste stream reduction alternative, per Section 4.408.4; 							

BUILDING MAINTENANCE AND OPERATION (4.410)

4.410.1 The building owner or occupant must receive an operations and maintenance manual for the ADU. This may include manufacturer manuals for installed systems, warranty information, and maintenance schedules. New 2022 provisions include information on maintenance of defensible space around residential structures including ADUs for fire protection purposes.

VOLUNTARY MEASURES: TIER 1 AND TIER 2

Options include frost protection for foundations (A4.403.1), 20-25% reduction in cement used in foundation concrete mix design, efficient framing via lumber size, dimensions and layout, building systems, or precutting materials (A4.404), using prefinished building materials (A4.405.1), exposed concrete floors (A4.3405.2), 10-15% of materials include recycled content (postconsumer or pre-consumer) by cost (A4.405.3), rapidly renewable materials use (A4.405.4), foundation and roof drainage (A4.407.1-2), flashing details (A4.407.3), material moisture protection during construction (A4.407.4), ice and water barriers in CZ 16 (A4.407.5), exterior door protection and roof overhangs (A4.407.6-7) and third-party verified construction waste diversion for 65-75% (A4.408.1).

Environmental Quality (Section 4.5)— 2019 and 2022

FIREPLACES (4.503)

4.503.1 If you are installing a gas fireplace, wood or pellet stove, there are additional requirements that must be met.

POLLUTANT CONTROL (4.504)

4.504.1 Duct openings and other related air distribution component openings shall be covered during construction to prevent dirt and debris from entering and contaminating the HVAC system. Ducts are usually delivered with openings wrapped in blue sticky film. Keep this on until system is fully installed.

4.504.2-4.504.5

• 100% of indoor wet-applied materials including adhesives, sealants, caulks, paints, stains, coatings, shall be compliant with VOC (g/L) and other toxic compound limits. Aerosol paints and coatings shall be

Effective HCD SHL	January 1, 615C (New 0	2020 1/20)					
	LI APPLICAI ELECTIV	EVELS NT TO SEI E MEASU	LECT RES	VERIFICATIONS ENFORCING AGENCY TO SPECIFY VERIFICATION METHOD			
FEATURE OR MEASURE		Prerequisites and Electives ¹		Enforcing Agency	Installer or Designer	Third- Party	
	Mandatory	Tier 1	Tier 2				
A4.408.1 Construction waste generated at the site is diverted to recycle or salvage in compliance with one of the following:		⊠2		_	_		
Tier 1. At least a 65% reduction with a third-party verification.							
Tier 2. At least a 75% reduction with a third-party verification.			⊠²				
Exception: Equivalent waste reduction methods are developed by working with local agencies.							
Building Maintenance and Operation							
4.410.1 An operation and maintenance manual shall be provided to the building occupant or owner.							
VATULY involves to interim multiply weaking units are been as the server the entries building and are identified for the deposition, storage and collection of nonhazardous materials for recepting, including (at an inimum) paper, compared cardboard, glass, plastice, organic weste, and none restrictive. We may be a server the server of the Exception: Rural jurisdictions that meet and apply for the exemption in Public Resources Code	Ø						
Section 42649.82(a)(2)(A) et seq. will also be exempt from the organic waste portion of this section.							
Innovative Concepts and Local Environmental Conditions							
A4.411.1 Items in this section are necessary to address innovative concepts or local environmental conditions.							
item 1							
item 2							
item 3							
ENVIRONMENTAL QUALITY							
Fireplaces							
4.503.1 Any installed gas fireplace shall be a direct-vent sealed-combusion 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.							
Pollutant Control							
4.504.1 Duct openings and other related air distribution component openings shall be covered during construction.							



compliant with product-weighted MIR Limits for ROC and other toxic compounds. See VOC limit tables in CALGreen code section.

- Provide verification of VOC content with manufacturer product information.
- 100% of carpet and carpet systems and 80% of resilient flooring shall comply with CDPH Standard Method for Testing VOCs, confirmed by a 3rd party. Many product certifications like FloorScore by SCS, Green Label Plus by CRI, GreenGuard Gold by UL, and Indoor Advantage Gold by SCS comply with this requirement.
- 100% of interior and exterior composite wood including particleboard, medium density fiberboard (MDF) and hardwood plywood should meet the low formaldehyde emission standards. See table in CALGreen for limits.
- See <u>CDPH</u> for more details on VOCs and testing

INTERIOR MOISTURE CONTROL (4.505)

4.505.2 Vapor retarder and capillary break shall be installed at slab-on-grade foundations. These measures are already required by different parts of the building code.

4.505.3 To prevent mold, don't let building materials like drywall and insulation with water damage be installed. Have the contractor check for moisture content before installing any wall or floor wood framing.

INDOOR AIR QUALITY AND EXHAUST (4.506)

4.506.1 Each bathroom with tub, shower, or combination must have an exhaust fan that meets the following criteria:

- 1. ENERGY STAR rated and ducted to terminate outside the ADU.
- 2. Has humidity controls (separate or built-in) or part of a whole house ventilation system.
- 3. Manual or automatic humidity control, capable of adjustment between a relative humidity range of ≤ 50% to a maximum of 80%. These requirements can be verified with information from the exhaust fan and/or humidity controller manufacturer.

SECTION AA.602 Effective January 1, 2020 HCD SHL 615C (New 01/20)									
	LEVELS APPLICANT TO SELECT ELECTIVE MEASURES			VERIFICATIONS ENFORCING AGENCY TO SPECIFY VERIFICATION METHO					
FEATURE OR MEASURE		Prerequisites and Electives ¹		Enforcing Agency	Installer or Designer	Third- Party			
	Mandatory	Tier 1	Tier 2	All	Ali				
4.504.2.1 Adhesives, sealants and caulks shall be compliant with VOC and other toxic compound limits.									
4.504.2.2 Paints, stains and other coatings shall be compliant with VOC limits.									
4.504.2.3 Aerosol paints and coatings shall be compliant with product-weighted MIR Limits for ROC and other toxic compounds.	⊠								
4.504.2.4 Documentation shall be provided to verify that compliant VOC limit finish materials have been used.	⊠								
4.504.3 Carpet and carpet systems shall be compliant with VOC limits.	⊠								
4.504.4 80% of floor area receiving resilient flooring shall comply with specified VOC criteria.	⊠								
4.504.5 Particleboard, medium density fiberboard (MDF) and hardwood plywood used in interior finish systems shall comply with low formaldehyde emission standards.	Ø								
A4.504.1 Use composite wood products made with either California Air Resources Board approved no-added formaldehyde (NAF) resins or ultra-low emitting formaldehyde (ULEF) resins.									
A4.504.2 Install VOC compliant resilient flooring systems. Tier 1. At least 90% of the resilient flooring installed shall comply. Tier 2. At least 100% of the resilient flooring installed shall comply.		⊠²	⊠²						

SECTION A4.602 Effective January 1, 2020 HOD SHL 615C (New 0120)								
	LI APPLICAT ELECTIV	EVELS NT TO SE E MEASU	LECT RES	VERIFICATIONS ENFORCING AGENCY TO SPECIFY VERIFICATION METHOD				
FEATURE OR MEASURE		Prerequisites and Electives ¹		Enforcing Agency	Installer or Designer	Third- Party		
	Mandatory	Tier 1	Tier 2					
A4.504.3 Thermal insulation installed in the building shall meet the following requirements: Tier 1. Install thermal insulation in compliance with VOC limits. Tier 2. Install insulation which contains no-added formaldehyde (NAF) and is in compliance with Tier 1.		⊠²	⊠²					
Interior Moisture Control	_					_		
4.505.2 Vapor retarder and capillary break is installed at slab-on-grade foundations.								
4.505.3 Moisture content of building materials used in wall and floor framing is checked before enclosure.								
Indoor Air Quality and Exhaust								
 ENERGY STAR fans ducted to terminate outside the building. Fans must be controlled by a humidity control (separate or built-in)/ OR functioning as a component of a whole house williable nystems of multiple outside with manual or automatic means of metative humidity range of ≤ 50% to a maximum of 80%. 								
A4.506.1 Reserved.								
A4.506.2 [HR] Provide filters on return air openings rated MERV 8 or higher during construction when it is necessary to use HVAC equipment.								
A4.506.3 Direct-vent appliances shall be used when equipment is located in conditioned space or the equipment must be installed in an isolated mechanical room.								
Environmental Comfort								
4.5072 Duct systems are sized, designed, and equipment is selencla using the following methods: 1. Establish heat loss and heat gain values according to ANSIACCA 2 Manual 2 - 2016 or equivalent. 2. Size duct systems according to ANSIACCA 1 Manual D - 2016 or equivalent. 3. Select heating and cooling equipment according to ANSIACA 3 Manual 5 - 2014 or equivalent.								

ENVIRONMENTAL COMFORT (4.507)

4.507.2 Make sure your HVAC system is designed properly. This will save energy and money! The design professional will verify that your HVAC system is sized appropriately for the heating and cooling loads per ASHRAE Handbooks, ANSI/ACCA standards or design software.

VOLUNTARY MEASURES: TIER 1 AND TIER 2

Options include additional VOC limits for composite wood labeled NAF or ULEF (A4.504.1), meeting VOC requirements for 90-100% of resilient flooring (A4.504.2), meeting VOC requirements for thermal insulation (A4.504.3), MERV 8 filters during construction (A4.506.2), direct-venting appliances (A4.506.3).





Installer and Special Inspector Qualifications (Chapter 7)

Make sure the professionals you have hired are licensed and competent in the area they are working.



QUALIFICATIONS (SECTION 702)

702.1 HVAC system installers shall be trained and certified in the proper installation of HVAC systems.

702.2 Special inspectors employed by the AHJ must be qualified and able to demonstrate competence in the discipline they are inspecting. HERS raters are special inspectors certified by the CEC to rate homes. They may be required for an ADU project and are typically hired by the owner/developer.

VERIFICATIONS (SECTION 703)

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. The AHJ may require 3rd party inspectors to verify compliance with CALGreen. Check with your building department about each stage of inspection and who will perform it. Scheduling inspections during construction is typically the responsibility of the builder and/or owner.



Need Help?

There are several resources available to make ADUs easier to develop. Here are some links to helpful documents.

For a digital copy of CALGreen:

- » 2022 Version, effective Jan 1, 2023
- » 2019 Version, with supplement, effective July 2021

To purchase a copy of CALGreen: <u>2022 California</u> Green Building Standards Code, Title 24, Part 11 (CALGreen) (iccsafe.org)

CEC <u>2019 Energy Code Accessory Dwelling Units</u>

HCD

- » ADU Handbook, updated in July 2022
- » <u>Tiny Homes</u>

Energy Code ACE, keyword search ADU

Casita Coalition's ADU Best Practices Guidebook

AARP Livable Communities including The ABCs of ADUs, A Step by Step Guide to Design and Development of ADUs





The Codes & Standards program is designed to improve compliance with the state's building and appliance energy codes and standards. The program aims to advance the adoption and effective implementation of energy efficiency measures and building practices to lock in long-term energy and GHG savings to meet California's ZNE, decarbonization and climate goals. The program recognizes that codes and standards are one of the most effective pathways to ensuring sustained market transformation—and that key to making them work well are well-informed industry professionals and consumers.







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