



# CITY OF NEWPORT BEACH

## COMMUNITY DEVELOPMENT DEPARTMENT BUILDING DIVISION

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### 2019 CALGREEN - RESIDENTIAL MINIMUM REQUIREMENTS

#### **Scope**

1. 2019 California Green Building Standards Code (CG) is applicable to all new residential buildings, including but not limited to, dwellings, apartment houses, condominiums, hotels, and other types of dwellings containing sleeping accommodations with or without common toilets or cooking facilities regulated by the Department of Housing and Community Development (HCD-1). (NBMC 15.11.010, CG Section 101.3.1(3)).
2. 2019 California Green Building Standards Code (CG) is applicable to additions or alterations of existing residential buildings where the addition or alteration increases the building's conditioned area, volume, or size. The requirements shall apply only to and/or within the specific area of the addition or alteration. (301.1.1)

#### **Energy Efficiency**

3. New one and two family dwellings and townhouses with attached private garages shall install a listed nominal 1 inch inside diameter raceway to accommodate a dedicated 208/240 volt branch circuit. (4.106.4.1)
  - a. The raceway shall originate at the main service or subpanel and terminate into a listed cabinet, box, or enclosure in close proximity to the proposed location of an EV charger.
  - b. The service panel or subpanel shall provide capacity to install a minimum 40 ampere dedicated branch circuit and space reserved for installation of a branch circuit overcurrent protective device.
  - c. The service panel or subpanel circuit directory shall identify the overcurrent protective devices space reserved for future EV charging as "EV CAPABLE."
  - d. The raceway termination location shall be permanently and visibly marked as "EV CAPABLE."

## **Material Conservation and Resources Efficiency**

4. 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 other similar method. (4.406.1)
5. Utilize one of the city's approved franchise hauler to recycle and/or salvage a minimum of 65% of the nonhazardous construction and demolition waste. (4.408.1, 4.408.3)

## **Water Efficiency and Conservation**

6. New residential developments shall comply with City's water efficient landscape ordinance. (4.304.1, NBMC 14.17)
7. Plumbing fixtures and fittings shall comply with the following (4.303.1):

<b>FIXTURE TYPE</b>	<b>MAXIMUM FLOW RATE</b>
Single Showerheads	1.8 gpm @ 80 psi
Multiple Showerheads	Combine flow rate of 1.8 gpm @80 psi
Residential Lavatory Faucets	1.2 gpm @ 60 psi <sup>2</sup>
Common and Public use Lavatory Faucets	0.5 gpm @ 60 psi
Kitchen Faucets	1.8 gpm @ 60 psi
Metering Faucets	0.2 gallons per cycle maximum
Water Closets	1.28 gallons/flush <sup>1</sup>
Wall Mounted Urinal	0.125 gallons/flush
All Other Types of Urinal	0.5 gallons/flush

1. Includes single and dual flush water closets with an effective flush rate of 1.28 gallons or less when tested per ASME A122.19.233.2 for single flush and ASME A112.19.14 for dual flush toilets.

2. Lavatory faucets shall not have a flow rate less than 0.8 gpm at 20 psi.

## **Environmental Quality**

8. Moisture content of building materials used in wall and floor framing is checked before enclosure according to one of the following (4.505.3):
  - a. Moisture content shall be determined with either a probe-type or contact-type moisture meter. Equivalent moisture verification methods may be approved by the enforcing agency and shall satisfy requirements found in Section 101.8 of this code.
  - b. Moisture readings shall be taken at a point 2 feet (610 mm) to 4 feet (1219 mm) from the grade stamped end of each piece to be verified.
  - c. At least three random moisture readings shall be performed on wall and floor framing with documentation acceptable to the enforcing agency provided at the time of approval to enclose the wall and floor framing.
9. Aerosol paints and coatings shall meet the Product-weighted MIR Limits for ROC in Section 94522(a)(2) and other toxic requirements in Sections 94522(e)(1) and (f)(1) of the California Code of Regulations, Title 17, commencing with Section 94520. (4.504.2.3)
10. Carpet and carpet systems shall be compliant with of the following (4.504.3):
  - a. Carpet and Rug Institute's Green Label Plus Program.
  - b. California Department of Public Health Specification 01350.
  - c. NSF/ANSI 140 at the Gold level.
  - d. Scientific Certifications Systems Indoor Advantage™ Gold
11. Minimum 80% of floor area receiving resilient flooring shall comply with one of the following (4.504.4):
  - a. VOC emission limits defined in the Collaborative for High Performance Schools (CHPS) High Performance Product Database.
  - b. Products certified under UL GREENGUARD Gold.
  - c. Certified under the Resilient Floor Covering Institute (RFCI) FloorScore program.
  - d. California Department of Public Health Specification 01350.

12. Adhesives, sealants and caulks shall be compliant with volatile organic compound (VOC) limits set forth in Table 4.504.1 or Table 4.504.2. (4.504.2.1)

<b>ADHESIVE VOC LIMIT <sup>1,2</sup></b> <b>(Less Water and Less Exempt Compounds in Grams per Liter)</b>	
<b>ARCHITECTURAL APPLICATIONS</b>	<b>VOC LIMIT</b>
Indoor carpet adhesives	50
Carpet pad adhesives	50
Outdoor carpet adhesives	150
Wood flooring adhesive	100
Rubber floor adhesives	60
Subfloor adhesives	50
Ceramic tile adhesives	65
VCT and asphalt tile adhesives	50
Drywall and panel adhesives	50
Cove base adhesives	50
Multipurpose construction adhesives	70
Structural glazing adhesives	100
Single-ply roof membrane adhesives	250
Other adhesives not specifically listed	50
<b>SPECIALTY APPLICATIONS</b>	
PVC welding	510
CPVC welding	490
ABS welding	325
Plastic cement welding	250
Adhesive primer for plastic	550
Contact adhesive	80
Special purpose contact adhesive	250
Structural wood member adhesive	140
Top and trim adhesive	250
<b>SUBSTRATE SPECIFIC APPLICATIONS</b>	
Metal to metal	30
Plastic foams	50
Porous material (except wood)	50
Wood	30
Fiberglass	80

1. If an adhesive is used to bond dissimilar substrates together, the adhesive with the highest VOC content shall be allowed.

2. For additional information regarding methods to measure VOC content specified in table, see South Coast Air Quality Management District Rule 1168.

<b>SEALANT VOC LIMIT</b> <b>(Less Water and Less Exempt Compounds in Grams per Liter)</b>	
<b>SEALANTS</b>	<b>VOC LIMIT</b>
Architectural	250
Marine deck	760
Nonmembrane roof	300
Roadway	250
Single-ply roof membrane	450
Other	420
<b>SEALANT PRIMERS</b>	
Architectural	
Nonporous	250
Porous	775
Modified bituminous	500
Marine deck	760
Other	750

13. Paints, stains, and other coatings shall be compliant with VOC and other toxic compound limits set forth in Table 4.504.3. (4.504.2.2)

<b>VOC CONTENT LIMITS FOR ARCHITECTURAL COATINGS <sup>2,3</sup></b>	
<b>(Grams of VOC per Liter of Coating, Less Water and Less Exempt Compounds)</b>	
<b>COATING CATEGORY</b>	<b>VOC LIMIT</b>
Flat coatings	50
Nonflat coatings	100
Nonflat-high gloss coatings	150
<b>Specialty Coatings</b>	
Aluminum roof coatings	400
Basement specialty coatings	400
Bituminous roof coatings	50
Bituminous roof primers	350
Bond breakers	350
Concrete curing compounds	350
Concrete/masonry sealers	100
Driveway sealers	50
Dry fog coatings	150
Faux finishing coatings	350
Fire resistive coatings	350
Floor coatings	100
Form-release compounds	250
Graphic arts coatings (sign paints)	500
High temperature coatings	420
Industrial maintenance coatings	250
Low solids coatings <sup>1</sup>	120
Magnesite cement coatings	450
Mastic texture coatings	100
Metallic pigmented coatings	500
Multicolor coatings	250
Pretreatment wash primers	420
Primers, sealers, and undercoaters	100
Reactive penetrating sealers	350
Recycled coatings	250
Roof coatings	50
Rust preventative coatings	250
Shellacs	
Clear	730
Opaque	550
Specialty primers, sealers and undercoaters	100
Stains	250
Stone consolidants	450
Swimming pool coatings	340
Traffic marking coatings	100
Tub and tile refinish coatings	420
Waterproofing membranes	250
Wood coatings	275
Wood preservatives	350
Zinc-rich primers	340

1. Grams of VOC per liter of coating, including water and including exempt compounds.

2. The specified limits remain in effect unless revised limits are listed in subsequent columns in the table.

3. Values in this table are derived from those specified by the California Air Resources Board, Architectural Coatings Suggested Control Measure, February 1, 2008. More information is available from the Air Resources Board.

14. Particleboard, medium density fiberboard (MDF) and hardwood plywood used in interior or exterior of the building shall comply with low formaldehyde emission standards as set forth in Table 4.504.5 below (4.504.5):

<b>FORMALDEHYDE LIMITS<sup>1</sup></b> <b>(Maximum formaldehyde Emissions in Parts per Million)</b>	
<b>PRODUCT</b>	<b>LIMIT</b>
Hardwood plywood veneer core	0.05
Hardwood plywood composite core	0.05
Particleboard	0.09
Medium density fiberboard	0.11
Thin medium density fiberboard <sup>2</sup>	0.13

1. Values in this table are derived from those specified by the California Air Resources Board, Air Toxics Control Measure for Composite Wood as tested in accordance with ASTM E 1333-96(2002). For additional information, see *California Code of Regulations*, Title 17, Sections 93120 through 93120.12

2. Thin medium density fiberboard has a maximum thickness of 5/16 inch (8 mm).

15. All duct and other related air distribution component openings shall be covered with tape, plastic, sheet metal or other methods acceptable to the building inspector to reduce the amount of water, dust and debris, which may enter the system until final startup of the HVAC equipment. (4.504.1)
16. Bathroom exhaust fans shall be ENERGY STAR compliant and be ducted to terminate outside the building. Unless functioning as a component of whole house ventilation system, fans must be controlled by a humidity control capable of adjustment between a relative humidity range of less than or equal to 50% to maximum 80%. (4.506.1)
17. Duct systems are sized, designed and equipment is selected using the following methods (4.507.2):
- Establish heat loss and heat gain values according to ANSI/ACCA 2 Manual J-2016 (Residential Load Calculation), ASHRAE handbooks or equivalent design software or methods.
  - Size duct systems according to ANSI/ACCA 1 Manual D-2016 (Residential Duct Systems), ASHRAE handbooks or other equivalent design software or methods.
  - Select heating and cooling equipment according to ANSI/ACCA 3 Manual S-2014 (Residential Equipment Selection) or other equivalent design software or methods

### **Installer and Special Inspector Qualifications**

18. HVAC system installers shall be trained and certified or work under direct supervision of trained and certified installers in the proper installation of HVAC systems. (702.1)
19. HVAC special inspectors must be qualified and able to demonstrate competence in the discipline they are inspecting. (702.2)

### **Documentations**

20. An operation and maintenance manual, CD, web-based reference or other approved media shall be provided by the builder to the building occupant or owner at the final inspection. It shall include operation and maintenance instruction of the equipment and appliances. (4.410.1)
21. Documentation shall be provided to verify that finish materials used comply with VOC limits as set forth in Tables 4.504.1, 4.504.2, & 4.504.3. (4.504.2.4)
22. Documentation shall be provided to verify that composite wood products used comply with formaldehyde limits as set forth in Tables 4.504.5. (4.504.5.1)
23. Documentation which shows compliance with CAL Green code including construction documents, plans, specifications, builder or installer certification, and inspection reports and verification shall be available at the final inspection. (703.1)
24. CAL Green Documentation Compliance Certification form (City form) is required to be submitted to the Building Inspector prior to final building inspection. (703.1)