CITY OF CORONADO

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HANDOUT
211
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MANDATORY GREEN CODE STANDARDS

NONRESIDENTIAL CHECKLIST & CERTIFICATION

(Additions and Alterations)

PURPOSE: To ensure mandatory features of the California Green Building Standards Code are incorporated, as applicable, into additions or alterations to nonresidential buildings.

AUTHORITY: 2010 California Green Building Standards Code (individual code sections cited with feature)

NOTES:
1. The mandatory features set forth below must be incorporated, as applicable, into additions or alterations to nonresidential buildings.
2. The owner, contractor, or other person of responsibility must certify prior to building final that these mandatory features have been incorporated, as applicable, into the design and construction of any addition or alteration project to an existing nonresidential building.

DATA: **MANDATORY FEATURES**

Planning and Design

1. Site Development (5.710.6)

a. Storm water pollution prevention (5.710.6.1). Additions that disturb less than one acre of land shall prevent the pollution of storm water runoff from the construction activities through local ordinance in Section 5.710.6.1.1 or Best Management Practices (BMP) in Section 5.710.6.1.2.

b. Bicycle parking (5.710.6.2). Comply with Sections 5.710.6.2.1 and 5.710.6.2.2; or meet the applicable local ordinance, whichever is stricter.

(1). Short-term bicycle parking (5.710.6.2.1). If the project is anticipated to generate visitor traffic and adds 10 or more vehicular parking spaces, provide permanently anchored bicycle racks within 200 feet of the visitor's entrance, readily visible to passers-by, for 5 percent of the additional visitor motorized vehicle parking capacity, with a minimum of one two-bike capacity rack.

(2). Long-term bicycle parking (5.710.6.2.2). For buildings with over 10 tenant-occupants that add 20 or more vehicular parking spaces, provide secure bicycle parking for 5 percent of the additional motorized vehicle parking capacity, with a minimum of one space.

c. Designated parking (5.710.6.3). For projects that add 10 or more vehicular parking spaces, provide designated parking for any combination of low-emitting, fuel-efficient and carpool/van pool vehicles as shown in Table 5.106.2.2 of Division 5.1 based on the number of additional spaces.

d. **Grading and paving (5.710.6.10).** Construction plans shall indicate how site grading or a drainage system will manage all surface water flows to keep water from entering buildings. Examples of methods to manage surface water include those shown in Items 1-5.

Water Efficiency and Conservation

1. Indoor Water Use (5.712.3)

a. Meters (5.712.3.1). Separate submeters or metering device shall be installed for the uses described in Sections 5.712.3.1.1 and 5.713.3.1.2.

(1). Additions to existing buildings in excess of 50,000 square feet (5.712.3.1.1). Separate submeters shall be installed as follows:

(a). For each individual leased, rented, or other tenant space within the building projected to consume more than 100 gal/day.

(b). Where separate submeters for individual building tenants are unfeasible, for water supplied to the following subsystems:

(1). Makeup water for cooling towers where flow through is greater than 500 gpm (30L/s)

(2). Makeup water of evaporative coolers is greater than 6 gpm)0.0 L/s)

(3). Steam and hot water boilers with energy input more than 500,000 Btu/h (147 kW).

(2). Excess consumption (5.712.3.1.2). Any addition or added space within an addition that is projected to consume more than 1,000 gal/day (3800 L/day).

b. Twenty (20) percent savings (5.712.3.2). A schedule of newly installed plumbing fixtures and fixture fittings that will reduce the overall use of potable water within the addition or area of alteration to the building by 20 percent shall be provided. (Calculate savings by completing the Water Use Worksheet)

c. Multiple showerheads serving one shower (5.712.3.3). When a shower is served by more than one newly installed showerhead, the combined flow rate of all the showerheads controlled by a single valve shall not exceed the maximum flow rate at ≥ 20 percent reduction contained in Table 5.303.2.3 or the shower shall be designed to only allow one showerhead to be in operation at a time.

d. Plumbing fixtures and fittings (5.712.3.5). Plumbing fixtures (water closets and urinals) and fittings (faucets and showerheads) shall Meet the standards referenced in Table 5.5.3.6 of Division 5.3.

2. Outdoor Water Use (5.712.4)

a. Water budget (5.712.4.1). A water budget shall be developed for landscaping irrigation use installed in conjunction with addition or alteration.

b. Outdoor potable water use (5.712.4.2). For building addition or alteration requiring upgraded water service for landscaped areas of at least 1,000 square feet but not more than 5,000 square feet (the level at which Water Code Section 535 applies), separate submeters or metering devices shall be installed for outdoor potable water use.

c. Irrigation design (5.712.4.3). In building addition or alteration with at least 1,000 square feet but not more than 2,500 square feet of cumulative landscaped area (the level at which the MLO applies), install irrigation controllers and sensors which include the following criteria and meet manufacturer's recommendations.

(1). Irrigations controllers (5.712.4.3.1). Automatic irrigation system controllers installed at the time of final inspection shall comply with the following:

(a). Controllers shall be weather- or soil moisture-based controllers that automatically adjust irrigation in response to changes in plants' needs as weather conditions change.

(b). Weather-based controllers without integral rain sensors or communication systems that account for local rainfall shall have a separate wired or wireless rain sensor which connects or communicates with the controller(s). Soil moisture-based controllers are not required to have rain sensor input.

Material Conservation and Resource Efficiency

1. Weather Resistance and Moisture Management (5.713.7)

a. Weather protection (5.713.7.1). Provide a weather-resistant exterior wall and foundation envelope as required by the California Building Code, Section 1403.2 (Weather Protection) and the California Energy Code, Section 150 (Mandatory Features and Devices), manufacturer's installation instructions or local ordinance, whichever is more stringent.

b. Moisture control (5.713.7.2). Employ moisture control measures by the following methods:

(1). Sprinklers (5.713.7.2.1). Design and maintain landscape irrigation system to prevent irrigation spray on structures.

(2). Entries and openings (5.713.7.2.2.). Design exterior entries and/or openings subject to foot traffic or wind-driven rain to prevent water intrusion into buildings.

2. Construction Waste Reduction, Disposal and Recycling (5.713.8)

a. Construction waste management (5.713.8.1). Recycle and/or salvage for reuse a minimum of 50 percent of the nonhazardous construction waste in accordance with Section 5.713.8.1.1, 5.713.8.1.2; or meet a local construction and demolition waste management ordinance, whichever is more stringent,

(1). Construction waste management plan (5.713.8.1.1). Where a local jurisdiction does not have a construction and demolition waste management ordinance that is more stringent, submit a construction waste management plan that complies with items 1 through 4 of this section.

(2). Waste management company (5.713.8.1.2). Utilize a waste management company that can provide verifiable documentation that the percentage of construction waste material diverted from the landfill complies with this section.

(3). Exceptions to Sections 5.713.8.1.1 and 5.713.8.1.2:

(a). Excavated soil and land-clearing debris.

(b). Alternate waste reduction methods developed by working with local agencies if diversion or recycle facilities capable or compliance with this item to not exist

(c). Demolition waste meeting local ordinance or calculated in consideration of local recycling facilities and markets, where demolition of an existing structure(s) is necessary for the new construction.

(4). Documentation (5.713.8.1.3). Documentation shall be provided to the enforcing agency which demonstrates compliance with Section 5.713.8.1.1, items 1 through 4. The waste management plan shall be updated as necessary and shall be accessible during construction for examination by the enforcing agency.

b. Excavated soil and land clearing debris (5.713.8.3). One Hundred (100) percent of trees, stumps, rocks and associated vegetation and soils resulting primarily from land clearing shall be reused or recycled. For a phased project, such material may be stockpiled on site until the storage site is developed.

(1). Exception: Reuse, either on- or off-site, of vegetation or soil contaminated by disease or pest infestation.

3. Building Maintenance and Operation (5.713.10)

a. Recycling by occupants (5.713.10.1). If not provided on the existing site and where site conditions permit, provide readily accessible areas that serve the entire building and are identified for the depositing, storage, and collection of nonhazardous materials for recycling in accordance with one of the items listed in 1 through 3.

b. Testing and adjusting (5.713.10.4). Testing and adjusting of new systems installed to serve an addition or alteration subject to Section 5.701.1 shall be required.

(1). Systems (5.713.10.4.2). Develop a written plan of procedures for testing and adjusting systems. Systems to be included for testing and adjusting shall include, as applicable to the project, the systems listed in Section 5.713.10.4.2.

(2). Procedures (5.713.10.4.3). Perform testing and adjusting procedures in accordance with manufacturer's specifications and

applicable standards on each system.

(a). HVAC balancing (5.713.10.4.3.1). In addition to testing and adjusting, before a new space-conditioning system serving a building or space is operated for normal use, balance the system in accordance with the procedures defined by national standards listed in Section 5.713.10.4.3.1 or as approved by the enforcing agency.

(3). Reporting (5.713.10.4.4). After completion of testing, adjusting and balancing, provide a final report of testing signed by the individual responsible for performing these services.

(4). Operation and maintenance manual (5.713.10.4.5). Provide the building owner or representative with detailed operating and maintenance instructions and copies of guaranties/warranties for each system prior to final inspection.

(a). Inspections and reports (5.713.10.4.5.1). Include a copy of all inspection verifications and reports required by the enforcing agency.

Environmental Quality

1. Fireplaces (5.714.3)

a. General (Fireplaces) (5.714.3.1). Install only a direct-vent sealed-combustion gas or sealed wood-burning fireplace, or a sealed woodstove or pellet stove, and refer to residential requirements in the 2010 California Energy Code, Subchapter 7, Section 150.

(1). Woodstoves (5.714.3.1.1). Woodstoves and pellet stoves shall comply with US EPA Phase II emissions limits.

2. Pollutant Control (5.714.4)

a. Temporary ventilation (5.714.4.1). If the HVAC system is used during construction, use return air filters with a MERV of 8, based on ASHRAE 52.2-1999, or an average efficiency of 30% based on ASHRAE 52.1-1992. Replace all filters immediately prior to occupancy.

b. Covering of duct openings of mechanical equipment during construction (5.714.4.3). At the time of rough installation and during storage on the construction site and until final startup of the heating, cooling and ventilating equipment, all duct and other related air distribution component openings shall be covered with tape, plastic, sheetmetal or other methods acceptable to the enforcing agency to reduce the amount of dust, water and debris which may enter the system.

c. Finish material pollutant control (5.714.4.4). Finish materials shall comply with Sections 5.714.4.4.1 through 5.714.4.4.4.

(1). Adhesives, sealants, caulks (5.714.4.4.1). Adhesives and sealants used on the project shall meet the requirements of the following standards.

(a). Adhesives, adhesive bonding primers, adhesive primers, sealants, sealant primers, and caulks shall comply with local or regional air pollution control or air quality management district rules where applicable or SCAQMD Rule 1168 VOC limits, as shown in Tables 5.504.4.1 and 5.504.4.2 in Division 5.5.

(b). Aerosol adhesives and smaller unit sizes of adhesives and sealant or caulking compounds (in units of product, less packaging, which do not weigh more than one pound and do not consist of more than 16 fluid ounces) shall comply with statewide VOC standards and other requirements, including prohibitions on use of certain toxic compounds, of California Code of Regulations, Title 17, commencing with Section 94507.

(2). Paints and coatings (5.714.4.4.3). Architectural paints and coatings shall comply with VOC limits in Table 1 of the ARB Architectural Coatings Suggested Control Measures, as shown in Table 5.504.4.3 in Division 5.5, unless more stringent local limits apply.

(a). Aerosol paints and coatings (5.714.4.4.3.1). Aerosol paints and coatings shall meet the product-weighted MIR limits for ROC in Section 94522(a)(3) and other requirements, including prohibition on use of certain toxic compounds and ozone depleting substances (CCR, Title 17, Section 94520 et seq.).

(b). Verification (5.714.4.4.3.2). Verification of compliance with this section shall be provided at the request of the enforcing agency.

(3). Carpet systems (5.714.4.4.4). All carpet installed in the building interior shall meet the testing and product requirements of one of the standards listed in Section 5.714.4.4.4..

(a). Carpet cushion (5.714.4.4.4.1). All carpet cushion installed in the building interior shall meet the requirements of the Carpet and Rug Institute's Green Label program.

(b). Carpet adhesive (5.714.4.4.4.2). All carpet adhesive shall meet the requirements of Table 5.504.4.1 in Division 5.5.

(4). Composite wood products (5.714.4.4.5). 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 Table 5.504.4 in Division 5.5.

(a). Documentation (5.714.4.4.5.2). Verification of compliance with this section shall be provided as requested by the enforcing agency. Documentation shall include at least one of the following:

(1). Product certifications and specifications

(2). Chain of custody certifications

(3). Product labeled and invoiced as meeting the Composite Wood Products Regulation (see CCR, Title 17, Section 93120, et. seq.)

(4). Exterior grade products marked as meeting the PS-1 or PS-2 standards of the Engineered Wood Association, the Australian AS/NZS 2269 or European 636 3S standards

(5). Other methods acceptable to the enforcing agency.

(5). Resilient flooring systems (5.714.4.4.6). For Fifty (50) percent of floor area receiving resilient flooring, install resilient flooring complying with the VOC-emission limits defined in the 2009 CHPS criteria and listed on its High Performance Products Database; products compliant with CHPS criteria certified under the Greenguard Children & Schools program; certified under the Resilient Floor Covering Institute (RFCI) FloorScore program; or meet California Department of Public Health 2010 Specification 03150.

(a). Verification of compliance (5.714.4.4.6.1). Documentation shall be provided verifying that resilient flooring

materials meet the pollutant emission limits.

(6). Filters (5.714.4.5.3). In mechanically ventilated buildings, provide regularly occupied areas of the building with air filtration media for outside and return air that provide at least a MERV of 8. MERV 8 filters shall be installed after any flush-out or testing and prior to occupancy, and recommendations for maintenance with filters of the same value shall be included in the operation and maintenance manual.

(a). Exception. A MERV-1 filter shall be allowed for return air only or return with pre-filtered outside air, if the filter is of a re-usable, non-disposable type, and the fan energy use of that air delivery system is 0.4W/cfm or less at design airflow.

d. Environmental tobacco smoke (ETS) control (5.714.4.7). Where outdoor areas are provided for smoking, prohibit smoking within 25 feet of building entries, outdoor air intakes and operable windows and within the building as already prohibited by other laws or regulations; or as enforced by ordinances, regulations, or policies of any city, county, city and county, California Community College, campus of the California State University, or campus of the University of California, whichever is more stringent. When ordinances, regulations, or policies are not in place, post signage to inform building occupants of the prohibition.

3. Indoor Moisture Control (5.714.5)

a. Indoor moisture control (5.714.5.1). Buildings shall meet or exceed the provisions of California Building Code, CCR, Title 24, Part 2, Section 1203 (Ventilation) and Chapter 14.1 (Exterior Walls). For additional measure not applicable to low-rise residential occupancies, see Section 5.407.2 of this code.

4. Indoor Air Quality (5.714.6)

a. Outside air delivery (5.714.6.1). For mechanically or naturally ventilated spaces in buildings, meet the minimum requirements of Section 121 (Requirements for Ventilation) of the California Energy Code and Chapter 4 of CCR, Title 8 or the applicable local code, whichever is more stringent.

b. Carbon dioxide (CO_2) monitoring (5.714.6.2). For additions equipped with demand control ventilation, CO_2 sensors and ventilation controls shall be specified and installed in accordance with the requirements of the current edition of the California Energy Code, CCR, Section 121(c).

5. Environmental Comfort (5.714.7)

a. Acoustical control (5.714.7.1). Employ building assemblies and components with STC values determined in accordance with ASTM E 90 and ASTM E 413 or OITC determined in accordance with ASTM E 1332, using either the prescriptive or performance method in Section 5.714.7.1.1 or 5.714.7.1.2.

(1). Exterior noise transmission, prescriptive method (5.714.7.1.1). Wall and floor-ceiling assemblies exposed to the noise source making up the building addition or altered envelope shall have exterior wall and roof –ceiling assemblies meeting a composite STC rating of at least 50 or a composite OITC rating of no less than 40 with exterior windows of a minimum STC of 40 or OITC of 30 in the locations described in Item 1 and 2.

(a). Noise exposure where noise contours are not readily available (5.714.7.1.1.1). Buildings exposed to a noise level of 65 dB Leq-1 Hr during any hour of operation shall have building addition or alteration exterior wall and roof-ceiling assemblies exposed to the noise source meeting a composite STC rating of at least 45 (or OITC 35), with exterior windows of a minimum STC of 40 (or OITC 30).

(2). Performance method (5.714.7.1.2). For buildings located as defined in Sections A5.507.4.1 or A5.507.4.1.1, wall and roof-ceiling assemblies exposed to the noise source making up the building addition or altered envelope shall be constructed to provide an interior noise environment attributable to exterior sources that does not exceed an hourly equivalent noise level (Leq-1 Hr) of 50 dBA in occupied areas during any hour of operation.

(a). Documentation of compliance (5.714.7.1.2.1). An acoustical analysis documenting complying interior sound levels shall be prepared by personnel approved by the architect or engineer of record.

(3). Interior sound transmission (5.714.7.1.3). Wall and floor-ceiling assemblies separating tenant spaces and tenant spaces and public places shall have an STC of at least 40.

6. Outdoor Air Quality (5.714.8)

a. Ozone depletion and global warming reductions (5.714.8.1). Installations of HVAC, refrigeration and fire suppression equipment shall comply with Sections 5.714.8.1.1 and 5.714.8.1.2.

(1). CFCs (5.714.8.1.1). Install HVAC, refrigeration and fire suppression equipment that does not contain CFCs.

(2). Halons (5.714.8.1.2). Install HVAC, refrigeration and fire suppression equipment that does not contain Halons.

CERTIFICATION:

Permit #:_____ Project Address:_____

Property Owner: _____

Contractor: _____ License # / Class: _____

I certify that, to the best of my knowledge, the mandatory features listed on this handout have been incorporated into this project in order to comply with the 2010 California Green Building Standards (California Code of Regulations, Title 24, Part 11).

Signature: _____ Printed name:_____ Date:_____

☐ Owner ☐ Contractor ☐ Other _____