California 2022 CALIFORNIA GREEN BUILDING STANDARDS CODE NONRESIDENTIAL MANDATORY MEASURES, SHEET 1 (July 2024 Supplement)

CHAPTER 3 GREEN BUILDING SECTION 301 GENERAL	N/A	RESPON. PARTY	SECTION 5.106 S 5.106.1 STORM WATER OF LAND. Newly constru- larger common plan of dev activities through one or m
301.1 SCOPE. Buildings shall be designed to include the green building measures specified as mandatory in the application checklists contained in this code. Voluntary green building measures are also included in the			5.106.1.1 Local or ordinance.
application checklists and may be included in the design and construction of structures covered by this code, but are not required unless adopted by a city, county, or city and county as specified in Section 101.7.			5.106.1.2 Best Main implementing an eff
301.3 NONRESIDENTIAL ADDITIONS AND ALTERATIONS. [BSC-CG] The provisions of individual sections of Chapter 5 apply to newly constructed buildings, building additions of 1,000 square feet or greater, and/or building alterations with a permit valuation of \$200,000 or above (for occupancies within the authority of California Building Standards Commission). Code sections relevant to additions and alterations shall only apply to the portions of the building being added or altered within the scope of the permitted work.			1. Soil loss E but are no a. Scl b. Pre c. Dra d. Mu
A code section will be designated by a banner to indicate where the code section only applies to newly constructed buildings [N] or to additions and/or alterations [A]. When the code section applies to both, no banner will be used.			e. Erc f. Prc g. Pe h. Sec
301.3.1 Nonresidential additions and alterations that cause updates to plumbing fixtures only: Note: On and after January 1, 2014, certain commercial real property, as defined in Civil Code Section			i. Sta j. Win k. Oth
1101.3, shall have its noncompliant plumbing fixtures replaced with appropriate water-conserving plumbing fixtures under specific circumstances. See Civil Code Section 1101.1 <i>et seq.</i> for definitions, types of commercial real property affected, effective dates, circumstances necessitating replacement of noncompliant plumbing fixtures, and duties and responsibilities for ensuring compliance.			2. Good hous and waste are not lim a. Dew b. Mate c. Bui
301.3.2 Waste Diversion. The requirements of Section 5.408 shall be required for additions and alterations whenever a permit is required for work.			d. Ma e. Co f. Veh
301.4 PUBLIC SCHOOLS AND COMMUNITY COLLEGES. (see GBSC) 301.5 HEALTH FACILITIES. (see GBSC)			g Spi h. Oth
 SECTION 302 MIXED OCCUPANCY BUILDINGS 302.1 MIXED OCCUPANCY BUILDINGS. In mixed occupancy buildings, each portion of a building shall comply with the specific green building measures applicable to each specific occupancy. 			5.106.2 STORMWATER F LAND. Comply with all law more of land, or (2) disturb Note: Projects that (1) dist
SECTION 303 PHASED PROJECTS			larger common plan of dev applicable National Polluta Associated with Construct
303.1 PHASED PROJECTS. For shell buildings and others constructed for future tenant improvements, only those code measures relevant to the building components and systems considered to be new construction (or newly constructed) shall apply.			the Lahontan Regional Wa The NPDES permits requi (pre-project hydrology) wit
 303.1.1 Initial Tenant improvements. The provisions of this code shall apply only to the initial tenant improvements to a project. Subsequent tenant improvements shall comply with the scoping provisions in Section 301.3 non-residential additions and alterations. ABBREVIATION DEFINITIONS: 			permits emphasize runoff i through nonstructural cont Stormwater volume that ca practices and be approved
HCD Department of Housing and Community Development BSC California Building Standards Commission			Refer to the current applica www.waterboards.ca.gov/ should be given during the
DSA-SSDivision of the State Architect, Structural SafetyOSHPDOffice of Statewide Health Planning and DevelopmentLRLow RiseHRHigh RiseAAAdditions and Alterations			5.106.4 BICYCLE PARKII specified in Section 103, c Architect pursuant to Section
CHAPTER 5			5.106.4.1 Bicycle p applicable local ordi
NONRESIDENTIAL MANDATORY MEASURES			5.106.4.1.1 Store to generate v
DIVISION 5.1 PLANNING AND DESIGN SECTION 5.101 GENERAL			entrance, rea added, with a Excep
5.101.1 SCOPE The provisions of this chapter outline planning, design and development methods that include environmentally responsible site selection, building design, building siting and development to protect, restore and enhance the			5.106.4.1.2 L tenant-occup
environmental quality of the site and respect the integrity of adjacent properties. SECTION 5.102 DEFINITIONS 5.102.1 DEFINITIONS The following terms are defined in Chapter 2 (and are included here for reference)			spaces with a 5.106.4.1.3 F provide secur minimum of o
CUTOFF LUMINAIRES. Luminaires whose light distribution is such that the candela per 1000 lamp lumens does not numerically exceed 25 (2.5 percent) at an angle of 90 degrees above nadir, and 100 (10 percent) at a vertical angle of 80 degrees above nadir. This applies to all lateral angles around the luminaire.			5.106.4.1.4 F anticipated te
ELECTRIC VEHICLE (EV). [BSC-CG, HCD] An automotive-type vehicle for on-road use, such as passenger automobiles, buses, trucks, vans, neighborhood electric vehicles, electric motorcycles and the like, primarily powered by an electric motor that draws current from a rechargeable storage battery, fuel cell, photovoltaic array or other source of electric current. Plug-in hybrid electric vehicles (PHEV) are considered electric vehicles. For purposes of the California Electrical Code, off-road, self-propelled electric vehicles, such as industrial trucks, hoists, lifts, transports, golf carts, airline ground support equipment, tractors, boats and the like, are not included.			5.106.4.1.5 A be convenien 1. Cov 2. Loc 3. Loc
ELECTRIC VEHICLE (EV) CAPABLE SPACE. [BSC-CG, DSA-SS and HCD] A vehicle space with electrical panel space and load capacity to support a branch circuit and			Note: Sacran 5.106.4.2 Bicycle p
necessary raceways, both underground and/or surface mounted, to support EV charging. ELECTRIC VEHICLE (EV) CHARGER. [BSC-CG, HCD] Off-board charging equipment used to charge an electric			5.106.4.2.1 and 5.10
vehicle. ELECTRIC VEHICLE CHARGING SPACE (EV SPACE). [HCD] A space intended for future installation of EV charging equipment and charging of electric vehicles.			accessed with 5.106.4.2.2 S with a minimu shall be conv
ELECTRIC VEHICLE CHARGING STATION (EVCS). [BSC-CG, DSA-SS, HCD] One or more electric vehicle charging spaces served by EVSE or receptacle(s).			1. Cov 2. Loc
ELECTRIC VEHICLE (EV) READY SPACE. [HCD] A vehicle space which is provided with a branch circuit; any necessary raceways, both underground and/or surface mounted; to accommodate EV charging, terminating in a receptacle or a charger.			3. Loc 5.106.5.3 Electric vehicle facilitate electric vehicle
ELECTRIC VEHICLE SUPPLY EQUIPMENT (EVSE).[BSC-CG, DSA-SS and HCD] The conductors, including the ungrounded, grounded and equipment grounding conductors and the electric vehicle connectors, attachment plugs, personnel protection system, and all other fittings, devices, power outlets or apparatus installed specifically for the purpose of transferring energy between the premises wiring and the electric vehicle.			Electric vehicle charging charging stations (EVCS accordance with regulat Exception
SECTION 5.105 DECONSTRUCTION AND REUSE OF EXISTING STRUCTURES 5.105.1 Scope. [BSC-CG] Effective July 1, 2024, alteration(s) to existing building(s) where the combined altered floor area is 100,000 square feet or greater shall comply with either Section 5.105.2, 5.409.2, or 5.409.3. Addition(s) to existing building(s) where the total floor area combined with the existing building(s) is 100,000 square feet or greater shall comply with either Section 5.105.2, Section 5.409.2, or Section 5.409.3. Effective January 1, 2026, the combined floor area shall be 50,000 square feet or greater.			1. C tł
[DSA-SS] Alteration(s) to existing building(s) where the combined altered floor area is 50,000 square feet or greater shall comply with either Section 5.105.2, 5.409.2, or 5.409.3. Addition(s) to existing building(s) where the total floor area combined with the existing building(s) is 50,000 square feet or greater shall comply with either Section 5.105.2, 105.2,			2. P 5.106.5.3.1 5.106.5.3.1
Section 5.409.2, or Section 5.409.3. Exception [BSC-CG, DSA-SS]: Combined addition(s) to existing building(s) of two times the area or more of the existing building(s) is not eligible to meet compliance with Section 5.105.2.			5.106.5.3.1 1. R d th
5.105.2 Reuse of existing building. An alteration or addition to an existing building shall maintain at a minimum 45 percent combined of the existing building's primary structural elements (foundations; columns, beams, walls, and floors; and lateral elements) and existing building enclosure (roof framing, wall framing and exterior finishes). Window assemblies, insulation, portions of buildings deemed structurally unsound or hazardous, and hazardous materials that are remediated as part of the project shall not be included in the calculation.			a u 2. A c c 3. T
5.105.2.1 Verification of compliance. Documentation shall be provided in the construction documents to			3. T to 4. T
demonstrate compliance with Section 5.105.2.			р
			p p Note: A pa charging sp

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E DEVELOPMENT LLUTION PREVENTION FOR PROJECTS THAT DISTURB LESS THAN ONE ACRE	N/A RESPON. PARTY	TABLE 5.106.5.3.1			
d projects and additions which disturb less than one acre of land, and are not part of a pment or sale, shall prevent the pollution of storm water runoff from the construction of the following measures:		TOTAL NUMBER OF ACTUAL PARKING SPACES	NUMBER OF RE CAPABLE S		NUMBER OF EVCS (E CAPABLE SPACES PROVIDED WITH EVSE) ^{A2}
ce. Comply with a lawfully enacted storm water management and/or erosion control		0-9	0		0
nent Practices (BMPs). Prevent the loss of soil through wind or water erosion by combination of erosion and sediment control and good housekeeping BMPs.		10-25	2		0
that should be considered for implementation as appropriate for each project include,		26-50	8		2
ed to, the following: ing construction activity during dry weather, when possible.		76-100	13		4
ation of natural features, vegetation, soil, and buffers around surface waters. e swales or lined ditches to control stormwater flow.		101-150	25		6
g or hydroseeding to stabilize disturbed soils. control to protect slopes. on of storm drain inlets (gravel bags or catch basin inserts).		151-200	35	- f (1	9
er sediment control (perimeter silt fence, fiber rolls). It trap or sediment basin to retain sediment on site.		201 AND OVER	20 percent o parking sp		25 percent of EV capab spaces ¹
d construction exits. sion control.		1. Calculation for spaces shall b 2. The number of required EVC			
il loss BMPs acceptable to the enforcing agency. bing BMPs to manage construction equipment, materials, non-stormwater discharges should be considered for implementation as appropriate for each project include, but b, the following: g activities. andling and waste management. materials stockpile management.		total number of required EV cap 3. At least one Level 2 EVSE sh 5.106.5.3.2 Electric vehicle chargi vehicle supply equipment (EVSE) to required by Table 5.106.5.3.1 shall b 5.106.5.3.2.1. At least one Level 2 E	nall be provided. ng stations (EVCS) EV o create EVCS in the nur be provided with Level 2	capable spaces nber indicated in	Table 5.106.5.3.1. The EV
ment of washout areas (concrete, paints, stucco, etc.). of vehicle/equipment fueling to contractor's staging area.		One EV charger with multiple conne	ctors capable of chargin		
and equipment cleaning performed off site. vention and control.		the electrical load capacity required supplied to the EV charger.	by Section 5.106.5.3.1 f	or each EV capal	ble space is accumulatively
usekeeping BMPs acceptable to the enforcing agency.		The installation of each DCFC EV capable spaces without EVSE by			
UTION PREVENTION FOR PROJECTS THAT DISTURB ONE OR MORE ACRES OF enacted stormwater discharge regulations for projects that (1) disturb one acre or than one acre of land but are part of a larger common plan of development sale.		service panel or subpanel. 5.106.5.3.2.1 The ins	tallation of each DCFC I	EVSE shall be pe	rmitted to reduce the minir S with Level 2 EVSE by five
ne acre or more of land, or (2) disturb less than one acre of land but are part of the nent or sale must comply with the post-construction requirements detailed in the scharge Elimination System (NPDES) General permit for Stormwater Discharges nd Land Disturbance Activities issued by the State Water Resources Control Board or quality Control Board (for projects in the Lake Tahoe Hydrologic Unit).		reduce proportionally 5.106.5.3.2.2 The ins	the required electrical lo	oad capacity to th er Level 2 EV cha	e service panel or subpane arging receptacles shall be ble spaces without EVSE in
tconstruction runoff (post-project hydrology) to match the preconstruction runoff installation of postconstruction stormwater management measures. The NPDES ion through on-site stormwater use, interception, evapotranspiration, and infiltration such as Low Impact Development (LID) practices, and conversation design measures. be addressed using nonstructural practices is required to be captured in structural		5.106.5.3.3 Use of automatic loa ALMS shall be permitted fo specified in Section 5.106.5.3.1 for each EVCS EVSE controlled by an ALM	r EVCS. When ALMS is may be reduced when s	installed, the requert serviced by an EV	/SE controlled by an ALMS
ne enforcing agency. Dermits on the State Water Resources Control Board website at: ructionstormwater. Consideration to the stormwater runoff management measures		and shall deliver a minimun 5.106.5.3.4 Accessible EV When EVSE is installed, ac	n 3.3 kW while simultane / CS. ccessible EVSC shall be	eously charging n	nultiple EVs.
I design process for appropriate integration into site development. For buildings within the authority of California Building Standards Commission as with Section 5.106.4.1. For buildings within the authority of the Division of the State		<i>Code</i> , Chapter 11B, Section Note: For EVCS signs, refe Vehicle Signs and Paveme	er to Caltrans Traffic Ope		rective 13-01 (Zero Emissio
5, comply with Section 5.106.4.2 J. [BSC-CG] Comply with Sections 5.106.4.1.1 and 5.106.4.1.2; or meet the , whichever is stricter.		5.106.5.3.4 Accessible electric v EVCS shall be provided in accord			
term bicycle parking. If the new project or an addition or alteration is anticipated raffic, provide permanently anchored bicycle racks within 200 feet of the visitors' sible to passers-by, for 5% of new visitor motorized vehicle parking spaces being num of one two-bike capacity rack. Additions or alterations which add nine or less visitor vehicular parking spaces.		5.106.5.3.5 Electric vehicle char by signage or pavement markings Emission Vehicle Signs and Pave Power allocation method shall incl	in compliance with Calt ment Markings) or its su lude the following:	rans Traffic Oper ccessor(s).	
provide secure bicycle parking for 5 percent of the tenant-occupant vehicular parking mum of one bicycle parking facility. ditions or alterations that add 10 or more tenant-occupant vehicular parking spaces, ycle parking for 5 percent of the tenant vehicular parking spaces being added, with a cycle parking facility.		5.106.5.3.6 Electric vehicle chargi method may be used as an alternati associated Table 5.106.5.3.1. Use T total number of actual parking space	ve to the requirements in Table 5.106.5.3.6 to dete	n Section 5.106.5	5.3.1, Section 5.106.5.3.2 a
w shell buildings in phased projects provide secure bicycle parking for 5 percent of the occupant vehicular parking spaces with a minimum of one bicycle parking facility.		TABLE 5.106.5.3.6	MINIMUM		VA REQUIRED IN ANY
able bicycle parking facility for Sections 5.106.4.1.2, 5.106.4.1.3, and 5.106.4.1.4 shall the street and shall meet one of the following:		TOTAL NUMBER OF ACTUAL PARKING SPACES	TOTAL kVA @ 6.6 kVA		ION OF EV CAPABLE,3,4 R LEVEL 2, LEVEL 2, 1, 2 OR DCFC
lockable enclosures with permanently anchored racks for bicycles; bicycle rooms with permanently anchored racks; or , permanently anchored bicycle lockers.		0-9 10-25	0 26.4		0 26.4
onal information on recommended bicycle accommodations may be obtained from		26-50	52.8		52.8
		51-75	85.8		02.0
					85.8
Area Bicycle Advocates. g. [DSA-SS] For public schools and community colleges, comply with Sections		76-100	112.2		85.8 112.2
Area Bicycle Advocates. g. [DSA-SS] For public schools and community colleges, comply with Sections 2 ht bicycle parking. Provide permanently anchored bicycle racks conveniently		101-150	112.2 165		85.8 112.2 165
Area Bicycle Advocates. g. [DSA-SS] For public schools and community colleges, comply with Sections .2 ht bicycle parking. Provide permanently anchored bicycle racks conveniently nimum of four two-bike capacity racks per new building. icycle parking. Provide permanent, secure bicycle parking conveniently accessed wo staff bicycle parking spaces per new building. Acceptable bicycle parking facilities			112.216523120 percent of actual parking spaces x		85.8 112.2 165 231 uired kVA = P × .20 × 6.6
Area Bicycle Advocates. ng. [DSA-SS] For public schools and community colleges, comply with Sections nt bicycle parking. Provide permanently anchored bicycle racks conveniently inimum of four two-bike capacity racks per new building. bicycle parking. Provide permanent, secure bicycle parking conveniently accessed two staff bicycle parking spaces per new building. Acceptable bicycle parking facilities t from the street or staff parking area and shall meet one of the following: lockable enclosures with permanently anchored racks for bicycles; bicycle rooms with permanently anchored racks; or		101-150 151-200 201 AND OVER 1. Level 2 EVSE @ 6.6 kVA minimu 2. At least one Level 2 EVSE shall 3. Maximum allowed kVA to be utili	112.216523120 percent of actual parking spaces x 6.60.6um. be provided. ized for EV capable space	Where P =	85.8 112.2 165 231 uired kVA = P × .20 × 6.6 Parking spaces in facility
Area Bicycle Advocates. ng. [DSA-SS] For public schools and community colleges, comply with Sections 2.2 nt bicycle parking. Provide permanently anchored bicycle racks conveniently inimum of four two-bike capacity racks per new building. bicycle parking. Provide permanent, secure bicycle parking conveniently accessed two staff bicycle parking spaces per new building. Acceptable bicycle parking facilities t from the street or staff parking area and shall meet one of the following: lockable enclosures with permanently anchored racks for bicycles; bicycle rooms with permanently anchored racks; or , permanently anchored bicycle lockers. V) charging. [N] [BSC-CG] Construction to provide electric vehicle infrastructure and		101-150 151-200 201 AND OVER 1. Level 2 EVSE @ 6.6 kVA minimu 2. At least one Level 2 EVSE shall	112.216523120 percent of actual parking spaces x 6.60.6um. be provided. ized for EV capable space	Where P =	85.8 112.2 165 231 uired kVA = P × .20 × 6.6 Parking spaces in facility
Area Bicycle Advocates. ng. [DSA-SS] For public schools and community colleges, comply with Sections nt bicycle parking. Provide permanently anchored bicycle racks conveniently inimum of four two-bike capacity racks per new building. Dicycle parking. Provide permanent, secure bicycle parking conveniently accessed two staff bicycle parking spaces per new building. Acceptable bicycle parking facilities t from the street or staff parking area and shall meet one of the following: lockable enclosures with permanently anchored racks for bicycles; bicycle rooms with permanently anchored racks; or , permanently anchored bicycle lockers. V) charging. [N] [BSC-CG] Construction to provide electric vehicle infrastructure and ging shall comply with Section 5.106.5.3.1 EV capable spaces, Section 5.106.5.3.2 Dis and associated Table 5.106.5.3.1, or Section 5.106.5.3.6 Electric vehicle ower allocation method and associated Table 5.106.5.3.6 and shall be provided in		101-150 151-200 201 AND OVER 1. Level 2 EVSE @ 6.6 kVA minimu 2. At least one Level 2 EVSE shall 3. Maximum allowed kVA to be utili 4. If EV capable spaces are utilized	112.2 165 231 20 percent of actual parking spaces x 6.6 um. be provided. ized for EV capable spaced, they shall meet the record, they shall meet the record. isting buildings or parts of the following shall code	Where P = ces is 75 percent. quirements of Sec king facilities [A omply with Section	85.8 112.2 165 231 uired kVA = P × .20 × 6.6 Parking spaces in facility
Area Bicycle Advocates. g. [DSA-SS] For public schools and community colleges, comply with Sections .2 Int bicycle parking. Provide permanently anchored bicycle racks conveniently nimum of four two-bike capacity racks per new building. bicycle parking. Provide permanent, secure bicycle parking conveniently accessed two staff bicycle parking spaces per new building. Acceptable bicycle parking facilities from the street or staff parking area and shall meet one of the following: lockable enclosures with permanently anchored racks for bicycles; bicycle rooms with permanently anchored racks; or permanently anchored bicycle lockers. V) charging. [N] [BSC-CG] Construction to provide electric vehicle infrastructure and ping shall comply with Section 5.106.5.3.1 EV capable spaces, Section 5.106.5.3.2 ons and associated Table 5.106.5.3.1, or Section 5.106.5.3.6 Electric vehicle bower allocation method and associated Table 5.106.5.3.6 and shall be provided in the California Building Code and the California Electrical Code. ase-by-case basis where the local enforcing agency has determined compliance with ction is not feasible based upon one of the following conditions: here there is no local utility power supply here the local utility is unable to supply adequate power.		101-150 151-200 201 AND OVER 1. Level 2 EVSE @ 6.6 kVA minimu 2. At least one Level 2 EVSE shall 3. Maximum allowed kVA to be utili 4. If EV capable spaces are utilized spaces. 5.106.5.4 Additions or alterations to ex or parking facilities being modified by one When EVSE is installed, accessible EVC	112.2 165 231 20 percent of actual parking spaces x parking spaces x 6.6 um. be provided. ized for EV capable spaced, they shall meet the record, they shall meet the record of the following shall cord shall be provided in action. work includes an increase alteration. n is installed covering exercisiting buildings are trigonal covering covering buildings are trigonal covering co	Where P = ces is 75 percent. quirements of Sec king facilities [A mply with Section cordance with the se in power suppl isting parking spa ggered pursuant	85.8 112.2 165 231 Ured kVA = P × .20 × 6.6 Parking spaces in facility
Area Bicycle Advocates. ig. [DSA-SS] For public schools and community colleges, comply with Sections 2 int bicycle parking. Provide permanently anchored bicycle racks conveniently nimum of four two-bike capacity racks per new building. icycle parking. Provide permanent, secure bicycle parking conveniently accessed two staff bicycle parking spaces per new building. Acceptable bicycle parking facilities from the street or staff parking area and shall meet one of the following: lockable enclosures with permanently anchored racks for bicycles; bicycle rooms with permanently anchored racks; or permanently anchored bicycle lockers. V) charging. [N] [BSC-CG] Construction to provide electric vehicle infrastructure and jing shall comply with Section 5.106.5.3.1 EV capable spaces, Section 5.106.5.3.2 ons and associated Table 5.106.5.3.1, or Section 5.106.5.3.6 Electric vehicle ower allocation method and associated Table 5.106.5.3.6 and shall be provided in a the <i>California Building Code</i> and the <i>California Electrical Code</i> . ase-by-case basis where the local enforcing agency has determined compliance with ction is not feasible based upon one of the following conditions: here there is no local utility power supply here the local utility is unable to supply adequate power. here there is evidence suitable to the local enforcement agency substantiating the cal utility infrastructure design requirements, directly related to the implementation of sciento 5.106.5.3, may adversely impact the construction cost of the project. g spaces accessible only by automated mechanical car parking systems are not		101-150 151-200 201 AND OVER 1. Level 2 EVSE @ 6.6 kVA minimu 2. At least one Level 2 EVSE shall 3. Maximum allowed kVA to be utilit 4. If EV capable spaces are utilized spaces. 5.106.5.4 Additions or alterations to ex or parking facilities being modified by one When EVSE is installed, accessible EVCE Chapter 11B, Section 11B-228.3. 1. When the scope of construction or part of a parking facility addition or 2. When a new photovoltaic system 3. When additions or alterations to scope of work includes an increase Exceptions: 1. On a case-by-case basis where not feasible based upon one of the	112.2 165 231 20 percent of actual parking spaces x parking spaces x 6.6 um. be provided. ized for EV capable spaced, they shall meet the record, they shall meet the record of the following shall cord shall be provided in action. work includes an increase alteration. n is installed covering exercisiting buildings are triger in power supply to an existing buildings are triger in power supply to an exist following conditions:	Where P = ces is 75 percent. quirements of Sec king facilities [A mply with Section cordance with the se in power suppl isting parking spa ggered pursuant	85.8 112.2 165 231 Ured kVA = P × .20 × 6.6 Parking spaces in facility
Area Bicycle Advocates. ng. [DSA-SS] For public schools and community colleges, comply with Sections 2.2 nt bicycle parking. Provide permanently anchored bicycle racks conveniently inimum of four two-bike capacity racks per new building. Dicycle parking. Provide permanent, secure bicycle parking conveniently accessed two staff bicycle parking spaces per new building. Acceptable bicycle parking facilities t from the street or staff parking area and shall meet one of the following: lockable enclosures with permanently anchored racks for bicycles; bicycle rooms with permanently anchored racks; or , permanently anchored bicycle lockers. N) charging. [N] [BSC-CG] Construction to provide electric vehicle infrastructure and ging shall comply with Section 5.106.5.3.1 EV capable spaces, Section 5.106.5.3.2 ons and associated Table 5.106.5.3.1, or Section 5.106.5.3.6 Electric vehicle ower allocation method and associated Table 5.106.5.3.6 and shall be provided in n the <i>California Building Code</i> and the <i>California Electrical Code</i> . Asse-by-case basis where the local enforcing agency has determined compliance with ction is not feasible based upon one of the following conditions: <i>Here</i> there is no local utility power supply <i>Here</i> the local utility is unable to supply adequate power. <i>Here</i> there is evidence suitable to the local enforcement agency substantiating the cal utility infrastructure design requirements, directly related to the implementation of ection 5.106.5.3, may adversely impact the construction cost of the project. g spaces accessible only by automated mechanical car parking systems are not red to comply with this code section. capable spaces. [N] EV capable spaces shall be provided in accordance with Table		101-150 151-200 201 AND OVER 1. Level 2 EVSE @ 6.6 kVA minimu 2. At least one Level 2 EVSE shall 3. Maximum allowed kVA to be utili 4. If EV capable spaces are utilized spaces. 5.106.5.4 Additions or alterations to ex or parking facilities being modified by one When EVSE is installed, accessible EVCE Chapter 11B, Section 11B-228.3. 1. When the scope of construction or part of a parking facility addition or 2. When a new photovoltaic system 3. When additions or alterations to scope of work includes an increase Exceptions: 1. On a case-by-case basis where not feasible based upon one of the a. Where there is no local utilib. Where the local utility is utilib. Where the local utility is utilib.	112.2 165 231 20 percent of actual parking spaces x parking spaces x 6.6 um. be provided. ized for EV capable space d, they shall meet the record isting buildings or part of the following shall co S shall be provided in act work includes an increase alteration. n is installed covering exercising buildings are trig e in power supply to an existing buildings are trig the local enforcing agent following conditions: ility power supply. nable to supply adequate uitable to the local enfor	Where P = ces is 75 percent. quirements of Sec king facilities [A comply with Section cordance with the se in power suppled disting parking spa ggered pursuant is electric service pa cy has determine e power. cement agency s	85.8 112.2 165 231 uired kVA = P × .20 × 6.6 Parking spaces in facility .
Area Bicycle Advocates. ng. [DSA-SS] For public schools and community colleges, comply with Sections 2.2 Int bicycle parking. Provide permanently anchored bicycle racks conveniently inimum of four two-bike capacity racks per new building. bicycle parking. Provide permanent, secure bicycle parking conveniently accessed two staff bicycle parking spaces per new building. Acceptable bicycle parking facilities it from the street or staff parking area and shall meet one of the following: lockable enclosures with permanently anchored racks for bicycles; bicycle rooms with permanently anchored racks; or a, permanently anchored bicycle lockers. EV) charging. [N] [BSC-CG] Construction to provide electric vehicle infrastructure and ging shall comply with Section 5.106.5.3.1 EV capable spaces, Section 5.106.5.3.2 ons and associated Table 5.106.5.3.1, or Section 5.106.5.3.6 Electric vehicle in the <i>California Building Code</i> and the <i>California Electrical Code</i> . Exase-by-case basis where the local enforcing agency has determined compliance with totion is not feasible based upon one of the following conditions: Where there is no local utility power supply where there is evidence suitable to the local enforcement agency substantiating the cal utility infrastructure design requirements, directly related to the implementation of ection 5.106.5.3, may adversely impact the construction cost of the project. g spaces accessible only by automated mechanical car parking systems are not ired to comply with this code section. Capable spaces. [N] EV capable spaces shall be provided in accordance with Table the following requirements: ways complying with the California Electrical Code and no less that 1-inch (25 mm) ter shall be provided and shall originate at a service panel or a subpanel(s) serving aa, and shall terminate in close proximity to the proposed location of the EV capable to a suitable listed cabinet, box, enclosure or equivalent. A common raceway may be o serve multiple EV charging spaces.		101-150 151-200 201 AND OVER 1. Level 2 EVSE @ 6.6 kVA minimu 2. At least one Level 2 EVSE shall 3. Maximum allowed kVA to be utilit 4. If EV capable spaces are utilized spaces. 5.106.5.4 Additions or alterations to ex or parking facilities being modified by one When EVSE is installed, accessible EVCE Chapter 11B, Section 11B-228.3. 1. When the scope of construction or part of a parking facility addition or 2. When a new photovoltaic system 3. When additions or alterations to scope of work includes an increase Exceptions: 1. On a case-by-case basis where not feasible based upon one of the a. Where there is no local utility is utility	112.2 165 231 20 percent of actual parking spaces x 6.6 um. be provided. ized for EV capable space of the following shall core of the following shall core of the following shall core of shall be provided in access alteration. n is installed covering exercisiting buildings are trige in power supply to an existing buildings are trige in power supply to an existing buildings are trige in power supply. the local enforcing agent following conditions: ility power supply. nable to supply adequate uitable to the local enfor ign requirements, directlipact the construction cos mpracticable excluding low of the construction cos moracticable excluding low of	Where P = Cess is 75 percent. Quirements of Sec king facilities [A comply with Section coordance with the se in power suppled disting parking spa ggered pursuant electric service pa cy has determine e power. cement agency s y related to the in st of the project. building service po t of the scope of	85.8 112.2 165 231 Lired kVA = P × .20 × 6.6 Parking spaces in facility
 Area Bicycle Advocates. ng. [DSA-SS] For public schools and community colleges, comply with Sections 2.2 ent bicycle parking. Provide permanently anchored bicycle racks conveniently animum of four two-bike capacity racks per new building. bicycle parking. Provide permanent, secure bicycle parking conveniently accessed two staff bicycle parking spaces per new building. Acceptable bicycle parking facilities and from the street or staff parking area and shall meet one of the following: a, lockable enclosures with permanently anchored racks for bicycles; bicycle rooms with permanently anchored racks; or bicycle rooms with permanently anchored racks; or permanently anchored bicycle lockers. EV) charging. [N] [BSC-CG] Construction to provide electric vehicle infrastructure and ging shall comply with Section 5.106.5.3.1 EV capable spaces, Section 5.106.5.3.2 		101-150 151-200 201 AND OVER 1. Level 2 EVSE @ 6.6 kVA minimu 2. At least one Level 2 EVSE shall 3. Maximum allowed kVA to be utili 4. If EV capable spaces are utilized spaces. 5.106.5.4 Additions or alterations to ex or parking facilities being modified by one When EVSE is installed, accessible EVCE Chapter 11B, Section 11B-228.3. 1. When the scope of construction or part of a parking facility addition or 2. When a new photovoltaic system 3. When additions or alterations to scope of work includes an increase Exceptions: 1. On a case-by-case basis where not feasible based upon one of the a. Where there is no local utilib. Where the local utility is un c. Where there is evidence s local utility infrastructure des 5.106.5.3, may adversely im d. Where demonstrated as ir 2. Remote parking facilities that do 3. Parking area lighting upgrades w	112.2 165 231 20 percent of actual parking spaces x 6.6 um. be provided. ized for EV capable space of the following shall construction for the following shall construction. isting buildings or partered of the following shall construction. is installed covering exercisiting buildings are triged in power supply to an existing buildings are triged in power supply to an existing buildings are triged in power supply. the local enforcing ageneration. is installed covering exercisiting buildings are triged in power supply to an existing buildings are triged in power supply. the local enforcing ageneration is installed covering exercisiting buildings are triged in power supply. mable to supply adequate uitable to the local enforing ageneration is installed covering ageneration is installed covering ageneration is the local enforing ageneration is a supply and the construction compracticable excluding local not have access to the local enforing is part to the local enfor to the local enfor is part to	Where P = Cess is 75 percent. Quirements of Sec king facilities [A comply with Section coordance with the se in power supple disting parking spa ggered pursuant electric service pa cy has determine e power. cement agency s y related to the ir st of the project. building service pa t of the scope of a break in parking previously instat kisting parking fac in Section 5.106 5.106.5.3 and ass	85.8 112.2 165 231 Lired kVA = P × .20 × 6.6 Parking spaces in facility

DISCLAIMER: THIS DOCUMENT IS PROVIDED AND INTENDED TO BE USED AS A MEANS TO INDICATE AREAS OF COMPLIANCE WITH THE CALIFORNIA GREEN BUILDING VERIFICATION WITH THE FULL CODE. DUE TO THE END USER ASSUMES ALL RESPONSIBILITY ASSOCIATED WITH THE USE OF THIS DOCUMENT, INCLUDING VERIFICATION WITH THE FULL CODE.

					Y N/A RESPON.		BLE PARTY (ie: ARCHITECT, ENGIN RACTOR, INSPECTOR ETC.)
EV	Y	N/A	RESPON. PARTY				
				5.106.5.5 Electric vehicle (EV) o with Section 5.106.5.5.1 to facilita warehouses, grocery stores and r loading spaces shall also comply	ate future installation of electric retail stores, office buildings, ar	vehicle supply equipment d manufacturing facilities	t (EVSE). Construction with planned off-street
				is not feasible based upon a. Where there is no b. Where the local ut c. Where there is evi local utility infrastruct	where the local enforcing agen one of the following conditions: local utility power supply. tility is unable to supply adequa idence suitable to the local enfo ture design requirements, direc	te power. rcing agency substantiati tly related to the impleme	ing that additional entation
					, may adversely impact the con	struction cost of the proje	ct.
e				Code and as follows:	shall be in accordance with the	Camornia Bunding Code	, the Camornia Electric
					le charging readiness require uring facilities and retail store		
l the				busway(s) and adequate ca	nolition when adding EV supply apacity for transformer(s), servi ordance with the <i>California Elec</i> nited to, the following:	ce panel(s) or subpanel(s	s) shall be installed at t
S					nain service equipment and sul to accommodate the dedicated		
tted if				2. The construction of off-street loading spatial dispensers, and a particular spatial dispensers, and a particular spatial spatia	documents shall indicate one or ace(s) reserved for medium- an athway reserved for routing of c	more location(s) conven d heavy-duty ZEV chargi onduit from the terminatio	ient to the planned ng cabinets and charg on of the raceway(s) or
the				busway(s) to the cha 3. Raceway(s) or bus	arging cabinet(s) and dispenser sway(s) originating at a main se um- and heavy-duty EVSE will	(s), as shown in Table 5.1 ervice panel or a subpane	106.5.5.1. el(s) serving the area w
um and				4. The raceway(s) or load to the future loc	e location of the charging equip r busway(s) shall be of sufficien ation of the charging for mediur	t size to carry the minimu	m additional system
Table					ACEWAY CONDUIT AI OR MEDIUM- AND HEA		
							ADDITIONAL
Each /ehicle /ilding				BUILDING TYPE	BUILDING SIZE (SQ. FT.)	NUMBER OF OFF-STREET LOADING SPACES	CAPACITY REQUIRED (KVA) FOR RACEWAY & BUSWAY AND TRANSFORMER & PANEL
linaing					10,000 to 90,000	1 or 2	200
I				Grocery		3 or Greater	400
e					Greater than 90,000 10,000 to 50,000	1 or Greater	400 200
3.3.				Manufacturing Facilities	10,000 to 50,000	3 or Greater	400
tified (Zero					Greater than 50,000	1 or Greater	400
					10,000 to 135,000	1 or 2	200
Es.				Office Buildings	10,000 to 135,000	3 or Greater	400
≥S.					Greater than 135,000	1 or Greater	400
						1 or 2	200
on 🛛				Retail	10,000 to 135,000	3 or Greater	400
n the				i vetaii	Greater than 135,000	1 or Greater	400
					20,000 to 256,000	1 or 2	200
				Warehouse		3 or Greater	400
					Greater than 256,000	1 or Greater	400
				based upon one of the follo compliance with Section 5. a. Where there is no b. Where the local ut c. The installation of	charging stations shall comply v	vith Section 5.106.5.6 and the California Electrical Co tion has been demonstrat rence by the Division of th e power.	l shall be provided in de. ted to be not feasible he State Architect (DS
				and the following requireme			
e				provided and shall originate proximity to the proposed lo	h the California Electrical Code e at a service panel or a subpar ocation of the EV capable space aceway may be used to serve m	el(s) serving the area and and into a suitable listed	d shall terminate in clos cabinet, box, enclosure
ngs				dedicated 208/240 volt, 40-	nel(s) shall be provided with pa ampere minimum branch circuit installed EVSE at each EVCS.		
las				full rated amperage at each			
ne					panel circuit directory shall iden ." The raceway termination loca		

TABLE 5.106.5.6.1 NUMBER OF TOTAL NUMBER OF ACTUAL NUMBER OF REQUIRED EV CAPABLE SPACES REQUIRED EVCS² PARKING SPACES 0-9 0 0 10-25 4 1 26-50 2 8 51-75 13 3 17 76-100 4 101-150 25 6 151-200 35 9 25 percent of EV capable 201 AND OVER 20 percent of total spaces¹ spaces¹

1. Calculation for spaces shall be rounded up to the nearest whole number. 2. Each EVCS shall reduce the number of required EV capable spaces by the same number.

5.106.5.6.2 Electric vehicle charging stations (EVCS). EV capable spaces shall be provided with EVSE to create EVCS in the number indicated in Table 5.106.5.6.1 and shall comply with Section 5.106.5.6.2. EVCS shall be serviced by Level 2 or Direct Current Fast Charging (DCFC) EVSE, or with EVSE in any combination of Level 2 and DCFC. Accessible EVCS shall be provided in accordance with California Building Code Chapter 11B.

"EV CAPABLE."

					Y	N/A RESPON.	Y N/A RES	SPON.	
5.106.5.6.2.1 Reduced nu permitted to reduce the mi by five and reduce proport	inimum num	ber of required E	V capable space	es indicated in T	able 5.106.5.6.1		5.106.8.1 Facing- Backlight Luminaries within 2MH of a property line shall be oriented so that the nearest property line is behind the fixture, and shall comply with the backlight rating specified in Table 5.106.8 based on the lighting zone and distance to	5.303.3 WATER CONSERVING PLUMBING FIXTURES A urinals) and fittings (faucets and showerheads) shall comply	
5.106.5.6.2.2 Multiple co EVs simultaneously shall l	be permitted	if the electrical l	oad capacity req				the nearest point of that property line. Exception: Corners. If two property lines (or two segments of the same property line) have equidistant point	5.303.3.1 Water Closets. The effective flush volum flush. Tank-type water closets shall be certified to th	
each EV capable space is 5.106.5.6.2.3 Use of auto				ALMS shall be	permitted for		to the luminaire, then the luminaire may be oriented so that the intersection of the two lines (the corner) is directly behind the luminaire. The luminaire shall still use the distance to the nearest points(s) on the property lines to determine the required backlight rating.	Specification for Tank-Type toilets. Note: The effective flush volume of dual flush toilets	is defined as the composite, average flus
EVCS installed in accorda load capacity specified in EVSE controlled by an AL	Section 5.10	6.5.6.1 for each	EVCS may be re	educed when se	rviced by an		5.106.8.2 Facing-Glare. For luminaires covered by 5.106.8.1, if a property line also exists within or extends into the front hemisphere	two reduced flushes and one full flush. 5.303.3.2 Urinals.	
to an EV when charging o multiple EVs.	ne vehicle a	nd shall deliver a	a minimum 3.3 k	N while simultar	neously charging		within 2MH of the luminaire then the luminaire shall comply with the more stringent glare rating specified in Table 5.106.8 based on the lighting zone and distance to the nearest point on the nearest property line within	5.303.3.2.1 Wall-mounted Urinals. The effect 0.125 gallons per flush.	tive flush volume of wall-mounted urinals
5.106.5.6.3 EVCS alternative co provided with Level 1, low power Level 2 EVSE such that the total	Level 2, or	Level 2, or any c	ombination of Le	evel 1, low powe	r Level 2 or		the front hemisphere. Note: [N]	5.303.3.2.2 Floor-mounted Urinals. The effent not exceed 0.5 gallons per flush.	ctive flush volume of floor-mounted or oth
indicated in Table 5.106.5.6.3, b							1.See also <i>California Building Code</i> , Chapter 12, Section 1205.6 for college campus lighting requirements for parking facilities and walkways. 2.Refer to Chapter 8 (Compliance Forms, Worksheets and Reference Material) for IES TM-15-11 Table	5.303.3.3 Showerheads. [BSC-CG] 5.303.3.3.1 Single showerhead. Showerhea gallons per minute at 80 psi. Showerheads sh	
TABLE 5.106.5.6.3							 A-1, <i>California Energy Code</i> Tables 130.2-A and 130.2-B. 3. Refer to the <i>California Building Code</i> for requirements for additions and alterations. 	WaterSense Specification for Showerheads. 5.303.3.3.2 Multiple showerheads serving o	ne shower. When a shower is served by
NUMBER OF PARKING SPA IN A PARKING FACILIT			OTAL POWER (RED FOR EVCS	,			5.106.10 GRADING AND PAVING. 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, but are not limited to, the following:	showerhead, the combined flow rate of all the single valve shall not exceed 1.8 gallons per m allow only one shower outlet to be in operation	inute at 80 psi, or the shower shall be des
0-9			0				 Swales. Water collection and disposal systems. 	Note: A hand-held shower shall be considered	d a showerhead.
10-25 26-50			14				 French drains. Water retention gardens. Other water measures which keep surface water away from buildings and aid in groundwater recharge. 	5.303.3.3.1 Single showerhead. Showerhead gallons per minute at 80 psi. Showerheads showerheads.	
51-75 76-100			20 27				Exception: Additions and alterations not altering the drainage path.	5.303.3.3.2 Multiple showerheads serving of showerhead, the combined flow rate of all the s	
101-150			40 60				5.106.12 SHADE TREES [DSA-SS]. Shade Trees shall be planted to comply with Sections 5.106.12.1, 5.106.12.2, and 5.106.12.3. Percentages shown shall be measured at noon on the summer solstice. Landscape irrigation necessary to establish and maintain tree health shall comply with Section 5.304.6.	showernead, the combined how rate of all the s single valve shall not exceed 1.8 gallons per m allow only one shower outlet to be in operation Note: A hand-held shower shall be considered	inute at 80 psi, or the shower shall be des at a time.
201 AND OVER			50 KVA = P × .05 rking spaces in				5.106.12.1 Surface parking areas. Shade tree plantings, minimum #10 container size or equal, shall be installed	5.303.3.4 Faucets and fountains. 5.303.3.4.1 Nonresidential Lavatory faucets	
5.106.5.6.4 EVCS for alterations of c	or additions				s to parking		to provide shade over 50 percent of the parking area within 15 years. Exceptions: Surface parking area covered by solar photovoltaic shade structures with roofing materials that comply with Table 45 106 11 2 2 in Appendix 45 shall be permitted in whole or in part in	5.303.3.4.1 Nonresidential Lavatory faucets more than 0.5 gallons per minute at 60 psi. 5.303.3.4.2 Kitchen faucets. Kitchen faucets s	
facilities shall provide EVCS in compli- spaces required to be provided without	ance with Se	ection 5.106.5.6.	4. The installation				materials that comply with Table A5.106.11.2.2 in Appendix A5 shall be permitted in whole or in part in lieu of shade tree planting. 5 106 12 2 Landscape areas. Shade tress plantings, minimum #10 container size or equal shall be installed to	gallons per minute at 60 psi. Kitchen faucets m but not to exceed 2.2 gallons per minute at 60 per minute at 60 psi.	ay temporarily increase the flow above the
5.106.5.6.4.1 Alterations of an the number indicated in Table 5	.106.5.6.1 o	r minimum powe	er indicated in Ta	able 5.106.5.6.3	when the scope		5.106.12.2 Landscape areas. Shade tress plantings, minimum #10 container size or equal shall be installed to provide shade of 20% of the landscape area within 15 years.	5.303.3.4.3 Wash fountains. Wash fountains gallons per minute/20 [rim space (inches) at 60	
of work includes an increase in area or when area containing pa shall be based on the total num	arking space	es is added to a	parking facility. T	he number of re	equired EVCS		Exceptions: Playfields for organized sport activity are not included in the total area calculation. 5.106.12.3. Hardscape areas. Shade tree plantings, minimum #10 container size or equal shall be installed to provide shade over 20 percent of the bardscape area within 15 years.	5.303.3.4.4 Metering faucets. Metering faucet	
5.106.5.6.4.2 Alterations cons in accordance with the number i							provide shade over 20 percent of the hardscape area within 15 years. Exceptions:	5.303.3.4.5 Metering faucets for wash founta maximum flow rate of not more than 0.20 gallo	
5.106.5.6.3 when a new photo							 Walks, hardscape areas covered by solar photovoltaic shade structures or shade structures with roofing materials that comply with Table A5.106.11.2.2 in Appendix A5 shall be permitted in whole or in part in lieu of shade tree planting. 	Note: Where complying faucets are unavailable reduction.	e, aerators or other means may be used t
5.106.5.6.5 Requirement to install E create EVCS when a project is require approval to the Division of the State A	d by Califor	nia Administrativ	e Code Section	4-309 to be sub	mitted for plan		2. Designated and marked play areas of organized sport activity are not included in the total area calculation.	5.303.3.4.6 Pre-rinse spray value When installed, shall meet the requirements in	
EVCS shall be provided in accordance	e with <i>Califor</i>	rnia Building Coo	<i>le</i> Chapter 11B.				DIVISION 5.2 ENERGY EFFICIENCY SECTION 5.201 GENERAL	Efficiency Regulations), Section 1605.1 (h)(4) (d)(7), and shall be equipped with an integral a	utomatic shutoff.
not required to comply with Sec	tion 5.106.5.	6.5.	·				5.201.1 Scope [BSC-CG]. <i>California Energy Code [DSA-SS].</i> For the purposes of mandatory energy efficiency standards in this code, the California Energy Commission will continue to adopt mandatory building standards.	FOR REFERENCE ONLY : The following table <i>Code of Regulations</i> , Title 20 (Appliance Efficient 1605.3 (h)(4)(A).	
5.106.8 LIGHT POLLUTION REDUCT with the following:				-			DIVISION 5.3 WATER EFFICIENCY AND CONSERVATION		
 The minimum requirements in Section 10-114 of the Californ Backlight (B) ratings as define Unlight and Clare ratings as 	nia Administi ed in IES TM	rative Code; and 1-15-11 (shown i	n Table A-1 in C	hapter 8);			SECTION 5.301 GENERAL 5.301.1 Scope. The provisions of this chapter shall establish the means of conserving water use indoors, outdoors and in wastewater conveyance.	TABLE H-2 STANDARDS FOR COMMERCIA	
 Uplight and Glare ratings as a Chapter 8) and Allowable BUG ratings not ex- lowfully exected pursuant to 2 	ceeding tho	se shown in Tab	le 5.106.8, [N] o				SECTION 5.302 DEFINITIONS	VALUES MANUFACTURED ON PRODUCT CLASS	OR AFTER JANUARY 28, 201
lawfully enacted pursuant to s Exceptions: [N]	Section 101.	ι, wnichever is n	nore stringent.				5.302.1 Definitions. The following terms are defined in Chapter 2 (and are included here for reference) EVAPOTRANSPIRATION ADJUSTMENT FACTOR (ETAF) [DSA-SS]. An adjustment factor when applied to	PRODUCT CLASS [spray force in ounce force (ozf)] Product Class 1 (≤ 5.0 ozf)	1.00
 Luminaires that qualify Emergency lighting. Building feede meeting 	•		()				reference evapotranspiration that adjusts for plant factors and irrigation efficiency, which ae two major influences on the amount of water that needs to be applied to the landscape.	Product Class 2 (> 5.0 ozf and \leq 8.0 ozf)	1.20
 Building facade meetin Custom lighting featur Alternate materials, de 	es as allowe esigns and n	ed by the local en nethods of constr	forcing agency, ruction.	aiitornia Energy as permitted by	Section 101.8		FOOTPRINT AREA [DSA-SS]. The total area of the furthest exterior wall of the structure projected to natural grade, not including exterior areas such as stairs, covered walkways, patios and decks.	Product Class 3 (> 8.0 ozf)	1.28
5. Luminaires with less the TABLE 5.106.8 [N] MAX				Γ,			METERING FAUCET. A self-closing faucet that dispenses a specific volume of water for each actuation cycle. The volume or cycle duration can be fixed or adjustable.	5.303.4 COMMERCIAL KITCHEN EQUIPMENT. 5.303.4.1 Food Waste Disposers. Disposers shall	
UPLIGHT AND GLARE (B		TINGS 1,2	1				GRAYWATER. Pursuant to Health and Safety Code Section 17922.12, "graywater" means untreated wastewater that has not been contaminated by any toilet discharge, has not been affected by infectious, contaminated, or unhealthy bodily wastes, and does not present a threat from contamination by unhealthful processing, manufacturing, or	when the disposer is not in use (not actively grinding more than 10 minutes of inactivity. Disposers shall us Note: This code section does not affect local jurisdic	food waste/no-load) or shall automatically se no more than 8 gpm of water.
ALLOWABLE RATING	ZONE LZ0	LIGHTING ZONE LZ1	LIGHTING ZONE LZ2	LIGHTING ZONE LZ3	LIGHTING ZONE LZ4		operating wastes, and does not present a threat from contamination by unnealthful processing, manufacturing, or operating wastes. "Graywater" includes, but is not limited to wastewater from bathtubs, showers, bathroom washbasins, clothes washing machines and laundry tubs, but does not include waste water from kitchen sinks or dishwashers.	installation. 5.303.5 AREAS OF ADDITION OR ALTERATION. For the	se occupancies within the authority of the
MAXIMUM ALLOWABLE BACKLIGHT RATING 3							MODEL WATER EFFICIENT LANDSCAPE ORDINANCE (MWELO). The California ordinance regulating landscape	Building Standards Commission as specified in Section 103 to new fixtures in additions or areas of alteration to the build	, the provisions of Section 5.303.3 and 5.
Luminaire greater than 2 mounting heights (MH) from property line	N/A	No Limit	No Limit	No Limit	No Limit		design, installation and maintenance practices that will ensure commercial, multifamily and other developer installed landscapes greater than 2500 square feet meet an irrigation water budget developed based on landscaped area and climatological parameters.	5.303.6 STANDARDS FOR PLUMBING FIXTURES AND F in accordance with the <i>California Plumbing Code</i> , and shall of the <i>California Plumbing Code</i> and in Chapter 6 of this cod	meet the applicable standards referenced
Luminaire back hemisphere is 1-2 MH from property line	N/A	B2	B3	B4	B4		MODEL WATER EFFICIENT LANDSCAPE ORDINANCE (MWELO). [HCD] The California model ordinance (California Code of Regulations, Title 23, Division 2, Chapter 2.7), regulating landscape design, installation and maintenance practices. Local agencies are required to adopt the updated MWELO, or adopt a local ordinance at least	SECTION 5.304 OUTDOOR WATER USE	
Luminaire back hemisphere is 0.5-1 MH from property line	N/A	B1	B2	B3	В3		maintenance practices. Local agencies are required to adopt the updated MWELO, or adopt a local ordinance at least as effective as the MWELO.	5.304.1 OUTDOOR POTABLE WATER USE IN LANDSCA with a local water efficient landscape ordinance or the curre Efficient Landscape Ordinance (MWELO), whichever is mor	nt California Department of Water Resour
Luminaire back hemisphere is less than 0.5 MH from property line	N/A	B0	В0	B1	B2		POTABLE WATER. Water that is drinkable and meets the U.S. Environmental Protection Agency (EPA) Drinking Water Standards. See definition in the California Plumbing Code, Part 5. POTABLE WATER. IHCD1. Water that is satisfactory for drinking, culinary, and domestic purposes, and meets the	Notes: 1. The Model Water Efficient Landscape Ordinance (MWELO) is located in the California Code
MAXIMUM ALLOWABLE UPLIGHT RATING (U)							POTABLE WATER. [HCD] Water that is satisfactory for drinking, culinary, and domestic purposes, and meets the U.S. Environmental Protection Agency (EPA) Drinking Water Standards and the requirements of the Health Authority Having Jurisdiction.	Title 23, Chapter 2.7, Division 2. 2. MWELO and supporting documents, including a w https://www.water.ca.gov/.	· · ·
For area lighting ₃	N/A	U0	U0	UO	U0		RECYCLED WATER. Water which, as a result of treatment of waste, is suitable for a direct beneficial use or a controlled use that would not otherwise occur [Water Code Section 13050 (n)]. Simply put, recycled water is water	5.304.6 OUTDOOR POTABLE WATER USE IN LANDSCA landscape projects as described in Sections 5.304.6.1 and	5.304.6.2 shall comply with the California I
lighting,including decorative luminaires	N/A	U1	U2	U3	UR		treated to remove waste matter attaining a quality that is suitable to use the water again. SUBMETER. [HCD 1] A secondary device beyond a meter that measures water consumption of an individual rental	Water Resources Model Water Efficient Landscape Ordinar 2.7, Division 2, Title 23, <i>California Code of Regulations</i> , exc shall be 0.65 with an additional water allowance for special	nce (MWELO) commencing with Section 4 ept that the evapotranspiration adjustment
MAXIMUM ALLOWABLE GLARE RATING 5 (G)							unit within a multiunit residential structure or mixed-use residential and commercial structure. (See Civic Code Section 1954.202 (g) and Water code Section 517 for additional details.)	Exception: Any project with an aggregate landscape prescriptive measures contained in Apper	area of 2,500 square feet or less may co
MAXIMUM ALLOWABLE GLARE RATING 5 (G)	N/A	G1	G2	G3	G4		WATER BUDGET. Is the estimated total landscape irrigation water use which shall not exceed the maximum applied water allowance calculated in accordance with the Department of Water Resources Model Efficient Landscape Ordinance (MWELO).	5.304.6.1 Newly constructed landscapes. New co area equal to or greater than 500 square fe	nstruction projects with an aggregate land
MAXIMUM ALLOWABLE GLARE RATING ₅ (G) MAXIMUM ALLOWABLE	N/A	G0	G1	G1	G2		SECTION 5.303 INDOOR WATER USE 5.303.1 METERS. Separate submeters or metering devices shall be installed for the uses described in Sections	5.304.6.2 Rehabilitated landscapes. Rehabilitated landscape area equal to or greater than 1,	landscape projects with an aggregate
GLARE RATING 5 (G)	N/A	G0	G0	G1	G1		503.1.1 and 503.1.2.		ERVATION AND RESOL
MAXIMUM ALLOWABLE GLARE RATING 5 (G)	N/A	G0	G0	G0	G1		 5.303.1.1 Buildings in excess of 50,000 square feet. Separate submeters shall be installed as follows: 1. For each individual leased, rented or other tenant space within the building projected to consume more than 100 gal/day (380 L/day) including, but not limited to spaces used for launday or cleaners. 	EFFICIENCY	
1. IESNA Lighting Zones 0 and 5 a		Administrative C	Code.				more than 100 gal/day (380 L/day), including, but not limited to, spaces used for laundry or cleaners, restaurant or food service, medical or dental office, laboratory, or beauty salon or barber shop. 2. Where separate submeters for individual building tenants are unfeasible, for water supplied to the	SECTION 5.401 GENERAL 5.401.1 SCOPE. The provisions of this chapter specify the r efficiency, and greenhouse gas (GHG) emission reduction t	hrough protection of buildings from exterio
Energy Code and Chapter 10 of the		bikowaye plaz	as and parking	ots, the property	y line may be		following subsystems:	construction waste diversion, employment of techniques to	reduce pollution through recycling of mate
 Energy Code and Chapter 10 of the For property lines that abut pub considered to be 5 feet beyond the section. For property lines that abu 	actual prop	erty line for purp	ose of determin	ing compliance	with this		 a. Makeup water for cooling towers where flow through is greater than 500 gpm (30 L/s). b. Makeup water for evaporative coolers greater than 6 gpm (0.04 L/s). 	installation of products with lower GHG emissions and build SECTION 5.402 DEFINITIONS	ing commissioning or testing and adjustin

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California 2022 CALIFORNIA GREEN BUILDING STANDARDS CODE

			Y = YES N/A = NOT APPLICABLE RESPON. PARTY = RESPONSIBLE PARTY (ie: ARCHITECT, ENGINEER, OWNER, CONTRACTOR, INSPECTOR ETC.)
	Y	N/A RESPON. PARTY	BALANCE. To proportion flows within the distribution system, including sub-mains, branches and terminals, according to design quantities.
d			BUILDING COMMISSIONING. A systematic quality assurance process that spans the entire design and construction process, including verifying and documenting that building systems and components are planned, designed, installed, tested, operated and maintained to meet the owner's project requirements.
ber			BUY CLEAN CALIFORNIA ACT (BCCA) . The Buy Clean California Act (BCCA) (Public Contract Code Sections 3500-3505) targets carbon emissions associated with the production of structural steel (hot-rolled sections, hollow
of			structural sections, and plate), concrete reinforcing steel, flat glass, and mineral wool board insulation. The maximum acceptable global warming potential (GWP) limits are established by the Department of General Services (DGS), in consultation with the California Air Resources Board (CARB).
exceed			CRADLE-TO-GRAVE. Activities associated with a product or building's life cycle from the extraction stage through disposal stage, and covering modules A1 through C4 in accordance with ISO Standards 14025 and 21930.
shall			ORGANIC WASTE. Food waste, green waste, landscape and pruning wste, nonhazardous wood waste, and food soiled paper waste that is mixed in with food waste.
1.8 . EPA			 REFERENCE STUDY PERIOD. The period of use for the building, in years, that will be assumed for life cycle assessment. TEST. A procedure to determine quantitative performance of a system or equipment
n one by a			TYPE III ENVIRONMENTAL PRODUCT DECLARATION (EPD). A third-party verified report that summarizes how a product impacts the environment. Type III EPDs can be either product-specific, factory-specific, or industry-wide EPDs See "Cradle-to-Gate."
			FACTORY-SPECIFIC EPD. A product-specific Type III EPD in which the environmental impacts can be attributed to a single manufacturer and manufacturing facility.
1.8 . EPA			INDUSTRY-WIDE EPD (IW-EPD). A Type III EPD in which the environmental impacts are an average of the typical manufacturing impacts for a range of products within the same product category for a group of manufacturers.
one by a			PRODUCT-SPECIFIC EPD. A Type III EPD in which the environmental impacts can be attributed to a product design and manufacturer across multiple facilities.
of not			SECTION 5.407 WATER RESISTANCE AND MOISTURE MANAGEMENT 5.407.1 WEATHER PROTECTION. Provide a weather-resistant exterior wall and foundation envelope as required by California Building Code Section 1402.2 (Weather Protection), manufacturer's installation instructions or local ordinance, whichever is more stringent.
8			5.407.2 MOISTURE CONTROL. Employ moisture control measures by the following methods.
n rate, gallons			 5.407.2.1 Sprinklers. Design and maintain landscape irrigation systems to prevent spray on structures. 5.407.2.2 Entries and openings. Design exterior entries and/or openings subject to foot traffic or wind-driven
			rain to prevent water intrusion into buildings as follows: 5.407.2.2.1 Exterior door protection. Primary exterior entries shall be covered to prevent water
			intrusion by using nonabsorbent floor and wall finishes within at least 2 feet around and perpendicular to such openings plus at least one of the following: 1. An installed awning at least 4 feet in depth.
а			 All installed awining at least 4 feet in depth. The door is protected by a roof overhang at least 4 feet in depth. The door is recessed at least 4 feet. Other methods which provide equivalent protection.
			5.407.2.2.2 Flashing. Install flashings integrated with a drainage plane.
nce)7			SECTION 5.408 CONSTRUCTION WASTE REDUCTION, DISPOSAL AND RECYCLING
<i>fornia</i> n			5.408.1 CONSTRUCTION WASTE MANAGEMENT. Recycle and/or salvage for reuse a minimum of 65% of the non-hazardous construction and demolition waste in accordance with Section 5.408.1.1, 5.408.1.2 or 5.408.1.3; or meet a local construction and demolition waste management ordinance, whichever is more stringent.
			 Identifies the construction and demolition waste materials to be diverted from disposal by efficient usage, recycling, reuse on the project or salvage for future use or sale. Determines if construction and demolition waste materials will be sorted on-site (source-separated) or bulk mixed (single stream). Identifies diversion facilities where construction and demolition waste material collected will be taken. Specifies that the amount of construction and demolition waste materials diverted shall be calculated by weight or volume, but not by both. 5.408.1.2 Waste Management Company. Utilize a waste management company that can provide verifiable documentation that the percentage of construction and demolition waste material diverted from the landfill
			complies with this section. Note: The owner or contractor shall make the determination if the construction and demolition waste material will be diverted by a waste management company. Exceptions to Sections 5.408.1.1 and 5.408.1.2:
gpm fter no			 Exceptions to operation of root in and encountry. Exceptions to operation of local and land-clearing debris. Alternate waste reduction methods developed by working with local agencies if diversion or recycle facilities capable of compliance with this item do not exist. Demolition waste meeting local ordinance or calculated in consideration of local recycling facilities and markets.
ll apply			5.408.1.3 Waste stream reduction alternative. The combined weight of new construction disposal that does not exceed two pounds per square foot of building area may be deemed to meet the 65% minimum requirement as approved by the enforcing agency.
stalled 1701.1			5.408.1.4 Documentation. Documentation shall be provided to the enforcing agency which demonstrates compliance with Sections 5.408.1.1, through 5.408.1.3. The waste management plan shall be updated as necessary and shall be accessible during construction for examination by the enforcing agency. Notes:
mply el Water			 Sample forms found in "A Guide to the California Green Building Standards Code (Nonresidential)" located www.dgs.ca.gov/BSC/Resources/Page-Content/Building-Standards-Commission- Resources-List-Folder/CALGreen may be used to assist in documenting compliance with the waste management plan. Mixed construction and demolition debris processors can be located at the California Department of
ations, leges, nt of			 Resources Recycling and Recovery (CalRecycle). 5.408.2 UNIVERSAL WASTE. [A] Additions and alterations to a building or tenant space that meet the scoping provisions in Section 301.3 for nonresidential additions and alterations, shall require verification that Universal Waste items such as fluorescent lamps and ballast and mercury containing thermostats as well as other California prohibited Universal Waste materials are disposed of properly and are diverted from landfills. A list of prohibited Universal Waste materials shall be included in the construction documents.
pter TAF) the			Note : Refer to the Universal Waste Rule link at: http://www.dtsc.ca.gov/universalwaste/ 5.408.3 EXCAVATED SOIL AND LAND CLEARING DEBRIS. 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.
			Exception: Reuse, either on or off-site, of vegetation or soil contaminated by disease or pest infestation. Notes:
			 If contamination by disease or pest infestation is suspected, contact the County Agricultural Commissioner and follow its direction for recycling or disposal of the material. For a map of know pest and/or disease quarantine zones, consult with the California Department of Food and Agriculture. (www.cdfa.ca.gov)
source e,			SECTION 5.409 LIFE CYCLE ASSESSMENT 5.409.1 SCOPE. [BSC-CG] Effective July 1, 2024, projects consisting of newly constructed building(s) with a combined floor area of 100,000 square feet or greater shall comply with either Section 5.409.2 or Section 5.409.3. Alteration(s) to existing building(s) where the combined altered floor area is 100,000 square feet or greater shall comply with either Section 5.105.2, 5.409.2, or 5.409.3. Addition(s) to existing building(s) where the total floor area combined with the existing building(s) is 100,000 square feet or greater shall comply with either Section 5.105.2, Section 5.409.3. Effective January 1, 2026, the combined floor area shall be 50,000 square feet or greater.
r adjust			[DSA-SS] Projects consisting of newly constructed building(s) with a combined floor area of 50,000 square feet or greater shall comply with either Section 5.409.2 or Section 5.409.3. Alteration(s) to existing building(s) where the combined altered floor area is 50,000 square feet or greater shall comply with either Section 5.105.2, 5.409.2, or 5.409.3. Addition(s) to existing building(s) where the total floor area combined with the existing building(s) is 50,000 square feet or greater feet or greater shall comply with either Section 5.409.3.



California 2022 CALIFORNIA GREEN BUILDING STANDARDS CODE **NONRESIDENTIAL MANDATORY MEASURES, SHEET 3** (July 2024 Supplement)

YN	I/A RESPON					_ _	RESPON.	
	PARTY				ſ		PARTY	5.409.3.2 Verification of compliance. C
		5.409.2 Whole building life cycle assess assessment performed in accordance with demonstrating a minimum 10-percent redu baseline building of similar size, function, o meets the requirements of the California E	ISO 14040 and ISO 14044, excluding o iction in global warming potential (GWP) complexity, type of construction, material nergy Code currently in effect. Software	as compared to a reference specification, and location that used to conduct the whole building				required to comply, if included in the proju- shall be provided on the construction doc provided to the owner at the close of con agency may require inspection and inspe at completion of construction to demonst design professional of record or third part
		life cycle assessment, including reference 21930 or EN 15804, and the software shal shall be the same for evaluation of both the Notes:	I conform to ISO 21931 and/or EN 1597	8. The software tools and data sets				SECTION 5.410 BUILDING MAIN 5.410.1 RECYCLING BY OCCUPANTS. Provi identified for the depositing, storage and collect
		1. Software for calculating whole but Materials Institute (https://calculatelo (www.oneclicklca.com/planetary). P (gabi.sphera.com), SimaPro (simap	ilding life cycle assessment is available f ca.com/software/impact-estimator/) and aid versions include, but are not limited f ro.com), One-Click LCA (www.oneclicklo	OneClick LCA-Planetary to, Sphera GaBi Solutions				paper, corrugated cardboard, glass, plastics, or ordinance, if more restrictive. Exception : Rural jurisdictions that meet Code 42649.82 (a)(2)(A) et seq. shall als
		Assessments for Use with Building	ice for Minimum Criteria for Comparing \ Codes, Standards, and Rating Systems"					5.410.1.1 Additions. All additions conductions resulting in an increase of 30% or more in Exception: Additions within a tena
			entation specified in Section 5.409.2.3, \ emonstrate compliance with the requirer					floor area. 5.410.1.2 Sample ordinance. Space all Division 30 of the <i>Public Resources Code</i>
		to glazing assemblies, insulation, ar	uilding enclosure components included nd exterior finishes. Primary and seconda potings and foundations, and structural c	ary structural members included in				Recycling Access Act of 1991 (Act). Note: A sample ordinance for use by loc CalRecycle's web site.
			The reference study period of the propo Il be 60 years.	osed building shall be equal to the				5.410.2 COMMISSIONING. [N] New buildings and over, building commissioning shall be include verify that the building systems and components Commissioning shall be performed in accordance
		Worksheet WS-4 signed by the desi as documentation of compliance. A analysis produced by the software, i operation and maintenance manual enforcing agency may require inspe during and at completion of construct	ce. A summary of the GWP analysis pro- ign professional of record shall be provid copy of the whole building life cycle asse- in addition to maintenance and training in and shall be provided to the owner at th ction and inspection reports in accordan ction to demonstrate substantial conform al of record or third party acceptable to the	led in the construction documents essment which includes the GWP nformation, shall be included in the e close of construction. The ce with Sections 702.2 and 703.1 nance. Inspection shall be				 comparable size and complexity. For I-occupance L-occupancies that are not regulated y the Califo 5.410.2 through 5.410.2.6 shall apply. Note: For energy-related systems under the scoventilation, air conditioning (HVAC) systems and heating systems and controls, refer to California Commissioning requirements shall include:
		5.409.3 Product GWP compliance—pres Table 5.409.3 shall have a Type III enviror factory-specific.						 Owner's or Owner representative's processing of design. Commissioning measures shown in the Commissioning plan. Functional performance testing.
		TABLE 5.409.3 PRODUCT GWP LIMITS						 Documentation and training. Commissioning report.
		BUY CLEAN CALIFORNIA MATERIALS PRODUCT CATEGORY ¹	MAXIMUM ACCEPTABLE GWP VALUE (unfabricated) (GWP _{allowed})	UNIT OF MEASUREMENT				Exceptions:1. Unconditioned warehouses of any size2. Areas less than 10,000 square feet us unconditioned warehouses.
		Hot-rolled structural steel sections	1.77	MT CO ₂ e/MT				 Tenant improvements less than 10,000 Open parking garages of any size, or open size.
		Hollow structural sections Steel plate	3.00 2.61	MT CO ₂ e/MT MT CO ₂ e/MT				Note: For the purposes of this section, ur provide heating and/or air conditioning.
		Concrete reinforcing steel			Informational Notes:			
		Flat glass Light-density mineral	2.50	MT CO ₂ e/MT ⁴				 Functional performance testing for he must be performed in compliance with the
		wool board insulation Heavy-density mineral	5.83	kg CO ₂ e/MT kg CO ₂ e/MT				5.410.2.1 Owner's or Owner Represent requirements of the building appropriate to
		wool board insulation	Concrete, Ready-Mixed ² , ³					project begins. This documentation shall in 1. Environmental and sustainability 2. Building sustainable goals.
		CONCRETE PRODUCT	MAXIMUM GWP					 Indoor environmental quality real Project program, including facili operation.
		CATEGORY	ALLOWED VALUE (GWP _{allowed})	MEASUREMENT				 Equipment and systems expect Building occupant and operation
		up to 2499 psi 2500-3499 psi	450 489	kg CO ₂ e/m ³ kg CO ₂ e/m ³				5.410.2.2 Basis of Design (BOD). [N] A the OPR shall be completed at the design cover the following systems:
		3500-4499 psi	566	kg CO ₂ e/m ³				 Renewable energy systems. Landscape irrigation systems. Water reuse system.
		4500-5499 psi	661	kg CO ₂ e/m ³				 Water reuse system. 5.410.2.3 Commissioning plan. [N] Price document how the project will be commission
		5500-6499 psi	701	kg CO ₂ e/m ³				1. General project will be commission. 2. Commissioning goals. 3. Systems to be commissioned. F
		6500 psi and greater	799	kg CO ₂ e/m ³				a. An explanation of the orig b. Equipment and systems
		Con	crete, Lightweight Ready-Mixed ²					c. Functions to be tested. d. Conditions under which t e. Measurable criteria for ac
		CONCRETE PRODUCT CATEGORY	MAXIMUM GWP ALLOWED VALUE (GWP _{allowed})	UNIT OF MEASUREMENT				 Commissioning team information Commissioning process activitien commissioning shall be include
		up to 2499 psi	875	kg CO ₂ e/m ³				5.410.2.4 Functional performance testin installation and operation of each compon approved plans and specifications. Functi
		2500-3499 psi	956	kg CO ₂ e/m ³				each of the building components tested, the made. 5.410.2.5 Documentation and training.
		3500-4499 psi	1039	kg CO ₂ e/m ³				including Occupational Safety and Health Title 8, Section 5142, and other related re
		(BCCA) GWP values, except for con 2. For concrete, 175 percent of the N Pacific Southwest regional benchma 3. Concrete High Early Strength read GWP allowed values for each produ 4. The GWP unit for flat glass has be (MT CO2e/MT), reported GWP value Material Baselines (2023).	isted in Table 5.409.3 are based on 175 increte products which are not included in National Ready Mixed Concrete Associa irk values are used for the GWP allowed dy-mixed shall be calculated at 130 perc ct category. een adjusted to correct an error in the ex es will align with industry data as publish the maximum GWP value specified in T	the BCCA. tion (NRMCA) 2022 version 3 , except for High Early Strength. ent of the ready-mixed concrete press terms. With the revised unit red in the CLF North American				 5.410.2.5.1 Systems manual. [N] If completed within the systems manual shall include the for 1. Site information, including 2. Site contact information. 3. Basic operations and main troubleshooting, recomm 4. Major systems. 5. Site equipment inventory 6. A copy of verifications reading to the following of the sources and doction of the systems. 7. Other resources and doction of the systems of the systems of the systems of the systems of the systems.
		weighted average of the maximum 0 weighted average maximum GWP a	lered one product category to meet com GWP for all concrete mixes installed in th Illowed per Table 5.409.3 using Exception nits of measurement for the material quan ndustry-wide EPDs are acceptable.	ne project shall be less than the on Equation 5.409.3.1. Calculations				 5.410.2.5.2 Systems operations to staff for each equipment type and/or report and shall include the followin 1. System/equipment overviequipment it interfaces). 2. Review and demonstration 3. Review of the information
		$GWP_n < GWP_{allowed}$ where $GWP_n = \Sigma (GWP_n)(v_n)$ and						4. Review of the record drav 5.410.2.6 Commissioning report. [N] A
		$GWP_{allowed} = \Sigma (GWP_{allowed})(v_n)$ and $n = each concrete mix installed in theGWP_n = the GWP for concrete mix nmix EPD, in kg CO2e/m3$	per concrete					design and construction phases of the bui representative. 5.410.4 TESTING AND ADJUSTING. New bui systems shall be required for new buildings less alteration subject to Section 303.1
		GWP _{allowed} = the GWP potential allow mix <i>n</i> per Table 5.409.3 v _n = the volume of concrete mix <i>n</i> ins the project, in m3						alteration subject to Section 303.1.

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n of compliance. Calculations to demonstrate compliance, Type III EPDs for products included in the project, and Worksheet WS-5 signed by the design professional of record the construction documents. Updated EPDs for products used in construction shall be r at the close of construction and to the enforcement entity upon request. The enforcing nspection and inspection reports in accordance with Sections 702.2 and 703.1 during and truction to demonstrate substantial conformance. Inspection shall be performed by the f record or third party acceptable to the enforcing agency.

LDING MAINTENANCE AND OPERATIONS

CCUPANTS. Provide readily accessible areas that serve the entire building and are storage and collection of non-hazardous materials for recycling, including (at a minimum) , glass, plastics, organic waste, and metals or meet a lawfully enacted local recycling

sdictions that meet and apply for the exemption in Public Resources)(A) et seq. shall also be exempt from the organic waste portion of this section.

All additions conducted within a 12-month period under single or multiple permits, se of 30% or more in floor area, shall provide recycling areas on site.

lditions within a tenant space resulting in less than a 30% increase in the tenant space

dinance. Space allocation for recycling areas shall comply with Chapter 18, Part 3, blic Resources Code. Chapter 18 is known as the California Solid Waste Reuse and t of 1991 (Act).

nance for use by local agencies may be found in Appendix A of the document at the

[N] New buildings 10,000 square feet and over. For new buildings 10,000 square feet pning shall be included in the design and construction processes of the building project to ms and components meet the owner's or owner representative's project requirements. ormed in accordance with this section by trained personnel with experience on projects of exity. For I-occupancies that are not regulated by OSHPD or for I-occupancies and egulated y the California Energy Code Section 100.0 Scope, all requirements in Sections hall apply.

stems under the scope (Section 100) of the California Energy Code, including heating, HVAC) systems and controls, indoor lighting systems and controls, as well as water s, refer to California Energy Code Section 120.8 for commissioning requirements

representative's project requirements.

easures shown in the construction documents.

rehouses of any size.

0,000 square feet used for offices or other conditioned accessory spaces within rehouses. ents less than 10,000 square feet as described in Section 303.1.1.

iges of any size, or open parking garage areas, of any size, within a structure. es of this section, unconditioned shall mean a building, area or room which does not

nance testing for heating, ventilation, air conditioning systems and lighting controls compliance with the California Energy Code.

Owner Representative's Project Requirements (OPR). [N] The expectations and uilding appropriate to its phase shall be documented before the design phase of the cumentation shall include the following: Ital and sustainability goals.

stainable goals. ronmental quality requirements.

gram, including facility functions and hours of operation, and need for after hours

and systems expectations. cupant and operation and maintenance (O&M) personnel expectations.

sign (BOD). [N] A written explanation of how the design of the building systems meets pleted at the design phase of the building project. The Basis of Design document shall

ning plan. [N] Prior to permit issuance a commissioning plan shall be completed to pject will be commissioned. The commissioning plan shall include the following: iect information.

ning goals. be commissioned. Plans to test systems and components shall include: planation of the original design intent.

oment and systems to be tested, including the extent of tests. tions to be tested.

litions under which the test shall be performed. urable criteria for acceptable performance.

ning team information ing process activities, schedules and responsibilities. Plans for the completion of ning shall be included.

performance testing. [N] Functional performance tests shall demonstrate the correct ion of each component, system and system-to-system interface in accordance with the pecifications. Functional performance testing reports shall contain information addressing omponents tested, the testing methods utilized, and include any readings and adjustments

ition and training. [N] A Systems Manual and Systems Operations Training are required, I Safety and Health Act (OSHA) requirements in California Code of Regulations (CCR), and other related regulations.

stems manual. [N] Documentation of the operational aspects of the building shall be n the systems manual and delivered to the building owner or representative. The I shall include the following: nformation, including facility description, history and current requirements.

contact information. operations and maintenance, including general site operating procedures, basic leshooting, recommended maintenance requirements, site events log.

r svstems. equipment inventory and maintenance notes.

y of verifications required by the enforcing agency or this code. resources and documentation, if applicable.

stems operations training. [N] A program for training of the appropriate maintenance quipment type and/or system shall be developed and documented in the commissioning include the following:

m/equipment overview (what it is, what it does and with what other systems and/or oment it interfaces).

ew and demonstration of servicing/preventive maintenance. ew of the information in the Systems Manual.

ew of the record drawings on the system/equipment.

oning report. [N] A report of commissioning process activities undertaken through the on phases of the building project shall be completed and provided to the owner or

JUSTING. New buildings less than 10,000 square feet. Testing and adjusting of r new buildings less than 10,000 square feet or new systems to serve an addition or 303.1.

5.410.4.2 (Reserved)

N/A RESPON

Note: For energy-related systems under the scope (Section 100) of the California Energy Code, including heating, ventilation, air conditioning (HVAC) systems and controls, indoor lighting system and controls, as well as water heating systems and controls, refer to California Energy Code Section 120.8 for commissioning requirements and Sections 120.5, 120.6, 130.4, and 140.9(b)3 for additional testing requirements of specific systems

5.410.4.2 Systems. Develop a written plan of procedures for testing and adjusting systems. Systems to be included for testing and adjusting shall include at a minimum, as applicable to the project:

- Renewable energy systems.
- 2. Landscape irrigation systems.
- 3. Water reuse systems.

5.410.4.3 Procedures. Perform testing and adjusting procedures in accordance with manufacturer's specifications and applicable standards on each system.

5.410.4.3.1 HVAC balancing. In addition to testing and adjusting, before a new space-conditioning system serving a building or space is operated for normal use, the system shall be balanced in accordance with the procedures defined by the Testing Adjusting and Balancing Bureau National Standards; the National Environmental Balancing Bureau Procedural Standards; Associated Air Ba Council National Standards or as approved by the enforcing agency.

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

5.410.4.5 Operation and maintenance (O & M) manual. Provide the building owner or representative detailed operating and maintenance instructions and copies of guaranties/warranties for each system. O instructions shall be consistent with OSHA requirements in CCR, Title 8, Section 5142, and other related regulations.

5.410.4.5.1 Inspections and reports. Include a copy of all inspection verifications and reports red

DIVISION 5.5 ENVIRONMENTAL QUALITY

SECTION 5.501 GENERAL

by the enforcing agency.

5.501.1 SCOPE. The provisions of this chapter shall outline means of reducing the quantity of air contaminants are odorous, irritating, and/or harmful to the comfort and well-being of a building's installers, occupants and neig

SECTION 5.502 DEFINITIONS 5.502.1 DEFINITIONS. The following terms are defined in Chapter 2 (and are included here for reference)

ARTERIAL HIGHWAY. A general term denoting a highway primarily for through traffic usually on a continuous A-WEIGHTED SOUND LEVEL (dBA). The sound pressure level in decibels as measured on a sound level met

using the internationally standardized A-weighting filter or as computed from sound spectral data to which A-wei adjustments have been made.

1 BTU/HOUR. British thermal units per hour, also referred to as Btu. The amount of heat required to raise one of water one degree Fahrenheit per hour, a common measure of heat transfer rate. A ton of refrigeration is 12,0 the amount of heat required to melt a ton (2,000 pounds) of ice at 32° Fahrenheit.

COMMUNITY NOISE EQUIVALENT LEVEL (CNEL). A metric similar to the day-night average sound level (Ld except that a 5 decibel adjustment is added to the equivalent continuous sound exposure level for evening hour to 10pm) in addition to the 10 dB nighttime adjustment used in the Ldn.

COMPOSITE WOOD PRODUCTS. Composite wood products include hardwood plywood, particleboard and me density fiberboard. "Composite wood products" does not include hardboard, structural plywood, structural panels structural composite lumber, oriented strand board, glued laminated timber, timber, prefabricated wood I-joists of finger-jointed lumber, all as specified in California Code of Regulations (CCR), Title 17, Section 93120.1(a).

Note: See CCR, Title 17, Section 93120.1.

DAY-NIGHT AVERAGE SOUND LEVEL (Ldn). The A-weighted equivalent continuous sound exposure level for 24-hour period with a 10 dB adjustment added to sound levels occurring during nighttime hours (10p.m. to 7 a.

DECIBEL (db). A measure on a logarithmic scale of the magnitude of a particular quantity (such as sound press sound power, sound intensity) with respect to a reference quantity.

ELECTRIC VEHICLE (EV). An automotive-type vehicle for on-road use, such as passenger automobiles, buses trucks, vans, neighborhood electric vehicles, electric motorcycles, and the like, primarily powered by an electric that draws current from a rechargeable storage battery, fuel cell, photovoltaic array, or other source of electric c Plug-in hybrid electric vehicles (PHEV) are considered electric vehicles. For purposes of the California Electrical off-road, self-propoelled electric vehicles, such as industrial trucks, hoists, lifts, transports, golf carts, airline grou support equipment, tractors, boats, and the like, are not included.

ELECTRIC VEHICLE CHARGING STATION(S) (EVCSj). One or more spaces intended for charging electric ve

ELECTRIC VEHICLE SUPPLY EQUIPMENT (EVSE). The conductors, including the ungrounded, grounded, an equipment grounding conductors and the electric vehicle connectors, attachment plugs, and all other fittings, de power outlets, or apparatus installed specifically for the purpose of transferring energy between the premises wir and the electric vehicle.

ENERGY EQUIVALENT (NOISE) LEVEL (Leq). The level of a steady noise which would have the same energy the fluctuating noise level integrated over the time of period of interest.

EXPRESSWAY. An arterial highway for through traffic which may have partial control of access, but which may not be divided or have grade separations at intersections.

FREEWAY. A divided arterial highway with full control of access and with grade separations at intersections.

GLOBAL WARMING POTENTIAL (GWP). The radiative forcing impact of one mass-based unit of a given greet gas relative to an equivalent unit of carbon dioxide over a given period of time. Carbon dioxide is the reference compound with a GWP of one.

GLOBAL WARMING POTENTIAL VALUE (GWP VALUE). A 100-year GWP value published by the Intergovernmental Panel on Climate Change (IPCC) in either its Second Assessment Report (SAR) (IPCC, 199 its Fourth Assessment A-3 Report (AR4) (IPCC, 2007). The SAR GWP values are found in column "SAR (100-y Table 2.14.; the AR4 GWP values are found in column "100 yr" of Table 2.14.

HIGH-GWP REFRIGERANT. A compound used as a heat transfer fluid or gas that is: (a) a chlorofluorocarbon, hdrochlorofluorocarbon, a hydrofluorocarbon, a perfluorocarbon, or any compound or blend of compounds, with GWP value equal to or greater than 150, or (B) any ozone depleting substance as defined in Title 40 of the Code Federal Regulations, Part 82, sec.82.3 (as amended March 10, 2009).

LONG RADIUS ELBOW. Pipe fitting installed between two lengths of pipe or tubing to allow a change of direction with a radius 1.5 times the pipe diameter.

LOW-GWP REFRIGERANT. A compound used as a heat transfer fluid or gas that: (A) has a GWP value less th 150, and (B) is not an ozone depleting substance as defined in Title 40 of the Code of Federal Regulations, Part sec.82.3 (as amended March 10, 2009).

MERV. Filter minimum efficiency reporting value, based on ASHRAE 52.2–1999.

MAXIMUM INCREMENTAL REACTIVITY (MIR). The maximum change in weight of ozone formed by adding a compound to the "Base REactive Organic Gas (ROG) Mixture" per weight of compound added, expressed to hundreths of a gram (g O^3/g ROC).

PRODUCT-WEIGHTED MIR (PWMIR). The sum of all weighted-MIR for all ingredients in a product subject to t article. The PWMIR is the total product reactivity expressed to hundredths of a gram of ozone formed per gram of product (excluding container and packaging).

PSIG. Pounds per square inch, guage.

REACTIVE ORGANIC COMPOUND (ROC). Any compound that has the potential, once emitted, to contribute ozone formation in the troposphere

SCHRADER ACCESS VALVES. Access fittings with a valve core installed.

SHORT RADIUS ELBOW. Pipe fitting installed between two lengths of pipe or tubing to allow a change of direct with a radius 1.0 times the pipe diameter.

SUPERMARKET. For the purposes of Section 5.508.2, a supermarket is any retail food facility with 8,000 square feet or more conditioned area, and that utilizes either refrigerated display cases, or walk-in coolers or freezers connected to remote compressor units or condensing units.

VOC. A volatile organic compound broadly defined as a chemical compound based on carbon chains or rings with vapor pressures greater than 0.1 millimeters of mercury at room temperature. These compounds typically contain hydrogen and may contain oxygen, nitrogen and other elements. See CCR Title 17, Section 94508(a).

Note: Where specific regulations are cited from different agencies such as SCAQMD, ARB, etc., the VOC definition included in that specific regulation is the one that prevails for the specific measure in guestion.

(N/A RESPON

SECTION 5.503 FIREPLACES

RESPON. PARTY

5.503.1 FIREPLACES. Install only a direct-vent sealed-combustion gas or sealed wood-burning fireplace, or a sealed

NOT APPLICABLE RESPONSIBLE PARTY (ie: ARCHITECT, ENGINEER OWNER, CONTRACTOR, INSPECTOR ETC.)

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	5.503.1.1 Woodstoves. Woodstoves and pellet stoves shall constandards (NSPS) emission limits as applicable, and shall have to make the emission limits.	
	to meet the emission limits.	
5.50 nec mat Min 30%	CTION 5.504 POLLUTANT CONTROL D4.1 TEMPORARY VENTILATION. The permanent HVAC system essary to condition the building or areas of addition or alteration wi erial and equipment installation. If the HVAC system is used durin imum Efficiency Reporting Value (MERV) of 8, based on ASHRAE 6 based on ASHRAE 52.1-1992 Replace all filters immediately prio upied during alteration, at the conclusion of construction.	thin the required temperature range g construction, use return air filters 52.2-1999, or an average efficienc
rouę equ she	04.3 Covering of duct openings and protection of mechanical o gh installation and during storage on the construction site until final ipment, all duct and other related air distribution component openir etmetal or other methods acceptable to the enforcing agency to re- v enter the system.	startup of the heating, cooling and ngs shall be covered with tape, plas
5.5	04.4 FINISH MATERIAL POLLUTANT CONTROL. Finish materia	als shall comply with Sections 5.504
	 5.504.4.6. 5.504.4.1 Adhesives, sealants and caulks. Adhesives, seal the requirements of the following standards: Adhesives, adhesive bonding primers, adhesive prime comply with local or regional air pollution control or air quapplicable, or SCAQMD Rule 1168 VOC limits, as shown products also shall comply with the Rule 1168 prohibition (chloroform, ethylene dichloride, methylene chloride, per aerosol products as specified in subsection 2, below. Aerosol adhesives, and smaller unit sizes of adhesive units of product, less packaging, which do not weigh mor than 16 fluid ounces) shall comply with statewide VOC st prohibitions on use of certain toxic compounds, of <i>Califor</i> with Section 94507. 	ers, sealants, sealant primers and c uality management district rules who in Tables 5.504.4.1 and 5.504.4.2 in on the use of certain toxic compou- chloroethylene and trichloroethylen es, and sealant or caulking compou- re than one pound and do not consi- tandards and other requirements, in
	TABLE 5.504.4.1 - ADHESIVE VOC LIMIT _{1,2}	
	Less Water and Less Exempt Compounds in Grams per Lite	
	ARCHITECTURAL APPLICATIONS	CURRENT VOC LIMIT
	CARPET PAD ADHESIVES	50
	OUTDOOR CARPET ADHESIVES	150
	WOOD FLOORING ADHESIVES	100
		60
	SUBFLOOR ADHESIVES	<u> </u>
	VCT & ASPHALT TILE ADHESIVES	50
	DRYWALL & PANEL ADHESIVES	50
	COVE BASE ADHESIVES	50
	MULTIPURPOSE CONSTRUCTION ADHESIVES	70
	SINGLE-PLY ROOF MEMBRANE ADHESIVES	250
	OTHER ADHESIVES NOT SPECIFICALLY LISTED	50
	SPECIALTY APPLICATIONS	
	PVC WELDING	510 490
	CPVC WELDING ABS WELDING	325
	PLASTIC CEMENT WELDING	250
	ADHESIVE PRIMER FOR PLASTIC	550
		80
	SPECIAL PURPOSE CONTACT ADHESIVE	140
	TOP & TRIM ADHESIVE	250
	SUBSTRATE SPECIFIC APPLICATIONS	
	METAL TO METAL	30
	PLASTIC FOAMS POROUS MATERIAL (EXCEPT WOOD)	50
	WOOD	30
	FIBERGLASS	80
	1. IF AN ADHESIVE IS USED TO BOND DISSIMILAR SUBS WITH THE HIGHEST VOC CONTENT SHALL BE ALLOWE 2. FOR ADDITIONAL INFORMATION REGARDING METH	D.
	CONTENT SPECIFIED IN THIS TABLE, SEE SOUTH COAS DISTRICT RULE 1168, www.arb.ca.gov/DRDB/SC/CURHTM	ST AIR QUALITY MANAGEMENT
	TABLE 5.504.4.2 - SEALANT VOC LIMIT	
	Less Water and Less Exempt Compounds in Grams per Lite	
	SEALANTS ARCHITECTURAL	250
	MARINE DECK	760
	NONMEMBRANE ROOF	300
	ROADWAY	250
	SINGLE-PLY ROOF MEMBRANE OTHER	450 420
	SEALANT PRIMERS	720
	ARCHITECTURAL	
	NONPOROUS	250
	POROUS	775
	MODIFIED BITUMINOUS	500
		760
	MARINE DECK OTHER	760 750



N/A RESPON

California 2022 CALIFORNIA GREEN BUILDING STANDARDS CODE NONRESIDENTIAL MANDATORY MEASURES, SHEET 4 (July 2024 Supplement)

5.504.4.3 Paints and coatings. Architectural paints and coatings shall comply with VOC limits in Table 1 of the ARB Architectural Coatings Suggested Control Measure, as shown in Table 5.504.4.3, unless more stringent local limits apply. The VOC content limit for coatings that do not meet the definitions for the specialty coatings categories listed in Table 5.504.4.3 shall be determined by classifying the coating as a Flat, Nonflat or Nonflat-High Gloss coating, based on its gloss, as defined in Subsections 4.21, 4.36 and 4.37 of the 2007 California Air Resources Board Suggested Control Measure, and the corresponding Flat, Nonflat or Nonflat-High Gloss VOC limit in Table 5.504.4.3 shall apply.

5.504.4.3.1 Aerosol Paints and coatings. Aerosol paints and coatings shall meet the PWMIR Limits for ROC in Section 94522(a)(3) and other requirements, including prohibitions on use of certain toxic compounds and ozone depleting substances, in Sections 94522(c)(2) and (d)(2) of California Code of Regulations, Title 17, commencing with Section 94520; and in areas under the jurisdiction of the Bay Area Air Quality Management District additionally comply with the percent VOC by weight of product limits of Regulation 8 Rule 49.

GRAMS OF VOC PER LITER OF COATING, LESS WATER & LESS EXEMI	
	CURRENT VOC LIMIT
FLAT COATINGS	50
NONFLAT COATINGS	100
NONFLAT HIGH GLOSS COATINGS	150
SPECIALTY COATINGS	100
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
	250
FORM-RELEASE COMPOUNDS GRAPHIC ARTS COATINGS (SIGN PAINTS)	500
HIGH-TEMPERATURE COATINGS	420
	-
INDUSTRIAL MAINTENANCE COATINGS	250
LOW SOLIDS COATINGS	120
MAGNESITE CEMENT COATINGS	450
	100
	500
	250
	420
PRIMERS, SEALERS, & UNDERCOATERS	100
REACTIVE PENETRATING SEALERS	350
RECYCLED COATINGS	250
ROOF COATINGS	50
RUST PREVENTATIVE COATINGS	250
SHELLACS:	700
CLEAR	730
OPAQUE	550
SPECIALTY PRIMERS, SEALERS & UNDERCOATERS	100
STAINS	250
STONE CONSOLIDANTS	450
SWIMMING POOL COATINGS	340
TRAFFIC MARKING COATINGS	100
TUB & TILE REFINISH COATINGS	420
WATERPROOFING MEMBRANES	250
WOOD COATINGS	275
WOOD PRESERVATIVES	350
ZINC-RICH PRIMERS	340

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, FEB. 1, 2008. MORE INFORMATION IS AVAILABLE FROM THE AIR RESOURCES BOARD.

5.504.4.3.2 Verification. Verification of compliance with this section shall be provided at the request of the enforcing agency. Documentation may include, but is not limited to, the following: Manufacturer's product specification Field verification of on-site product containers

5.504.4.4 Carpet Systems. All carpet installed in the building interior shall meet the requirements of the California Department of Public Health, "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers." Version 1.2, January 2017 (Emission testing method for California Specifications 01350).

See California Department of Public Health's website for certification programs and testing labs. https://www.cdph.ca.gov/Programs/CCDPHP/DEODC/EHLB/IAQ/Pages/VOC.aspx#material

5.504.4.4.1 Carpet cushion. All carpet cushion installed in the building interior shall meet the requirements of the California Department of Public Health,"Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers,"Version 1.2, January 2017 (Emission testing method for California Specifications 01350).

See California Department of Public Health's website for certification programs and testing labs. https://www.cdph.ca.gov/Programs/CCDPHP/DEODC/EHLB/IAQ/Pages/VOC.aspx#material

5.504.4.4.2 Carpet adhesive. All carpet adhesive shall meet the requirements of Table 5.504.4.1.

Table 5.504.4.5.

MAXIMUM FOR PRODUCT

HARDWOOD F

HARDWOOD F PARTICLE BOA

MEDIUM DENS

THIN MEDIUM

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. 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 INCHES (8 MM).

5.504.4.7 Thermal insulation Comply with the requirements of the California Department of Public Health, "Standard Method of the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers, "Version 1.2, January 1.2, January 2017 (Emission testing method for California Specification 01350). See California Department of Public Health's website for certification programs and testing labs. https://www.cdph.ca.gov/Programs/CCDPHP/DEODC/EHLB/IAQ/Pages/VOC.aspx#material

Documentation shall be provided verifying that thermal insulation materials meet the pollutant emission limits

5.504.4.8 Acoustical ceiling and wall panels. Comply with the requirements of the California Department of Public Health, "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers, Version 1.2, January 2017 (Emission testing method for California Specification 01350). See California Department of Public Health's website for certification programs and testing labs.

5.504.5.3 Filters. In mechanically ventilated buildings, provide regularly occupied areas of the building with air filtration media for outside and return air that provides at least a Minimum Efficiency Reporting Value (MERV) of 13. MERV 13 filters shall be installed prior to occupancy, and recommendations for maintenance with filters of the same value shall be included in the operation and maintenance manual.

5.504.7 ENVIRONMENTAL TOBACCO SMOKE (ETS) CONTROL. 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 are more stringent. When ordinances, regulations or policies are not in place, post signage to inform building occupants of the prohibitions.

Section 5.407.2 of this code.

5.506.1 OUTSIDE AIR DELIVERY. For mechanically or naturally ventilated spaces in buildings, meet the minimum requirements of Section 120.1 (Requirements For Ventilation) of the California Energy Code, or the applicable local code, whichever is more stringent, and Division 1, Chapter 4 of CCR, Title 8.

5.506.2 CARBON DIOXIDE (CO2) MONITORING. For buildings or additions equipped with demand control ventilation, CO₂ sensors and ventilation controls shall be specified and installed in accordance with the requirements of the California Energy Code, Section 120(c)(4).

(DSA-SS) Each public K-12 school classroom, as listed in Table 120.1-A of the California Energy Code, shall be equipped with a carbon dioxide monitor or sensor that meets the following requirements: 1. The monitor or sensor shall be permanently affixed in a tamper-proof manner in each classroom between 3 and 6 feet (914 mm and 1829 mm) above the floor and at least 5 feet (1524 mm) away from door and operable

windows.

2. When the monitor or sensor is not integral to an Energy Management Control System (EMCS), the monitor or sensor shall display the carbon dioxide readings on the device. When the sensor is integral to an EMCS, the carbon dioxide readings shall be available to and regularly monitored by facility personnel. A monitor shall provide notification though a visual indicator on the monitor when the carbon dioxide levels in the classroom have exceeded 1,100ppm. A sensor integral to an EMCS shall provide notification to facility personnel through a visual and/or audible indicator when the carbon dioxide levels in the classroom have

exceeded 1,100ppm.

once every 5 years.

5.504.4.5 Composite wood products. Hardwood plywood, particleboard and medium density fiberboard composite wood products used on the interior or exterior of the buildings shall meet the requirements for formaldehyde as specified in ARB's Air Toxics Control Measure (ATCM) for Composite Wood (17 CCR 93120 et seq.). Those materials not exempted under the ATCM must meet the specified emission limits, as shown in

5.504.4.5.3 Documentation. Verification of compliance with this section shall be provided as requested by the enforcing agency. Documentation shall include at least one of the following: . Product certifications and specifications.

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.

TABLE 5.504.4.5 - FORMALDEHYDE LIMITS

RMALDEHYDE EMISSIONS IN PARTS PER MILLION					
	CURRENT LIMIT				
PLYWOOD VENEER CORE	0.05				
PLYWOOD COMPOSITE CORE	0.05				
ARD	0.09				
SITY FIBERBOARD	0.11				
DENSITY FIBERBOARD2	0.13				

5.504.4.6 Resilient flooring systems. Where resilient flooring is installed, at least 80 percent of floor area receiving resilient flooring shall meet the requirements of the California Department of Public Health, "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers," Version 1.2, January 2017 (Emission testing method for California Specifications

See California Department of Public Health's website for certification programs and testing labs. https://www.cdph.ca.gov/Programs/CCDPHP/DEODC/EHLB/IAQ/Pages/VOC.aspx#material

5.504.4.6.1 Verification of compliance. Documentation shall be provided verifying that resilient flooring materials meet the pollutant emission limits.

5.504.4.7.1 Verification of compliance.

5.504.4.8.1 Verification of compliance. Documentation shall be provided verifying that acoustical finish materials meet the pollutant emission limits.

Exceptions: Existing mechanical equipment.

5.504.5.3.1 Labeling. Installed filters shall be clearly labeled by the manufacturer indicating the MERV

SECTION 5.505 INDOOR MOISTURE CONTROL

5.505.1 INDOOR MOISTURE CONTROL. Buildings shall meet or exceed the provisions of California Building Code, CCR, Title 24, Part 2, Sections 1202 (Ventilation) and Chapter 14 (Exterior Walls). For additional measures, see

SECTION 5.506 INDOOR AIR QUALITY

5.506.3 Carbon dioxide (CO2) monitoring in classrooms.

4. The monitor or sensor shall measure carbon dioxide levels at minimum 15- minute intervals and shall maintain a record of previous carbon dioxide measurements of not less than 30 days duration. The monitor or sensor used to measure carbon dioxide levels shall have the capacity to measure carbon dioxide levels with a range of 400ppm to 2000ppm or greater.

The monitor or sensor shall be certified by the manufacturer to be accurate within 75ppm at 1,000ppm carbon dioxide concentration and shall be certified by the manufacturer to require calibration no more frequently than

SECTION 5.507 ENVIRONMENTAL COMFORT 5.507.4 ACOUSTICAL CONTROL. Employ building assemblies and components with Sound Transmission (STC) values determined in accordance with ASTM E 90 and ASTM E 413, or Outdoor-Indoor Sound Trans Class (OITC) determined in accordance with ASTM E 1332, using either the prescriptive or performance met Section 5.507.4.1 or 5.507.4.2.

Exception: Buildings with few or no occupants or where occupants are not likely to be affected by exterior noise, as determined by the enforcement authority, such as factories, stadiums, storage, enclosed parking structures and utility buildings.

Exception: [DSA-SS] For public schools and community colleges, the requirements of this section and all subsections apply only to new construction.

5.507.4.1 Exterior noise transmission, prescriptive method. Wall and roof-ceiling assemblies exposed to the noise source making up the building or addition envelope or altered envelope shall meet 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 following locations:

1. Within the 65 CNEL noise contour of an airport.

Exceptions:

1. Ldn or CNEL for military airports shall be determined by the facility Air Installation Compatible

Land Use Zone (AICUZ) plan 2. Ldn or CNEL for other airports and heliports for which a land use plan has not been developed shall be determined by the local general plan noise element.

2. Within the 65 CNEL or Ldn noise contour of a freeway or expressway, railroad, industrial source or fixed-guideway source as determined by the Noise Element of the General Plan.

5.507.4.1.1. Noise exposure where noise contours are not readily available. Buildings exposed to a noise level of 65 dB L_{eq} - 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).

5.507.4.2 Performance Method. For buildings located as defined in Section 5.507.4.1 or 5.507.4.1.1, wall and roof-ceiling assemblies exposed to the noise source making up the building or addition envelope 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-1Hr) of 50 dBA in occupied areas during any hour of operation.

5.507.4.2.1 Site Features. Exterior features such as sound walls or earth berms may be utilized as appropriate to the building, addition or alteration project to mitigate sound migration to the interior.

5.507.4.2.2 Documentation of Compliance. An acoustical analysis documenting complying interior sound levels shall be prepared by personnel approved by the architect or engineer of record.

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

Note: Examples of assemblies and their various STC ratings may be found at the California Office of Noise Control: www.toolbase.org/PDF/CaseStudies/stc icc ratings.pdf.

SECTION 5.508 OUTDOOR AIR QUALITY 5.508.1 Ozone depletion and greenhouse gas reductions. Installations of HVAC, refrigeration and fire suppression equipment shall comply with Sections 5.508.1.1 and 5.508.1.2.

5.508.1.1 Chlorofluorocarbons (CFCs). Install HVAC, refrigeration and fire suppression equipment that do not contain CFCs.

5.508.1.2 Halons. Install HVAC, refrigeration and fire suppression equipment that do not contain Halons.

5.508.2 Supermarket refrigerant leak reduction. New commercial refrigeration systems shall comply with the provisions of this section when installed in retail food stores 8,000 square feet or more conditioned area, and that utilize either refrigerated display cases, or walk-in coolers or freezers connected to remote compressor units or condensing units. The leak reduction measures apply to refrigeration systems containing high-global-warming potential (high-GWP) refrigerants with a GWP of 150 or greater. New refrigeration systems include both new facilities and the replacement of existing refrigeration systems in existing facilities.

Exception: Refrigeration systems containing low-global warming potential (low-GWP) refrigerant with a GWP value less than 150 are not subject to this section. Low-GWP refrigerants are nonozone-depleting refrigerants that include ammonia, carbon dioxide (CO_2) , and potentially other refrigerants.

5.508.2.1 Refrigerant piping. Piping compliant with the California Mechanical Code shall be installed to be accessible for leak protection and repairs. Piping runs using threaded pipe, copper tubing with an outside diameter (OD) less than 1/4 inch, flared tubing connections and short radius elbows shall not be used in refrigerant systems except as noted below.

5.508.2.1.1 Threaded pipe. Threaded connections are permitted at the compressor rack.

5.508.2.1.2 Copper pipe. Copper tubing with an OD less than 1/4 inch may be used in systems with a refrigerant charge of 5 pounds or less.

5.508.2.1.2.1 Anchorage. One-fouth-inch OD tubing shall be securely clamped to a rigid base to keep vibration levels below 8 mils.

5.508.2.1.3 Flared tubing connections. Double-flared tubing connections may be used for pressure controls, valve pilot lines and oil.

Exception: Single-flared tubing connections may be used with a multiring seal coated with industrial sealant suitable for use with refrigerants and tightened in accordance with manufacturer's

recommendations. 5.508.2.1.4 Elbows. Short radius elbows are only permitted where space limitations prohibit use of

long radius elbows.

5.508.2.2 Valves. Valves Valves and fittings shall comply with the *California Mechanical Code* and as follows

5.508.2.2.1 Pressure relief valves. For vessels containing high-GWP refrigerant, a rupture disc shall be installed between the outlet of the vessel and the inlet of the pressure relief valve.

5.508.2.2.1.1 Pressure detection. A pressure gauge, pressure transducer or other device shall be installed in the space between the rupture disc and the relief valve inlet to indicate a disc rupture or discharge of the relief valve.

5.508.2.2.2 Access valves. Only Schrader access valves with a brass or steel body are permitted for use.

shall be brass or steel and not plastic

5.508.2.2.2.1 Valve caps. For systems with a refrigerant charge of 5 pounds or more, valve caps

5.508.2.2.2 Seal caps. If designed for it, the cap shall have a neoprene O-ring in place.

5.508.2.2.2.1 Chain tethers. Chain tethers to fit ovr the stem are required for valves designed to have seal caps.

Exception: Valves with seal caps that are not removed from the valve during stem operation

5.508.2.3 Refrigerated service cases. Refrigerated service cases holding food products containing vinegar and salt shall have evaporator coils of corrosion-resistant material, such as stainless steel; or be coated to prevent corrosion from these substances.

5.508.2.3.1 Coil coating. Consideration shall be given to the heat transfer efficiency of coil coating to maximize energy efficiency.

5.508.2.4 Refrigerant receivers. Refrigerant receivers with capacities greater than 200 pounds shall be fitted with a device tha indicates the level of refrigerant in the receiver.

5.508.2.5 Pressure testing. The system shall be pressure tested during installation prior to evacuation and charging.

5.508.2.5.1 Minimum pressure. The system shall be charged with regulated dry nitrogen and appropriate tracer gas to bring system pressure up to 300 psig minimum.

5.508.2.5.2 Leaks. Check the system for leaks, repair any leaks, and retest for pressure using the same

5.508.2.5.3 Allowable pressure change. The system shall stand, unaltered, for 24 hours with no more than a +/- one pound pressure change from 300 psig, measured with the same gauge.



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Y N/A RESPON PARTY

5.508.2.6 Evacuation. The system shall be evacuated after pressure testing and prior to charging.

RESPON, PARTY

NOT APPLICABLE

RESPONSIBLE PARTY (ie: ARCHITECT, ENGINEER, OWNER, CONTRACTOR, INSPECTOR ETC.)

5.508.2.6.1 First vacuum. Pull a system vacuum down to at least 1000 microns (+/- 50 microns), and hold for 30 minutes

5.508.2.6.2 Second vacuum. Pull a second system vacuum to a minimum of 500 microns and hold for 30

5.508.2.6.3 Third vacuum. Pull a third vacuum down to a minimum of 300 microns, and hold for 24 hours with a maximum drift of 100 microns over a 24-hour period.

CHAPTER 7 INSTALLER & SPECIAL INSPECTOR QUALIFICATIONS

702 QUALIFICATIONS

702.1 INSTALLER TRAINING. HVAC system installers shall be trained and certified in the proper installation of HVAC systems including ducts and equipment by a nationally or regionally recognized training or certification program. Uncertified persons may perform HVAC installations when under the direct supervision and responsibility of a person trained and certified to install HVAC systems or contractor licensed to install HVAC systems. Examples of acceptable HVAC training and certification programs include but are not limited to the following:

- State certified apprenticeship programs. Public utility training programs.
- Training programs sponsored by trade, labor or statewide energy consulting or verification organizations. 4. Programs sponsored by manufacturing organizations.
- Other programs acceptable to the enforcing agency.

702.2 SPECIAL INSPECTION [HCD]. When required by the enforcing agency, the owner or the esponsible entity acting as the owner's agent shall employ one or more special inspectors to provide inspection or other duties necessary to substantiate compliance with this code. Special inspectors shall demonstrate competence to the satisfaction of the enforcing agency for the particular type of inspection or task to be performed. In addition to other certifications or qualifications acceptable to the enforcing agency, the following certifications or education may be considered by the enforcing agency when evaluating the qualifications of a special inspector:

- Certification by a national or regional green building program or standard publisher. 2. Certification by a statewide energy consulting or verification organization, such as HERS raters, building
- performance contractors, and home energy auditors. Successful completion of a third party apprentice training program in the appropriate trade.
- Other programs acceptable to the enforcing agency.

Notes:

Special inspectors shall be independent entities with no financial interest in the materials or the project they are inspecting for compliance with this code HERS raters are special inspectors certified by the California Energy Commission (CEC) to rate homes in California according to the Home Energy Rating System (HERS).

[BSC-CG] When required by the enforcing agency, the owner or the responsible entity acting as the owner's agent shall employ one or more special inspectors to provide inspection or other duties necessary to substantiate compliance with this code. Special inspectors shall demonstrate competence to the satisfaction of the enforcing agency for the particular type of inspection or task to be performed. In addition, the special inspector shall have a certification from a recognized state, national or international association, as determined by the local agency. The area of certification shall be closely related to the primary job function, as determined by the local agency.

Note: Special inspectors shall be independent entities with no financial interest in the materials or the project they are inspecting for compliance with this code.

703 VERIFICATIONS

703.1 DOCUMENTATION. Documentation used to show compliance with this code shall include but is not limited to, construction documents, plans, specifications, builder or installer certification, inspection reports, or other methods acceptable to the enforcing agency which demonstrate substantial conformance. When specific documentation or special inspection is necessary to verify compliance, that method of compliance will be specified in the appropriate section or identified applicable checklist.