#  INITIAL EXPRESS TERMSFOR PROPOSED BUILDING STANDARDSOF THE CALIFORNIA BUILDING STANDARDS COMMISSIONREGARDING THE 2019 INTERVENING CODE CYCLE,CALIFORNIA CODE OF REGULATIONS, TITLE 24, PART 11

**(****BSC 04/19)**

The state agency shall draft the regulations in plain, straightforward language, avoiding technical terms as much as possible and using a coherent and easily readable style. The agency shall draft the regulation in plain English. A notation shall follow the express terms of each regulation listing the specific statutes authorizing the adoption and listing specific statutes being implemented, interpreted, or made specific (Government Code Section 11346.2(a)(1)).

If using assistive technology, please adjust your settings to recognize underline, strikeout and ellipsis.

## LEGEND for EXPRESS TERMS

1. Existing California amendments appear upright
2. Amended or new California amendments appear underlined
3. Repealed California language appears ~~upright and in strikeout~~
4. Ellipsis (…) indicate existing text remains unchanged

**INITIAL EXPRESS TERMS**

# ITEM 1: DESIGNATED PARKING

## SECTION 5.106

## SITE DEVELOPMENT

**. . .**

**5.106.5.2 Designated parking for clean air vehicles.** In new projects **. . .**

**. . .**

**TABLE 5.106.5.2**

| **TOTAL NUMBER OF PARKING SPACES** | **NUMBER OF** **REQUIRED SPACES** |
| --- | --- |
| 0-9 | 0 |
| 10-25 | ~~1~~  3 |
| 26-50 | ~~3~~ 6 |
| 51-75 | ~~6~~ 9 |
| 76-100 | ~~8~~ 12 |
| 101-150 | ~~11~~ 18 |
| 151-200 |  ~~16~~ 21 |
| 201 and over | At least  ~~8~~  12 percentof total1  |

1. Calculation for spaces shall be rounded up to the nearest whole number.

Note: Designated parking for clean air vehicles shall count toward the total parking spaces required by the local enforcing agencies.

**…**

**Notation:**

Authority*: Health & Safety Code Sections 18930.5 and 18941.10.*

Reference *– Health & Safety Code Sections 18930.5 and 18941.10.*

# ITEM 2: ELECTRIC VEHICLE INFRASTRUCTURE

## SECTION 5.106

## SITE DEVELOPMENT

**. . .**

**5.106.5.3 Electric vehicle (EV) charging. [N] . . .**

**. . .**

**5.106.5.3.1 Single charging space requirements [N]**

When only a single **. . .** the following:

1. **. . .**

2. **. . .**

3. **. . .**

4. **. . .**

5. **. . .**

**5.106.5.3.2 Multiple charging space requirements. [N]**

When multiple charging spaces **. . .** thefollowing:

1. **. . .**

2. **. . .**

3. **. . .**

4. **. . .**

5. **. . .**

**5.106.5.3.3. Charging space calculation. [N]** Table 5.106.5.3.3 shall be used to **determine . . .**

**. . .**

**TABLE 5.106.5.3.3**

| **TOTAL NUMBER OF** **ACTUAL PARKING SPACES** | **NUMBER OF REQUIRED EV CHARGING SPACES** |
| --- | --- |
| 0-9 | 0 |
| 10-25 | ~~1~~ 2 |
| 26-50 | ~~2~~ 4 |
| 51-75 | ~~4~~ 7  |
| 76-100 | ~~5~~ 9 |
| 101-150 | ~~7~~ 13 |
| 151-200 |  ~~10~~ 18 |
| 201 and over |  ~~6~~ 10 percent of total1 |

1. Calculation for spaces shall be rounded up to the nearest whole number.

**. . .**

**5.106.5.3.5 [N] Future charging spaces.**

Future charging spaces qualify as **. . .** clean air vehicles.

Note: Future electric vehicle charging spaces shall count toward the total parking spaces required by the local enforcing agencies.

**…**

**Notation:**

Authority*: Health & Safety Code Sections 18930.5 and 18940.10.*

Reference *– Health & Safety Code Sections 18930.5 and 18940.10.*

# ITEM 3: LIGHT POLLUTION REDUCTION

**. . .**

**5.106.8 Light pollution reduction. [N]** Outdoor lighting systems shall be designed and installed to comply with the following:

1. The minimum requirements in the *California Energy Code* **. . . ;** and
2. Backlight (B) ratings as defined in IES TM-15-11 **. . . ;**
3. Uplight and Glare ratings **. . .** and
4. Allowable BUG ratings not exceeding those shown in Table 5.106.8 **. . . ,** or

Comply with a local ordinance lawfully enacted pursuant to Section 101.7, whichever is more stringent.

**Exceptions: ~~[N]~~**

1. Luminaires that qualify as exceptions in Sections 130.2(b) and 140.7 of the *California Energy Code*.
2. Emergency lighting.
3. Building façade **. . .**
4. Custom lighting features **. . .**
5. Luminaires with less than 6,200 initial luminaire lumens.

**5.106.8.1** **Facing – Backlight.** Luminaires 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 the nearest point of that property line.

**Exception:** **Corners.** If two property lines (or two segments of the same property line) have equidistant points 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 point(s) on the property lines to determine the required backlight rating.

**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 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 the front hemisphere.

**Notes:**

1. **~~[N]~~**See also *California Building Code*, Chapter 12, Section 1205.7 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 A-1, *California Energy Code* Tables 130.2-A and 130.2-B.
3. Refer to the *California Energy Code* for requirements for additions and alterations.

**TABLE 5.106.8 [N]**

**MAXIMUM ALLOWABLE BACKLIGHT, UPLIGHT AND GLARE (BUG) RATINGS1,2**

| **ALLOWABLE RATING** **Maximum Allowable Backlight Rating (B)** | **LIGHTING ZONE LZ0** | **LIGHTING ZONE LZ1** | **LIGHTING ZONE LZ2** | **LIGHTING ZONE LZ3** | **LIGHTING ZONE LZ4** |
| --- | --- | --- | --- | --- | --- |
| **Maximum Allowable Backlight Rating ~~3~~  (B)** |  |  |  |  |  |
| Luminaire greater than 2 mounting heights (MH) from property line | N/A | No Limit | No Limit | No Limit | No Limit |
| Luminaire back hemisphere is 1 – 2 MH from property line | N/A | B2 | B3 | B4 | B4 |
| Luminaire back hemisphere is 0.5 – 1 MH from property line | N/A | B1 | B2 | B3 | B3 |
| Luminaire back hemisphere is less than 0.5 MH from property line | N/A | B0 | B0 | B1 | B2 |

| **ALLOWABLE RATING** **Maximum Allowable Uplight Rating (U****Maximum Allowable Uplight Rating (U))** | **LIGHTING ZONE LZ0** | **LIGHTING ZONE LZ1** | **LIGHTING ZONE LZ2** | **LIGHTING ZONE LZ3** | **LIGHTING ZONE LZ4** |
| --- | --- | --- | --- | --- | --- |
| For area lighting ~~4~~ 3 | N/A | U0 | U0 | U0 | U0 |
| For all other outdoor lighting, including decorative luminaires | N/A | U1 | U2 | U3 | U4 |

| **ALLOWABLE RATING** **Maximum Allowable GlaMaximum Allowable Glare Rating ~~5~~  (G)re Rating(G)** | **LIGHTING ZONE LZ0** | **LIGHTING ZONE LZ1** | **LIGHTING ZONE LZ2** | **LIGHTING ZONE LZ3** | **LIGHTING ZONE LZ4** |
| --- | --- | --- | --- | --- | --- |
| Luminaire greater than 2 MH from property line | N/A | G1 | G2 | G3 | G4 |
| Luminaire front hemisphere is 1 – 2 MH from property line | N/A | G0 | G1 | G1 | G2 |
| Luminaire front hemisphere is 0.5 – 1 MH from property line | N/A | G0 | G0 | G1 | G1 |
| Luminaire front hemisphere is less than 0.5 MH from property line | N/A | G0 | G0 | G0 | G1 |

1. IESNA Lighting Zones 0 are not applicable; refer to Lighting Zones as defined in the *California Energy Code* and Chapter 10 of the *California Administrative Code*.
2. For property lines that abut public walkways, bikeways, plazas and parking lots, the property line may be considered to be 5 feet beyond the actual property line for purpose of determining compliance with this section. For property lines that abut public roadways and public transit corridors, the property line may be considered to be the centerline of the public roadway or public transit corridor for the purpose of determining compliance with this section.

~~3. If the nearest property line is less than or equal to two mounting heights from the back hemisphere of the luminaire distribution, the applicable reduced Backlight rating shall be met.~~

1. ~~4 .~~ General lighting luminaires in areas such as outdoor parking, sales or storage lots shall meet these reduced ratings. Decorative luminaires located in these areas shall meet U-value limits for “all other outdoor lighting.”

~~5. If the nearest property line is less than or equal to two mounting heights from the front hemisphere of the luminaire distribution, the applicable reduced Glare rating shall be met.~~

**. . .**

**Notation:**

Authority*: Health & Safety Code Sections 18930.5.*

Reference *– Health & Safety Code Sections 18930.5.*

# ITEM 4: PRE-RINSE SPRAY VALVES

## SECTION 5.303

## INDOOR WATER USE

**. . .**

**5.303.3.4.5 Metering faucets for wash fountains.** Metering faucets **. . .**

**Note:** Where complying faucets **. . .**

**. . .**

**5.303.3.4.6 Pre-rinse spray valve.** When installed, shall meet the requirements in the *California Code of Regulations*, Title 20 (Appliance Efficiency Regulations), Section 1605.1(h)(4) Table H‑2, Section 1605.3(h)(4)(A), and Section 1607(d)(7), and shall be equipped with an integral automatic shutoff.

**FOR REFERENCE ONLY:** The following table and code section have been reprinted from the *California Code of Regulations*, Title 20 (Appliance Efficiency Regulations), Section 1605.1(h)(4) and Section 1605.3(h)(4)(A).

**Table H-2**

**Standards For Commercial Pre-Rinse Spray Valves Manufactured On Or After January 28, 2019.**

| **Product Class (spray force in ounce force (ozf))** | **Maximum Flow Rate (gpm)** |
| --- | --- |
| Product Class 1 (≤ 5.0 ozf) | 1.00 |
| Product Class 2 (> 5.0 ozf and ≤ 8.0 ozf) | 1.20 |
| Product Class 3 (> 8.0 ozf) | 1.28 |

Title 20 Section 1605.3(h)(4)(A): Commercial pre-rinse spray valves manufactured on or after January 1, 2006, shall have a minimum spray force of not less than 4.0 ounces-force (ozf) [113 grams-force (gf)].

**. . .**

**Notation:**

Authority*: Health & Safety Code Sections 18930.5. and 18940.5*

Reference *– Health & Safety Code Sections 18930.5 and 18940.5.*

**ITEM 5: POLLUTANT CONTROL**

## SECTION 5.504

## POLLUTANT CONTROL

**. . .**

**5.504.4.4 Carpet systems.** ~~All carpet installed in the building interior shall meet at least one of the following testing and product requirements:~~

1. ~~Carpet and Rug Institute’s Green Label Plus Program;~~
2. ~~Compliant with the VOC-emission limits and testing requirements specified in 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 1.1, February 2010 (also known as CDPH Standard Method V1.1 or~~ *~~Specification 01350);~~*
3. ~~NSF/ANSI 140 at the Gold level or higher;~~
4. ~~Scientific Certifications Systems Sustainable Choice; or~~
5. ~~Compliant with the Collaborative for High Performance Schools California (2014 CA-CHPS) Criteria and listed in the CHPS High Performance Product Database.~~

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 Specification 01350).

(See [California Department of Public Health’s website](https://www.cdph.ca.gov/Programs/CCDPHP/DEODC/EHLB/IAQ/Pages/VOC.aspx#material) 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 ~~Carpet and Rug Institute’s Green Label program.~~ 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](https://www.cdph.ca.gov/Programs/CCDPHP/DEODC/EHLB/IAQ/Pages/VOC.aspx#material) for certification programs and testing labs.)

https://www.cdph.ca.gov/Programs/CCDPHP/DEODC/EHLB/IAQ/Pages/VOC.aspx#material

**. . .**

**5.504.4.6 Resilient flooring systems.** ~~For 80 percent of floor area receiving resilient flooring, installed resilient flooring shall meet at least one of the following:~~

1. ~~Certified under the Resilient Floor Covering Institute (RFCI) FloorScore program;~~
2. ~~Compliant with the VOC-emission limits and testing requirements specified in the California Department of Public Health’s 2010 Standard Method for the Testing and Evaluation Chambers, Version 1.1, February 2010;~~
3. ~~Compliant with the Collaborative for High Performance Schools California (2014 CA-CHPS) Criteria and listed in the CHPS High Performance Product Database; or~~
4. ~~Products certified under UL GREENGUARD Gold (formerly the Greenguard Children’s & Schools Program).~~

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 Specification 01350).

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

https://www.cdph.ca.gov/Programs/CCDPHP/DEODC/EHLB/IAQ/Pages/VOC.aspx#material

**. . .**

**Notation:**

Authority*: Health & Safety Code Sections 18930.5, 18934.5 and 18928.*

Reference *– Health & Safety Code Sections 18930.5, 18934.5 and 18928.*

# ITEM 6: REFERENCED ORGANIZATIONS AND STANDARDS

## CHAPTER 6

## REFERENCED ORGANIZATIONS AND STANDARDS

**. . .**

**601.1** This chapter lists the organizations and standards that are referenced in various sections of this document. The standards are listed herein by the promulgating agency of the standard.

| ORGANIZATION | STANDARD | REFERENCED SECTION |
| --- | --- | --- |
| [**ANSI**](https://www.ansi.org/)American National Standards Institute |  |  |
| Operations Office25 West 43rd Street, Fourth Floor New York, NY 10036 http://www.ansi.org/ | NSF/ANSI 140-2014~~NSF/ANSI 140-2007~~ | 4.504.3, ~~5.504.4.4~~~~5.504.4.4~~ |
| **…** | **…** | **…** |

| ORGANIZATION[**ASTM** International](https://www.astm.org/) | STANDARD | REFERENCED SECTION |
| --- | --- | --- |
| 100 Barr Harbor DriveWest Conshohocken, PA 19428-2859 http://www.astm.org  | ASTM E1333 – 14 | Table 4.504.5, ~~5.504.4.5~~ |
|  | ASTM E1333 – 14 | Tables 5.504.4.5, 5.504.8.5 |
|  | ASTM E1903- ~~97~~ 11 | A5.103. ~~4~~ .2.1 |
|  | ASTM E1918 - 06 (2015) | A4. 106.7~~, A5.106.11.1~~ |
|  | ASTM E1918 - 16 (2016) | A5.106.11.1 |
|  | ASTM E1980-11 | A4.106.5.3, ~~A5.106.11.2.3~~ |
|  | ASTM E1980- ~~01~~ 11 | A5.106.11.2.3 |
| **…** | **…** | **…** |

| ORGANIZATION | STANDARD | REFERENCED SECTION |
| --- | --- | --- |
| [**NSF** International](http://www.nsf.org/) |  |  |
| 789 Dixboro Rd.Ann Arbor, MI 48113-0140http://www.nsf.org/ | NSF/ANSI 140-2014~~NSF/ANSI 140-2007~~ | 4.504.3, ~~5.504.4.4~~~~5.504.4.4~~ |
| **…** | **…** | **…** |

**. . .**

**Notation:**

Authority*: Health & Safety Code Sections 18930.5 and 18928.*

Reference *– Health & Safety Code Sections 18930.5 and 18928.*

# ITEM 7: BASELINE WATER USE AND WATER USE REDUCTION

## CHAPTER 8

## COMPLIANCE FORMS, WORKSHEETS

## AND REFERENCE MATERIAL

**. . .**

**WORKSHEET (WS-1)**

**BASELINE WATER USE**

**BASELINE WATER USE CALCULATION TABLE**

| **FIXTURE TYPE** | **FLOW RATE** |  | **DURATION** |  | **DAILY USES** |  | **OCCUPANTS1** |  | **GALLONS PER DAY** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Shower-heads | ~~2.0~~ 1.8 gpm @ 80 psi | X | 5 min. | X | 1 | X | Note 1a | = |  |

1. For nonresidential occupancies Refer to Table  ~~A~~  4-1, Chapter 4, 2019 *California Plumbing Code*, for occupant load factors.

a. **. . .**

b. **. . .**

2. **. . .**

3. **. . .**

**WORKSHEET (WS-2)**

**WATER USE REDUCTION**

**12-, 20-, 25-PERCENT REDUCTION WATER USE CALCULATION TABLE**

| **FIXTURE TYPE** | **FLOW RATE** |  | **DURATION** |  | **DAILY USES** |  | **OCCUPANTS1** |  | **GALLONS PER DAY** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| … |  |  |  |  |  |  |  |  |  |
| Gravity tank-type water closets  |  | X | 1 flush | X | 1 male 33 female | X |  | = |  |
| Flushometer tank water closets  |  | X | 1 flush | X | 1 male 33 female | X |  | = |  |
| Flushometer valve water closets  |  | X | 1 flush | X | 1 male 33 female | X |  | = |  |
| Electromechanical hydraulic water closets  |  | X | 1 flush | X | 1 male 33 female | X |  | = |  |
| … |  |  |  |  |  |  |  |  |  |

1. For occupancies Refer to Table ~~A~~  4-1, Chapter 4, 2019 *California Plumbing Code*, for occupant load factors.

a. **. . .**

b. **. . .**

2. **. . .**

3. **. . .**

4. **. . .**

**. . .**

**Notation:**

Authority*: Health & Safety Code Sections 18930.5. and 18940.5.*

Reference *– Health & Safety Code Sections 18930.5 and 18940.5.*

# ITEM 8: BROWNFIELD REDEVELOPMENT (VOLUNTARY)

## APPENDIX A5

## NONRESIDENTIAL VOLUNTARY MEASURES

**. . .**

## SECTION A5.103

## SITE SELECTION

**. . .**

**A5.103.2.1 Brownfield redevelopment.** Develop a site documented as contaminated by means of an ASTM E1903-~~97~~ 11 Phase II Environmental Site Assessment or on a site defined as a brownfield by a local, state or federal government agency. The site must be fully remediated in accordance with EPA regulations to the level required of the anticipated land use.

**. . .**

**Notation:**

Authority*: Health & Safety Code Sections 18930.5, 18934.5 and 18931.7(b).*

Reference *– Health & Safety Code Sections 18930.5, 18934.5 and 18931.7(b).*

# ITEM 9: CHANGING ROOMS AND DESIGNATED PARKING (VOLUNTARY)

## APPENDIX A5

## NONRESIDENTIAL VOLUNTARY MEASURES

**. . .**

## SECTION A5.106

## SITE DEVELOPMENT

**. . .**

**A5.106.4.3 Changing rooms.** For buildings with over 10 tenant-occupants, provide changing/shower facilities for tenant-occupants only in accordance with Table A5.106.4.3 or document arrangements with nearby changing/ shower facilities.

**Note:** Additional information on recommended bicycle accommodations may be obtained from [Sacramento Area Bicycle Advocates](https://sacbike.org) at https://sacbike.org

**. . .**

**A5.106.5.1. Designated parking for clean air vehicles.**  In new projects or additions or alterations that add 10 or more vehicular parking spaces, ~~P~~ provide designated parking spaces for any combination of low-emitting, fuel-efficient and carpool/van pool vehicles shown in Table A5.106.5.1.1 or Table A5.106.5.1.2

**A5.106.5.1.1 Tier 1.** ~~Ten percent of total spaces. [BSC- CG]~~ Provide ~~10~~ seventeen percent designated parking spaces, 201 and over parking spaces, for any combination of low-emitting, fuel-efficient and carpool/van pool vehicles as follows:

**TABLE A5.106.5.1.1**

| **TOTAL NUMBER OF PARKING SPACES** | **NUMBER OF** **REQUIRED SPACES** |
| --- | --- |
| 0-9 | ~~0~~  1 |
| 10-25 |  ~~2~~ 3 |
| 26-50 |  ~~4~~  7  |
| 51-75 |  ~~6~~  11 |
| 76-100 |  ~~9~~  15 |
| 101-150 |  ~~11~~ 26 |
| 151-200 |  ~~18~~ 30 |
| 201 and over | At least ~~10~~ 17 percentof total1  |

1. Calculation for spaces shall be rounded up to the nearest whole number.

Note: Designated parking for clean air vehicles shall count toward the total parking spaces required by the local enforcing agencies.

**A5.106.5.1.2 Tier 2**. Provide ~~12~~ twenty-two percent of total designated parking spaces, 201 and over parking spaces, for any combination of low-emitting, fuel-efficient, and carpool/van pool vehicles as follows:

**TABLE A5.106.5.1.2**

| **TOTAL NUMBER OF PARKING SPACES** | **NUMBER OF** **REQUIRED SPACES** |
| --- | --- |
| 0-9 | ~~1~~ 2 |
| 10-25 | ~~3~~ 4 |
| 26-50 | ~~5~~  9 |
| 51-75 | ~~7~~  14 |
| 76-100 | ~~9~~ 18 |
| 101-150 |  ~~13~~ 26  |
| 151-200 |  ~~19~~ 36 |
| 201 and over | At least ~~12~~ 22 percentof total1  |

1. Calculation for spaces shall be rounded up to the nearest whole number.

Note: Designated parking for clean air vehicles shall count toward the total parking spaces required by the local enforcing agencies.

**…**

**Notation:**

Authority*: Health & Safety Code Sections 18930.5.*

Reference *– Health & Safety Code Sections 18930.5.*

# ITEM 10: ELECTRIC VEHICLE INFRASTRUCTURE (VOLUNTARY)

## APPENDIX A5

## NONRESIDENTIAL VOLUNTARY MEASURES

**. . .**

## SECTION A5.106

## SITE DEVELOPMENT

**. . .**

**A5.106.5.3 [N] Electric vehicle (EV) charging.** Construction shall comply with **. . .** and as follows:

**A5.106.5.3.1 Tier 1 . . .**

**A5.106.5.3.2 Tier 2 . . .**

**TABLE A5.106.5.3.1**

| **TOTAL NUMBER OF** **ACTUAL PARKING SPACES** | **TIER 1 NUMBER OF REQUIRED EV CHARGING SPACES** |
| --- | --- |
| 0-9 | ~~0~~ 1 |
| 10-25 | ~~2~~ 3 |
| 26-50 | ~~3~~ 6 |
| 51-75 | ~~5~~ 10 |
| 76-100 | ~~7~~ 14 |
| 101-150 | ~~10~~ 23 |
| 151-200 | ~~14~~ 27 |
| 201 and over | ~~8~~ 15 percent of total1 |

1. Calculation for spaces shall be rounded up to the nearest whole number.

**TABLE A5.106.5.3.2**

| **TOTAL NUMBER OF** **ACTUAL PARKING SPACES** | **TIER 2 NUMBER OF REQUIRED EV CHARGING SPACES** |
| --- | --- |
| 0-9 | ~~1~~ 2 |
| 10-25 | ~~2~~ 4 |
| 26-50 |  ~~4~~ 8 |
| 51-75 |  ~~6~~ 13 |
| 76-100 | ~~9~~ 18 |
| 101-150 | ~~12~~ 26 |
| 151-200 | ~~17~~ 36 |
| 201 and over | ~~10~~ 20 percent of total1 |

1. Calculation for spaces shall be rounded up to the nearest whole number.

**. . .**

**A5.106.5.3.3 [N] Identification.** The service panel or subpanel **. . .**

**. . .**

**A5.106.5.3.4 [N] Future charging spaces.** Future charging spaces qualify as **. . .**

**~~Notes:~~**

1. ~~The California Department of Transportation adopts and publishes the California Manual on Uniform Traffic Control Devices (California MUTCD) to provide uniform standards and specifications for all official traffic control devices in California. Zero Emission Vehicle Signs and Pavement Mark- ings can be found in the New Policies & Directives number 13-01. www.dot.ca.gov/ hq/traffops/policy/13-01.pdf.~~
2. ~~See Vehicle Code Section 22511 EV charging spaces signage in offstreet parking facilities and for use of EV charging spaces.~~
3. ~~The Governor’s Office of Planning and Research published a Zero-Emission Vehicle Community Readiness Guidebook which provides helpful information for local governments, residents and businesses.~~

~~www.opr.ca.gov/docs/ZEV\_Guidebook.pdf.~~

**Note:** Future electric vehicle charging spaces shall count toward the total parking spaces required by the local enforcing agencies.

**. . .**

**Notation:**

Authority*: Health & Safety Code Sections 18930.5, ~~18934.5~~ and 18931.7(b).*

Reference *– Health & Safety Code Sections 18930.5, ~~18934.5~~ and 18931.7(b).*

# ITEM 11: SOLAR REFLECTANCE INDEX (VOLUNTARY)

## APPENDIX A5

## NONRESIDENTIAL VOLUNTARY MEASURES

**. . .**

## SECTION A5.106

## SITE DEVELOPMENT

**. . .**

**A5.106.11.2.3 Solar reflectance index alternative.**

SRI values used to comply with this section shall be calculated using the Solar Reflectance Index (SRI) Calculation Worksheet (SRI-WS) developed by the California Energy Commission or in compliance with ASTM E1980 ~~-0~~ 11 as specified in the *California Energy Code,* Section ~~118~~ 110.8(i)3.

**. . .**

**Notation:**

Authority*: Health & Safety Code Sections 18930.5 and 18928.*

Reference *– Health & Safety Code Sections 18930.5 and 18928.*

# ITEM 12: BIRD-FRIENDLY BUILDING DESIGN (VOLUNTARY)

**SECTION A5.107**

**BIRD-FRIENDLY BUILDING DESIGN**

**A5.107 Bird-friendly building design.** Building design elements and features considered “bird-friendly” shall comply with Sections A5.107.1 through A5.107.3.

**A5.107.1 Glazing.** No more than 10% of building facades to a height of 40 feet (12 m) or to that of the average height of local tree canopy, whichever is higher; and no more than 40% of facades above that shall be see-through glazing, reflective glazing or acrylic glass unless:

1. The installed glazing meets the energy requirements of the current California Energy Code and may include, but is not limited to, the following:
	1. Etched or fritted glass with patterns of elements on the exterior having minimum dimensions of 3/8" diameter for dots or 1/8" width for stripes in a density of 2 inches (5.1 cm) maximum horizontally or 4 inches (10.2 cm) maximum vertically (also know as the 2x4 rule).

 **Note:** interior fritted glazing can be effective if visible on a non-reflective exterior surface.

* 1. Interior or exterior glazing films with a pattern visible from the outside conforming to the 2x4 rule;
	2. Laminated glass with 2x4 patterns, patterned UV coating or use of contrasting patterned UV-absorbing and UV reflective films;
	3. Glass block or channel glass;
1. the installed glazing is protected by exterior features including, but not be limited to:
	1. Grilles or screens with openings no more than 2 inches (5.1 cm) maximum horizontally or 4 inches (10 cm) maximum vertically (the 2x4 rule) installed on the exterior side of glass.
	2. Netting with 2”x2” maximum openings.
	3. Sunshades or louvers with 3 dimensional elements spaced a maximum vertical or horizontal 9”;

Note: Interior blinds with 2x4 patterns visible from the exterior during the day and shielding interior lighting at night, may be an acceptable feature when included as part of the construction contract.

**A5.107.2 Special conditions.** Vegetated roofs, site structures, building comers and passageways, and facades of atria and courtyards shall comply with the following:

1. Railings and facades adjacent to vegetated roofs shall meet the standards in A5.107.1 (A) or (B) treated to a height of 1 unit per 4 units of perpendicular length of green roof.
2. Auxiliary buildings such as pavilions or gazebos and facades of atria or courtyards with water features or plants shall meet the standards of A5.107.1 (A) or (B); and
3. There shall be no see-through passageways and comers exposed to sky or habitat on the other side.

**A5.107.3 Nighttime conditions.** Nighttime building lighting at the top of the building, interiors of all floors, lobby and atria shall be controlled as follows:

1. Lighting is extinguished between March 15 and May 31 and between August 15 and October 31 from midnight to dawn.
2. Time-switch control devices or occupancy sensors are installed complying with the current *California Energy Code*, that can be programmed to turn off lights during those time frames.

**Exception:** Emergency lighting and lighting required for nighttime security.

**A5.107.3.1 Systems or operation and maintenance manual.** Include written recommendations that lighting is extinguished pursuant to Section A5.107.3 and janitorial services to the building are scheduled between sunrise and sunset.

**. . .**

**Notation:**

Authority*: Health & Safety Code Sections 18930.5.*

Reference *– Health & Safety Code Sections 18930.5.*

# ITEM 13: INDOOR WATER USE (VOLUNTARY)

## SECTION A5.303

## INDOOR WATER USE

**. . .**

**TABLE A5.303.2.2**

**WATER USE BASELINE (PERFORMANCE METHOD)**

| **FIXTURE TYPE** | **BASELINE FLOW RATE** | **DURATION** | **DAILY USES** | **OCCUPANTS** |
| --- | --- | --- | --- | --- |
| Showerheads | ~~2.0~~ 1.8 gpm @ 80 psi | 5 min. | 1 | **X** |

1. The daily use number **. . .**

2. Refer to Table  ~~A~~  4-1, Chapter 4, 2019 *California Plumbing Code*, for occupant load factors.

a. **. . .**

b. **. . .**

3. **. . .**

4. **. . .**

**. . .**

**TABLE A5.303.2.3.1**

**FIXTURE FLOW RATES (PRESCRIPTIVE METHOD)**

| **FIXTURE TYPE** | **BASELINE FLOW RATE** | **MAXIMUM FLOW RATE AT ≥ 12 PERCENT REDUCTION** |
| --- | --- | --- |
| Showerheads | ~~2.0~~ 1.8 gpm @ 80 psi |  ~~1.8~~  1.6 gpm @ 80 psi |

**. . .**

**A5.303.3 Appliances and fixtures for commercial application**. Appliances and fixtures shall meet the following:

1. Clothes washers shall have a maximum **. . .**
2. Dishwashers shall meet the following water use standards:
3. Residential – ENERGY STAR

i. Standard Dishwashers – 4.25 gallons per cycle.

ii. Compact Dishwashers-3.5 gallons per cycle.

1. Commercial –Shall be in accordance with **. . .**
2. Ice makers shall be air cooled.
3. Food steamers shall be connectionless **. . .**
4. The use and installation of water softeners **. . .**
5. Combination ovens shall use a maximum **. . .**

~~7. Commercial pre-rinse spray valves manufactured on or after January 1, 2006 shall function at equal to or less than 1.6 gpm (0.10 L/s) at 60 psi (414 kPa) and~~

* 1. ~~Be capable of cleaning 60 plates in an average time of not more than 30 seconds per plate.~~
	2. ~~Be equipped with an…~~
	3. ~~Operate at static …~~
1. ~~8~~. Food waste pulping systems shall use no more than 2 gpm of potable water.

7.1 ~~8.1~~. Note: potable water excludes on-site gray water use, such as dishwasher discharge water.

**…**

**Notation:**

Authority*: Health & Safety Code Sections 18930.5.*

Reference *– Health & Safety Code Sections 18930.5.*

# ITEM 14: MATERIAL SOURCES (VOLUNTARY)

## SECTION A5.405

## MATERIAL SOURCES

**. . .**

**A5.405.2.1 [RESERVED] ~~Certified wood.~~** ~~Certified wood is an important component of green building strategies. and the California Building Standards Commission will continue to develop a standard through the next code cycle.~~

**. . .**

**A5.405.3 Reused materials.** Use salvaged, refurbished, refinished or reused materials for a minimum of 5 percent of the total value, based on estimated cost of materials on the project. Provide documentation as to the respective values.

**Note:** Sources of some reused materials can be found at [CalRecycle’s website](https://www.calrecycle.ca.gov/), https://www.calrecycle.ca.gov/. See also Appendix A5, Division A5.1, Section A5.105.1 for on-site materials reuse.

**. . .**

**Notation:**

Authority*: Health & Safety Code Sections 18930.5 and 18931.7(b).*

Reference *– Health & Safety Code Sections 18930.5 and 18931.7(b).*

# ITEM 15: POLLUTANT CONTROL (VOLUNTARY)

## SECTION A5.504

## POLLUTANT CONTROL

**. . .**

**A5.504.4.7** **Resilient flooring systems, Tier 1.** ~~For 90 percent of floor area receiving resilient flooring, install resilient flooring that is:~~

* + 1. ~~Certified under the Resilient Floor Covering Institute (RFCI) FloorScore program;~~
		2. ~~Compliant with the VOC-emission limits and testing requirements specified in the California Department of Public Health’s 2010 Standard Method for the Testing and Evaluation Chambers, Version 1.1, February 2010;~~
		3. ~~Compliant with the Collaborative for High Performance Schools California (2014 CA-CHPS) Criteria and listed in the CHPS High Performance Product Database; or~~
		4. ~~Products certified under UL GREENGUARD Gold (formerly the Greenguard Children’s & Schools Program).~~

Where resilient flooring is installed, at least 90 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 Specification 01350).

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

https://www.cdph.ca.gov/Programs/CCDPHP/DEODC/EHLB/IAQ/Pages/VOC.aspx#material

**A5.504.4.7.1 Resilient flooring systems, Tier 2.**  ~~For 100 percent of floor area receiving resilient flooring, install resilient flooring that is:~~

1. ~~Certified under the Resilient Floor Covering Institute (RFCI) FloorScore program;~~
2. ~~Compliant with the VOC-emission limits and testing requirements specified in the California Department of Public Health’s 2010 Standard Method for the Testing and Evaluation Chambers, Version 1.1, February 2010;~~
3. ~~Compliant with the Collaborative for High Performance Schools California (2014 CA-CHPS) Criteria and listed in the CHPS High Performance Product Database; or~~
4. ~~Products certified under UL GREENGUARD Gold (formerly the Greenguard Children’s & Schools Program).~~

~~Exception: Allowance may be permitted in Tier 2 for up to 5-percent specialty purpose flooring.~~

Where resilient flooring is installed,100 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 Specification 01350).

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

https://www.cdph.ca.gov/Programs/CCDPHP/DEODC/EHLB/IAQ/Pages/VOC.aspx#material

**A5.504.4.7.2 Verification of compliance.** Documentation **. . .**

**A5.504.4.8 Thermal insulation, Tier 1.** ~~Comply with the requirements of the following standards:~~

1. ~~Chapters 12-13 (Standards for Insulating Material) in Title 24, Part 12, the~~ *~~California Referenced Standards Code,~~*
2. ~~The VOC-emission limits defined in 2009 CHPS criteria and listed on its High Performance Products Database.~~
3. ~~California Department of Public Health 2010 Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers, Version 1.1, February 2010 (also known as Specification 01350.)~~

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](https://www.cdph.ca.gov/Programs/CCDPHP/DEODC/EHLB/IAQ/Pages/VOC.aspx#material) for certification programs and testing labs.)

https://www.cdph.ca.gov/Programs/CCDPHP/DEODC/EHLB/IAQ/Pages/VOC.aspx#material

**. . .**

**A5.504.4.9 Acoustical ceilings and wall panels.** Comply with ~~Chapter 8 in Title 24, Part 2, the~~ *~~California Building Code~~* ~~and with the VOC-emission limits defined in the 2009 CHPS criteria and listed on its High Performance Products Database.~~  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](https://www.cdph.ca.gov/Programs/CCDPHP/DEODC/EHLB/IAQ/Pages/VOC.aspx#material) for certification programs and testing labs.)

https://www.cdph.ca.gov/Programs/CCDPHP/DEODC/EHLB/IAQ/Pages/VOC.aspx#material

**A5.504.4.9.1 Verification of compliance.** Documentation shall be provided verifying that acoustical finish materials meet the pollutant emission limits.

**~~Note:~~** ~~Products compliant with CHPS criteria certified under the Greenguard Children & Schools program may also be used.~~

**. . .**

**Notation:**

Authority*: Health & Safety Code Sections 18930.5 and 18928.*

Reference *– Health & Safety Code Sections 18930.5 and 18928.*

# ITEM 16: DIVISIONA5.6 – VOLUNTARY TIERS

## SECTION A5.601

## *CALGreen* TIER 1 AND TIER 2

**. . .**

**TABLE A5.601 NONRESIDENTIAL BUILDINGS:**

**. . .**

| **CATEGORY** | **ENVIRONMENTAL PERFORMANCE GOAL** | **TIER 1** | **TIER 2** |
| --- | --- | --- | --- |
| **All** | Minimum Mandatory (See Mandatory Checklist) | Meet all of the provisions of Chapter 5 (See Tier 1 Checklist) | Meet all of the provisions of Chapter 5 (See Tier 2 Checklist) |
| **DIVISION 5.1****Planning and Design** | Designated Parking forFuel Efficient Vehicles | Approx. ~~10%~~ 17% of total spaces | Approx. ~~12%~~ 22% of total spaces |
| **DIVISION 5.1****Planning and Design** | Electric Vehicle Charging | Approx. ~~8%~~ 15% of total spaces | Approx. ~~10%~~ 20% of total spaces |

**. . .**

**Notation:**

Authority*: Health & Safety Code Sections 18930.5 and 18931.7(b).*

Reference *– Health & Safety Code Sections 18930.5 and 18931.7(b).*

# ITEM 17: *CALGreen* VERIFICATION GUIDELINES (Mandatory, Tier 1 and Tier 2)

## *CALGreen* VERIFICATION GUIDELINES

## MANDATORY MEASURES CHECKLIST

**. . .**

| **CHAPTER** **5 DIVISIONS** |  | **SECTION TITLE** | **CODE SECTION** | **Y** | **N/A** | **O** | **PLAN SHEET, SPEC, OR ATTACH REFER-ENCE** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **DIVISION 5.1****Planning and Design** | **. . .**  | **. . .**  | **. . .**  |  |  |  |  |
| **DIVISION 5.1****Planning and Design** | Mandatory | Long-term bicycle parking | 5.106.4.1.2through 5.106.4.1.5 |  |  |  |  |
| **DIVISION 5.1****Planning and Design** | Mandatory | Designated parking for clean air vehicles w/footnote and note | 5.106.5.2 |  |  |  |  |
| **DIVISION 5.1****Planning and Design** | **. . .** | **. . .** | **. . .** |  |  |  |  |
| **DIVISION 5.1****Planning and Design** | Mandatory | [N] Future charging spaces with note | 5.106.5.3.5 |  |  |  |  |
| **DIVISION 5.1****Planning and Design** | Mandatory | Light pollution reduction [N] (with exceptions, ~~and~~ notes and table) | 5.106.8 through 5.106.8.2 |  |  |  |  |
| **DIVISION 5.1****Planning and Design** | **. . .** | **. . .**  | **. . .**  |  |  |  |  |
| **DIVISION 5.3****Water Efficiency and Conservation** (continued) | **. . .** | **. . .** | **. . .** |  |  |  |  |
| **DIVISION 5.3****Water Efficiency and Conservation** (continued) | Mandatory | Metering faucets for wash fountains | 5.303.3.4.5 |  |  |  |  |
| **DIVISION 5.3****Water Efficiency and Conservation** (continued) | Mandatory | Pre-rinse spray valve | 5.303.3.4.6 |  |  |  |  |
| **DIVISION 5.3****Water Efficiency and Conservation** (continued) | Mandatory | Food waste disposers | 5.303.4.1 |  |  |  |  |
|  | **. . .** | **. . .** | **. . .** |  |  |  |  |

**A5.602.1**

***CALGreen* VERIFICATION GUIDELINES**

**TIER 1 CHECKLIST**

**. . .**

| **CHAPTER** **5 DIVISIONS** |  | **SECTION TITLE** | **CODE SECTION** | **Y** | **N/A** | **O** | **PLAN SHEET, SPEC, OR ATTACH REFER-ENCE** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **DIVISION 5.1****Planning and Design** | **. . .**  | **. . .**  | **. . .**  |  |  |  |  |
| **DIVISION 5.1****Planning and Design** | Mandatory | Long-term bicycle parking | 5.106.4.1.2through 5.106.4.1.5 |  |  |  |  |
| **DIVISION 5.1****Planning and Design** | Mandatory | Designated parking for clean air vehicles w/footnote and note | 5.106.5.2 |  |  |  |  |
| **DIVISION 5.1****Planning and Design** | *Tier 1 Prerequisite* | *Designated parking—~~10%~~ 17% of parking capacity w/ parking stall markings and stall identification* | *A5.106.5.1,**A5.106.5.1.2,**A5.106.5.1.3,**A5.106.5.1.4* |  |  |  |  |
| **DIVISION 5.1****Planning and Design** | **. . .** | **. . .** | **. . .** |  |  |  |  |
| **DIVISION 5.1****Planning and Design** | Mandatory | [N] Future charging spaces with note | 5.106.5.3.5 |  |  |  |  |
| **DIVISION 5.1****Planning and Design** | Mandatory | Light pollution reduction [N] (with exceptions, ~~and~~ notes and table) | 5.106.8 through 5.106.8.2 |  |  |  |  |
| **DIVISION 5.1****Planning and Design** | **. . .** | **. . .**  | **. . .**  |  |  |  |  |
| **DIVISION 5.3****Water Efficiency and Conservation**  | **. . .** | **. . .** | **. . .** |  |  |  |  |
| **DIVISION 5.3****Water Efficiency and Conservation** | Mandatory | Metering faucets for wash fountains | 5.303.3.4.5 |  |  |  |  |
| **DIVISION 5.3****Water Efficiency and Conservation** | Mandatory | Pre-rinse spray valve | 5.303.3.4.6 |  |  |  |  |
| **DIVISION 5.3****Water Efficiency and Conservation** | Mandatory | Food waste disposers | 5.303.4.1 |  |  |  |  |
|  | **…** | **…** | **…** |  |  |  |  |
| **DIVISION 5.4****Material Conservation and Resource Efficiency** | **. . .** | **. . .** | **. . .** |  |  |  |  |
|  | **…** | **…** | **…** |  |  |  |  |
|  | Elective |  [Reserved] | A5.405.2.1 |  |  |  |  |
|  | **…** | **…** | **…** |  |  |  |  |

**A5.602.2**

***CALGreen* VERIFICATION GUIDELINES**

**TIER 2 CHECKLIST**

**. . .**

| **CHAPTER** **5 DIVISIONS** |  | **SECTION TITLE** | **CODE SECTION** | **Y** | **N/A** | **O** | **PLAN SHEET, SPEC, OR ATTACH REFER-ENCE** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **DIVISION 5.1****Planning and Design** | **. . .**  | **. . .**  | **. . .**  |  |  |  |  |
| **DIVISION 5.1****Planning and Design** | Mandatory | Designated parking for clean air vehicles w/footnote and note | 5.106.5.2 |  |  |  |  |
| **DIVISION 5.1****Planning and Design** | *Tier 2 Prerequisite* | *Designated parking—~~10%~~ 22% of parking capacity w/ parking stall markings and stall identification* | *A5.106.5.1,**A5.106.5.1.2,**A5.106.5.1.3,**A5.106.5.1.4* |  |  |  |  |
| **DIVISION 5.1****Planning and Design** | **. . .** | **. . .** | **. . .** |  |  |  |  |
| **DIVISION 5.1****Planning and Design** | Mandatory | [N] Future charging spaces with note | 5.106.5.3.5 |  |  |  |  |
| **DIVISION 5.1****Planning and Design** | Mandatory | Light pollution reduction [N] (with exceptions, ~~and~~ notes and table) | 5.106.8 through 5.106.8.2 |  |  |  |  |
| **DIVISION 5.1****Planning and Design** | **. . .** | **. . .**  | **. . .**  |  |  |  |  |
| **DIVISION 5.3****Water Efficiency and Conservation** | **. . .** | **. . .** | **. . .** |  |  |  |  |
| **DIVISION 5.3****Water Efficiency and Conservation** | Mandatory | Metering faucets for wash fountains | 5.303.3.4.5 |  |  |  |  |
| **DIVISION 5.3****Water Efficiency and Conservation** | Mandatory | Pre-rinse spray valve | 5.303.3.4.6 |  |  |  |  |
| **DIVISION 5.3****Water Efficiency and Conservation** | Mandatory | Food waste disposers | 5.303.4.1 |  |  |  |  |
| **DIVISION 5.4****Material Conservation and Resource Efficiency** | **. . .** | **. . .** | **. . .** |  |  |  |  |
|  | Elective | [Reserved] | A5.405.2.1 |  |  |  |  |
|  | **…** | **…** | **…** |  |  |  |  |

**Notation:**

Authority*: Health & Safety Code Sections 18930.5 and 18931.7(b).*

Reference *– Health & Safety Code Sections 18930.5 and 18931.7(b).*

# F