# INITIAL EXPRESS TERMSFOR PROPOSED BUILDING STANDARDSOF THE DIVISION OF THE STATE ARCHITECT-STRUCTURAL SAFETY

# (DSA-SS AND DSA-SS/CC)REGARDING THE 2022 CALIFORNIA GREEN BUILDING STANDARDS CODE,CALIFORNIA CODE OF REGULATIONS, TITLE 24, PART 11(DSA-SS/CC 01/22)

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 (California only codes - Parts 1, 6, 8, 11, 12)

* Existing California amendments appear upright
* Amended or new California amendments appear underlined
* Repealed California language appears ~~upright and in strikeout~~
* Ellipses ( ...) indicate existing text remains unchanged

## INITIAL EXPRESS TERMS

### ITEM 1Chapter 2 Definitions, Section 202 Definitions

**BUY CLEAN CALIFORNIA ACT. [DSA-SS]** 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 structural sections, and plate), concrete reinforcing steel, flat glass, and mineral wool board insulation. The maximum acceptable global warming potential (GWP) limit are established by the Department of General Services (DGS), in consultation with the California Air Resources Board (CARB).

**CRADLE-TO-GATE. [DSA-SS]** Activities associated with a product or building’s life cycle from the extraction stage through production stage, and covering modules A1 through A3 in accordance with ISO Standards 14025 and 21930.

**CRADLE-TO-GRAVE. [DSA-SS]** 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.

**DECONSTRUCTION. [DSA-SS]** The process of systematically dismantling a structure, or a portion thereof, to maximize the potential to reclaim reusable material.

**ELECTRIC VEHICLE CHARGING STATION (EVCS). [DSA-SS]** One or more electric vehicle charging spaces served by **EVSE** or receptacle(s).

**ELECTRIC VEHICLE SUPPLY EQUIPMENT (EVSE). [DSA-SS]** 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.

**TYPE III ENVIRONMENTAL PRODUCT DECLARATION (EPD). [DSA-SS]** 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.

**PRODUCT-SPECIFIC EPD. [DSA-SS]** A Type III EPD in which the environmental impacts can be attributed to a product design and manufacturer across multiple facilities.

**FACTORY-SPECIFIC EPD. [DSA-SS]** A product-specific Type III EPD in which the environmental impacts can be attributed to a single manufacturer and manufacturing facility.

**INDUSTRY-WIDE EPD (IW-EPD). [DSA-SS]** 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.

**LEVEL 1 ELECTRIC VEHICLE (EV) CHARGING RECEPTACLE. [DSA-SS]** A 120 Volt 20-ampere minimum branch circuit and a receptacle.

**LEVEL 2 ELECTRIC VEHICLE SUPPLY EQUIPMENT. [DSA-SS]** The 208/240 Volt 40‑ampere branch circuit, and the electric vehicle charging connectors, attachment plugs, 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.

**LOW POWER LEVEL 2 ELECTRIC VEHICLE (EV) CHARGING RECEPTACLE. [DSA-SS]** A 208/240-volt 20-ampere minimum branch circuit and a receptacle.

**REFERENCE STUDY PERIOD. [DSA-SS]** The period of use for the building, in years, that will be assumed for life cycle assessment.

**Notation: DSA-SS**

Authority: Education Code Section 17310 and 81142

Reference(s): Education Code Sections 17280 through 17317, and 81130 through 81147.

**Notation: DSA-SS/CC**

Authority: Education Code Section 81053.

Reference(s): Education Code Sections 81052, 81053, and 81130 through 81147.

### ITEM 2Chapter 3 Green Building, Section 301.4 Mandatory Measures for Public Schools and Community Colleges

**301.4.2** Work on an existing site (…)

**301.4.2.5** Additions and alterations to existing parking facilities shall comply with Section 5.106.5.5.4 and Section 5.106.12.

**301.4.2.6** Additions and additions to existing buildings shall comply with Section 5.105.1, 5.106.5.6.5, 5.409, and 5.506.3.

**Notation:**

Authority: Education Code 17310

Reference(s): Education Code Sections 17280-17317

### ITEM 3Chapter 5-NONRESIDENTIAL MANDATORY MEASURES, DIVISION 5.1- PLANNING AND DESIGN, SECTION 5.105 DECONSTRUCTION AND REUSE OF EXISTING STRUCTURES

**SECTION 5.105, DECONSTRUCTION AND REUSE OF EXISTING STRUCTURES**

**~~(Reserved)~~**

**5.105.1 Scope.** Alteration(s) to existing building(s) where the combined 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, Section 5.409.2, or Section 5.409.3.

**Exception:** 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.

**5.105.2 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.

**5.105.2.1 Verification of compliance.** Documentation shall be provided in the construction documents to demonstrate compliance with Section 5.105.2.

**Note:** Sample Worksheet WS-3 in Chapter 8 may be used to assist in documenting compliance with this section.

**5.105.3 Deconstruction (reserved)**

**Notation: DSA-SS**

Authority: Education Code Section 17310 and 81142

Reference(s): Education Code Sections 17280 through 17317, and 81130 through 81147.

**Notation: DSA-SS/CC**

Authority: Education Code Section 81053.

Reference(s): Education Code Sections 81052, 81053, and 81130 through

### ITEM 4Chapter 5 Non-residential Mandatory Measures, Division 5.1 Planning and Design, Section 5.106 Site Development

(…)

*(Relocate existing co-adopted Sections 5.106.5.3 and related sub-sections into a new school specific Section 5.105.5.6 and related sub-sections with edits.)*

**~~5.106.5.3~~ 5.106.5.6 Electric vehicle (EV) charging at Public Schools and Community Colleges. [DSA-SS]** ~~Construction to provide~~ ~~e~~Electric vehicle infrastructure and ~~facilitate~~ electric vehicle charging stations shall comply with Section 5.106.5.~~3.1~~6 and shall be provided in accordance with regulations in the *California Building Code* ~~and the~~ *California Electrical Code.*

**Exceptions:**

1. On a case-by-case basis where ~~the local enforcing agency has determined~~ compliance with this section ~~is~~ has been demonstrated to be not feasible based upon one of the following conditions~~:~~,and with concurrence by the Division of the State Architect (DSA), compliance with Section 5.106.5.6 shall not be required.
	1. Where there is no local utility power supply.
	2. Where the local utility is unable to supply adequate power.
	3. ~~Where there is evidence suitable to the local enforcement agency substantiating that additional local utility infrastructure design requirements, directly related to the implementation of Section 5.106.5.3, may adversely impact the construction cost of the project.~~ The installation of EVCS is impracticable.
2. Parking spaces accessible only by automated mechanical car parking systems are not required to comply with ~~this code section.~~ Section 5.106.5.6.

**~~5.106.5.3.1~~ 5.106.5.6.1** **EV capable spaces.** EV capable spaces shall be provided in accordance with Table 5.106.5.~~3~~6.1 and the following requirements:

1. Raceways complying with the *California Electrical Code* and no less than 1-inch (25 mm) diameter shall be provided and shall originate at a service panel or a subpanel(s) serving the area and shall terminate in close proximity to the proposed location of the EV capable space and into a suitable listed cabinet, box, enclosure or equivalent. A common raceway may be used to serve multiple EV capable spaces.
2. A service panel or subpanel(s) shall be provided with panel space and electrical load capacity for a dedicated 208/240 volt, 40-ampere minimum branch circuit for each EV capable space, with delivery of 30-ampere minimum to an installed EVSE at each EVCS.
3. The electrical system and any on-site distribution transformers shall have sufficient capacity to supply full rated amperage at each EV capable space.
4. The service panel or subpanel circuit directory shall identify the reserved overcurrent protective device space(s) as “EV CAPABLE”. The raceway termination location shall be permanently and visibly marked as “EV CAPABLE.”

~~Note: A parking space served by electric vehicle supply equipment or designed as a future EV charging space shall count as at least one standard automobile parking space only for the purpose of complying with any applicable minimum parking space requirements established by an enforcement agency. See Vehicle Code Section 22511.2 for further details~~**~~.~~**

**TABLE** **~~5.106.5.3.1~~** **5.106.5.6.1**

| **TOTAL NUMBER OF PARKING SPACES** | **NUMBER OF REQUIRED EV CAPABLE SPACES** | **NUMBER OF REQUIRED EVCS**2**~~(EV CAPABLE SPACES PROVIDED WITH EVSE)~~**~~2~~ |
| --- | --- | --- |
| 0-9 | 0 | 0 |
| 10-25 | 4  | ~~0~~1 |
| 26-50 | 8  | 2  |
| 51-75 | 13  | 3 |
| 76-100 | 17  | 4 |
| 101-150 | 25  | 6 |
| 151-200 | 35  | 9 |
| 201 and over | 20 percent of total1 | 25 percent of EV capable spaces 1 |

1. Calculation for spaces shall be rounded up to the nearest whole number.
2. ~~The number of required~~[~~EVCS~~](https://up.codes/viewer/california/ca-green-code-2022/chapter/2/definitions#electric_vehicle_charging_station_evcs)~~(~~[~~EV~~](https://up.codes/viewer/california/ca-green-code-2022/chapter/2/definitions#electric_vehicle_ev)~~capable spaces provided with~~[~~EVSE~~](https://up.codes/viewer/california/ca-green-code-2022/chapter/2/definitions#electric_vehicle_supply_equipment_evse)~~) in column 3 count toward the total number of required~~[~~EV~~](https://up.codes/viewer/california/ca-green-code-2022/chapter/2/definitions#electric_vehicle_ev)~~capable spaces shown in column 2.~~ Each EVCS shall reduce the number of required EV capable spaces by the same number.

**~~5.106.5.3.2~~ 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.~~3~~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*. ~~The EVCS required by Table 5.106.5.3.1 may be provided with EVSE in any combination of Level 2 and Direct Current Fast Charging (DCFC), except that at least one Level 2 EVSE shall be provided.~~

**5.106.5.6.2.1 Reduced number of EV capable spaces.** The installation of each DCFC EVSE shall be permitted to reduce the minimum number of required EV capable spaces ~~without EVSE~~ indicated in Table 5.106.5.6.1 by five and reduce proportionally the required electrical load capacity to the service panel or subpanel.

**5.106.5.6.2.2 Multiple Connectors.** ~~One EV charger~~ EVSE with multiple vehicle connectors capable of charging multiple EVs simultaneously shall be permitted if the electrical load capacity required by Section 5.106.5.~~3~~6.1 for each EV capable space is accumulatively supplied to the ~~EV charger~~ EVSE.

**~~5.106.5.3.3.~~ 5.106.5.6.2.3 Use of automatic load management systems (ALMS).** ALMS shall be permitted for EVCS~~.~~ installed in accordance with Section 5.106.5.6.2. When ALMS is installed, the required electrical load capacity specified in Section 5.106.5.~~3~~6.1 for each EVCS may be reduced when serviced by an EVSE controlled by an ALMS. Each EVSE controlled by an ALMS shall deliver a minimum 30 amperes to an EV when charging one vehicle and shall deliver a minimum 3.3 kW while simultaneously charging multiple EVs.

**~~5.106.5.3.4 Accessible EVCS~~**~~. When EVSE is installed, accessible EVCS shall be provided in accordance with the~~ *~~California Building Code Chapter 11B Section 11B-228.3.~~*

~~Note:~~~~For EVCS signs refer to Caltrans Traffic Operations Policy Directive 13-01 (Zero Emission Vehicle Signs and Pavement Markings) or its successor(s).~~

**5.106.5.6.3 EVCS alternative compliance.** In lieu of compliance with Section 5.106.5.6.2, EVCS shall be provided with Level 1, Low Power Level 2, or Level 2, or any combination of Level 1, Low Power Level 2 or Level 2 EVSE such that the total power supplied by the combination of EVSE meets the minimum power indicated in Table 5.106.5.6.3, based on the total number of actual parking spaces in each parking facility.

**TABLE 5.106.5.6.3**

| **NUMBER OF PARKING SPACES** **IN A PARKING FACILITY** | **MINIMUM TOTAL POWER (KVA)** **REQUIRED FOR EVCS** |
| --- | --- |
| 0-9 | 0 |
| 10-25 | 7 |
| 26-50 | 14 |
| 51-75 | 20 |
| 76-100 | 27 |
| 101-150 | 40 |
| 151-200 | 60 |
| 201 and over | Total required KVA=P×.05×6.6Where P=Parking spaces in facility |

**5.106.5.6.4 EVCS for alterations of or additions to parking facilities.** Alterations of or additions to parking facilities shall provide EVCS in compliance with Section 5.106.5.6.4. The installation of infrastructure for EV capable spaces required to be provided without EVSE shall not be required.

**5.106.5.6.4.1 Alterations of and additions to parking facilities.** EVCS shall be provided in accordance with the number indicated in Table 5.106.5.6.1 or minimum power indicated in Table 5.106.5.6.3 when the scope of work includes an increase in power supply to an electric panel serving light fixtures illuminating the parking area or when area containing parking spaces is added to a parking facility. The number of required EVCS shall be based on the total number of existing and new parking spaces in the parking facility.

**5.106.5.6.4.2 Alterations consisting of the installation of photovoltaic systems.** EVCS shall be provided in accordance with the number indicated in Table 5.106.5.6.1 or maximum power indicated in Table 5.106.5.6.3 when a new photovoltaic system is installed in an existing parking facility.

**5.106.5.6.5 Requirement to install EVSE.** EVSE shall be provided in all existing EV capable spaces to create EVCS when a project is required by *California Administrative Code* Section 4-309 to be submitted for plan approval to the Division of the State Architect. When EVSE is installed in existing EV capable spaces, accessible EVCS shall be provided in accordance with *California Building Code Chapter 11B*.

**Exception:** Projects in which improvements in parking areas consist only of accessibility improvements are not required to comply with Section 5.106.5.6.5

**Notation: DSA-SS**

Authority: Education Code Section 17310 and 81142

Reference(s): Education Code Sections 17280 through 17317, and 81130 through 81147.

**Notation: DSA-SS/CC**

Authority: Education Code Section 81053.

Reference(s): Education Code Sections 81052, 81053, and 81130 through 81147

### ITEM 5Chapter 5-NONRESIDENTIAL MANDATORY MEASURES, DIVISION 5.4-MATERIAL CONSERVATION AND RESOURCE EFFICIENCY, SECTION 5.401 GENERAL, SECTION 5.402 DEFINITIONS

**SECTION 5.401, GENERAL**

**5.401.1 Scope.** The provisions of this chapter ~~shall outline means~~ specify the requirements of achieving material conservation, ~~and~~ resource efficiency, and greenhouse gas (GHG) emission reduction through protection of buildings from exterior moisture, construction waste diversion, employment of techniques to reduce pollution through recycling of materials, the installation of products with lower GHG emissions and building commissioning or testing and adjusting.

(...)

**SECTION 5.402, DEFINITIONS**

**5.402 Definitions.** The following terms are defined in Chapter 2.

**ADJUST.**

**BALANCE.**

**BUILDING COMMISSIONING.**

**BUY CLEAN CALIFORNIA ACT (BCCA).**

**CRADLE-TO-GRAVE.**

**TYPE III ENVIRONMENTAL PRODUCT DECLARATION (EPD).**

**PRODUCT-SPECIFIC EPD.**

**FACTORY-SPECIFIC EPD.**

**INDUSTRY-WIDE EPD (IW-EPD).**

**ORGANIC WASTE.**

**REFERENCE BASELINE BUILDING.**

**TEST.**

**Notation: DSA-SS**

Authority: Education Code Section 17310 and 81142

Reference(s): Education Code Sections 17280 through 17317, and 81130 through 81147.

**Notation: DSA-SS/CC**

Authority: Education Code Section 81053.

Reference(s): Education Code Sections 81052, 81053, and 81130 through 81147.

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### ITEM 6Section 5.408, CONSTRUCTION WASTE REDUCTIONS, DISPOSAL AND RECYCLING

**5.408.1 Construction waste management.** Deconstruct ~~Recycle and/or salvage~~ for reuse and/or recycle a minimum of 65 percent of the nonhazardous organic building material from construction excess, deconstruction, and demolition ~~construction and demolition waste~~ in accordance with Section 5.408.1.1, 5.408.1.2 or 5.408.1.3; or meet a more stringent local construction and demolition waste management ordinance.~~, whichever is more stringent.~~

[No change to subsections]

**Notation: DSA-SS**

Authority: Education Code Section 17310 and 81142

Reference(s): Education Code Sections 17280 through 17317, and 81130 through 81147.

**Notation: DSA-SS/CC**

Authority: Education Code Section 81053.

Reference(s): Education Code Sections 81052, 81053, and 81130 through 81147.

**. . .**

### ITEM 7Section 5.409, LIFE CYCLE ASSESSMENT

**~~(Reserved)~~**

**5.409.1 Scope.** 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 floor area is 50,000 square feet or greater shall comply with either 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, Section 5.409.2, or Section 5.409.3.

**5.409.2 Whole building life cycle assessment.** Projects shall conduct a cradle-to-grave whole building life cycle assessment performed in accordance with ISO 14044, excluding operating energy, and demonstrating a minimum 10 percent reduction in global warming potential (GWP) as compared to a reference baseline building of similar size, function, complexity, type of construction, material specification, and location that meets the requirements of the California Energy Code currently in effect. Software used to conduct the whole building life cycle assessment, including reference baseline building, shall have a data set compliant with ISO-14044, and ISO 21930-2017 or EN 15804, and the software shall conform to ISO 21931-2017 and/or EN 15978:2011.

**5.409.2.1 Building components.** Building enclosure components included in the assessment shall be limited to glazing, insulation, and exterior finishes. Primary and secondary structural members included in the assessment shall be limited to footings and foundations, and structural columns, beams, walls, roofs, and floors.

**5.409.2.2 Reference study period.** The reference study period of the proposed building shall be equal to the reference baseline building and shall be 60 years.

**5.409.2.3 Verification of compliance.** A summary of the GWP analysis produced by the software shall be provided in the construction documents as documentation of compliance. A copy of the whole building life cycle assessment which includes the GWP analysis produced by the software, in addition to maintenance and training information, shall be included in the operation and maintenance manual and shall be provided to the owner at the close of construction.

**Notes:**

1. Software for calculating whole building life cycle assessment is available for free at Athena Sustainable Materials Institute (https://calculateca.com/software/impact-estimator/) and OneClick LCA - Planetary (www.oneclicklca.com/planetary). Paid versions include, but are not limited to, Sphera GaBi Solutions (gabi.sphera.com), SimaPro (simapro.com), OneClick LCA (www.oneclicklca.com) and Tally for Revit (apps.autodesk.com).
2. Sample Worksheet WS-4 in Chapter 8 may be used to assist in documenting compliance with this section.

**Notation: DSA-SS**

Authority: Education Code Section 17310 and 81142

Reference(s): Education Code Sections 17280 through 17317, and 81130 through 81147.

**Notation: DSA-SS/CC**

Authority: Education Code Section 81053.

Reference(s): Education Code Sections 81052, 81053, and 81130 through 81147

### ITEM 8Chapter 5 NONRESIDENTIAL MANDATORY MEASURES, DIVISION 5.4- MATERIAL CONSERVATION AND RESOURCE EFFICIENCY, SECTION 5.409 LIFE CYCLE ASSESSMENT

**5.409.3 Product GWP compliance – prescriptive path. [DSA-SS]** Each product that is permanently installed and listed in Table 5.409.3 shall have a Type III environmental product declaration (EPD), either product-specific or factory-specific.

**5.409.3.1** Products shall not exceed the maximum GWP value specified in Table 5.409.3.

**Exception:** Concrete may be considered one product category to meet compliance with this section. A weighted average of the maximum GWP for all concrete mixes installed in the project shall be less than the weighted average maximum GWP allowed per Table 5.409.3 using Exception Equation 5.409.3.1. Calculations shall be performed with consistent units of measurement for the material quantity and the GWP value. For the purposes of this exception, industry wide EPDs are acceptable.

**Exception EQUATION 5.409.3.1**

GWP*n* < GWP*allowed*

*where*

GWPn = (ΣGWP*n*)(v*n*) *and* GWP*allowed* = (ΣGWP*allowed*)(v*n*)

*and*

*n* = each concrete mix installed in the project

GWP*n* = the GWP for concrete mix *n* per concrete mix EPD, in kg/m3

GWP*allowed* = the GWP potential allowed for concrete mix *n* per Table 5.409.3

v*n* = the volume of concrete mix *n* installed in the project, in kg3

**5.409.3.2. Verification of compliance.** Calculations to demonstrate compliance, and Type III EPDs for products required to comply, if included in the project, shall be provided on the construction documents. Updated EPDs for products used in construction shall be provided to the owner at the close of construction and to the enforcement entity upon request.

**Note:** Sample Worksheet WS-5 in Chapter 8 may be used to assist in documenting compliance with this section.

**TABLE 5.409.3**

**PRODUCT GWP LIMITS**

|  |  |  |
| --- | --- | --- |
| **Buy Clean California Materials Product Category 1** | **Maximum acceptable GWP value (unfabricated)****(GWPallowed)** | **Unit of Measurement** |
| Hot-rolled structural steel sections | 1.77 | MT CO2e/MT |
| Hollow structural sections | 3.00 | MT CO2e/MT |
| Steel plate | 2.61 | MT CO2e/MT |
| Concrete reinforcing steel | 1.56 | MT CO2e/MT |
| Flat glass | 2.50 | kg CO2e/MT |
| Light-density mineral wool board insulation | 5.83 | kg CO2e/1 m2 |
| Heavy-density mineral wool board insulation | 14.28 | kg CO2e/1 m2 |
| **Concrete Product Category** | **Maximum GWP allowed value** **(GWPallowed)** | **Unit of Measurement** |
|  Concrete, Ready-mixed 2,3  |
| up to 2499 psi | 450 | kg CO2e/m3 |
| 2500-3499 psi | 489 | kg CO2e/m3 |
| 3500-4499 psi | 566 | kg CO2e/m3 |
| 4500-5499 psi | 661 | kg CO2e/m3 |
| 5500-6499 psi | 701 | kg CO2e/m3 |
| 6500 psi and greater | 799 | kg CO2e/m3 |
| Concrete, Lightweight Ready-mixed 2  |
| up to 2499 psi | 875 | kg CO2e/m3 |
| 2500-3499 psi | 956 | kg CO2e/m3 |
| 3500-4499 psi | 1,039 | kg CO2e/m3 |

**Footnotes:**

1. The GWP values of the products listed in Table 5.409.3 are based on 175 percent of Buy Clean California Act (BCCA) GWP values, except for concrete products which are not included in BCCA.
2. For concrete, 175 percent of the National Ready Mix Concrete Association (NRMCA) 2021 version 3 Pacific Southwest regional benchmark values are used for the GWP allowed, except for High Early strength.
3. Concrete High Early Strength ready-mixed shall be calculated at 130 percent of the Ready mixed concrete GWP allowed values for each product category.

**Notation: DSA-SS**

Authority: Education Code Section 17310 and 81142

Reference(s): Education Code Sections 17280 through 17317, and 81130 through 81147.

**Notation: DSA-SS/CC**

Authority: Education Code Section 81053.

Reference(s): Education Code Sections 81052, 81053, and 81130 through 81147.

### ITEM 9Chapter 6-REFERENCED ORGANIZATIONS AND STANDARDS

**SECTION 601**

**GENERAL**

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

[Entire table not shown, just new reference standards]

|  |  |  |
| --- | --- | --- |
| **ORGANIZATION** | **STANDARD** | **REFERENCED SECTION** |
| . . . . |  |  |
| ACI AMERICAN CONCRETE INSTITUTE |  |  |
| [American Concrete Institute](https://www.concrete.org/) | ACI CT-21  | A5.405.5.2.1.1 |
|  |  |  |
| . . . . |  |  |
| EN EUROPEAN STANDARDS |  |  |
| [European and International standards online store - European Standards (en-standard.eu)](https://www.en-standard.eu/) | EN 15804EN 15978-2011 | 5.409.2A5.409.2.1A5.409.2.2 |
| . . . |  |  |
| ISO International Organization for Standardization |  |  |
| ISO Central SecretariatChemin de Blandonnet 8CP 401 - 1214 Vernier, Geneva, Switzerland<https://www.iso.org>  | ISO 14044:2006ISO 21930-2017ISO 21931-2017 | 5.409.2A5.409.2.1A5.409.2.2 |
|  |  |  |

**Notation: DSA-SS**

Authority: Education Code Section 17310 and 81142

Reference(s): Education Code Sections 17280 through 17317, and 81130 through 81147.

**Notation: DSA-SS/CC**

Authority: Education Code Section 81053.

Reference(s): Education Code Sections 81052, 81053, and 81130 through 81147

### ITEM 10Chapter 8 COMPLIANCE FORMS, WORKSHEETS AND REFERENCE MATERIAL

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**WORKSHEET (WS-3)**

**BUILDING REUSE**

|  |
| --- |
| **DOCUMENTATION OF COMPLIANCE OF EXISTING BUILDING REUSE** |
| **Area of Existing Building(s)** | \_\_\_\_\_ SF |
| **Area of Aggregate Addition(s)** (if applicable) | \_\_\_\_\_ SF |
|  | **Existing Total Area****(A)** | **Retained Total Area****(B)** | **% of Retained Structure****(B)/(A)** |
| **Primary Structural Elements of Existing Building(s)**(foundations; columns, beams, walls, and floors; and lateral elements) | \_\_\_\_\_ SF | \_\_\_\_\_ SF | \_\_\_\_\_ % |
| **Building Enclosure of Existing Building(s)** (roof framing, wall framing and exterior finishes only) | \_\_\_\_\_ SF | \_\_\_\_\_ SF | \_\_\_\_\_ % |
| **Total % Reuse of Required Elements = ≥45%** | \_\_\_\_\_ % |

**WORKSHEET (WS-4)**

**WHOLE BUILDING LIFE CYCLE ASSESSMENT**

**TBD**

**WORKSHEET (WS-5)**

**PRODUCT GWP COMPLIANCE – PRESCRIPTIVE PATH**

**TBD**

**WORKSHEET (WS-6)**

|  |
| --- |
| **DOCUMENTATION OF COMPLIANCE OF EXISTING BUILDING REUSE** **TIER 1 AND TIER 2** |
| **Area of Existing Building** | \_\_\_\_\_ SF |
|  | **Existing Total Area****(A)** | **Retained Total Area****(B)** | **% of Retained Structure****(B)/(A)** |
| **Primary Structural Elements of Existing Building**(foundations; columns, beams, walls, and floors; and lateral elements) | \_\_\_\_\_ SF | \_\_\_\_\_ SF | \_\_\_\_\_ % |
| **Building Enclosure of Existing Building** (roof framing, wall framing and exterior finishes only) | \_\_\_\_\_ SF | \_\_\_\_\_ SF | \_\_\_\_\_ % |
| **Interior Nonstructural Elements** (interior walls, doors, floor coverings, ceiling systemsapplicable for voluntary Tier 2 compliance) | \_\_\_\_\_ SF | \_\_\_\_\_ SF | \_\_\_\_\_ % |
| **Total % Reuse of Required Elements** | \_\_\_\_\_ % |

**Notation: DSA-SS**

Authority: Education Code Section 17310 and 81142

Reference(s): Education Code Sections 17280 through 17317, and 81130 through 81147.

**Notation: DSA-SS/CC**

Authority: Education Code Section 81053.

Reference(s): Education Code Sections 81052, 81053, and 81130 through 81147.

**WORKSHEET (WS-7)**

**PRODUCT GWP COMPLIANCE – PRESCRIPTIVE PATH TIER 1 AND 2**

**TBD**

**Notation: DSA-SS**

Authority: Education Code Section 17310 and 81142

Reference(s): Education Code Sections 17280 through 17317, and 81130 through 81147.

**Notation: DSA-SS/CC**

Authority: Education Code Section 81053.

Reference(s): Education Code Sections 81052, 81053, and 81130 through 81147