

**INITIAL STATEMENT OF REASONS  
FOR PROPOSED BUILDING STANDARDS  
OF THE DIVISION OF THE STATE ARCHITECT (DSA-SS AND DSA-SS/CC)  
REGARDING THE 2022 CALIFORNIA BUILDING CODE  
CALIFORNIA CODE OF REGULATIONS, TITLE 24, PART 2  
(DSA SS/CC 05/21)**

The Administrative Procedure Act (APA) requires that an Initial Statement of Reasons be available to the public upon request when rulemaking action is being undertaken. The following information required by the APA pertains to this particular rulemaking action:

**STATEMENT OF SPECIFIC PURPOSE, PROBLEM, RATIONALE and BENEFITS**

Government Code Section 11346.2(b)(1) requires a statement of specific purpose of each adoption, amendment, or repeal and the problem the agency intends to address and the rationale for the determination by the agency that each adoption, amendment, or repeal is reasonably necessary to carry out the purpose and address the problem for which it is proposed. The statement shall enumerate the benefits anticipated from the regulatory action, including the benefits or goals provided in the authorizing statute.

**Item 1.**

**Chapter 1 SCOPE AND ADMINISTRATION**

**Section 106.1** – Clarifying that live load postings apply to DSA regulated structures, which is consistent with past practice.

**Section 110** – Repeal 110.3.12 from 2019 IV cycle and adopt new 2021 IBC Section 1103.5 which has the same language. Associated change sections: 202, 1705A.5.7, 1705A.20, 2304.10.1.2, 3102.3, 3102.6.1.1.

**Item 2.**

**Chapter 2 DEFINITIONS**

**Section 202 – DEFINITIONS**

Repeal definition of “EQUIPMENT” as currently reflected as [DSA-SS, DSA-SS/CC] amendment language in 2019 CBC and adopt definition of “EQUIPMENT” that was introduced by OSHPD in the 2019 IV cycle, with some modifications.

Repeal definition of “MASS TIMBER” that was added in 2019 IV cycle and adopt new 2021 IBC definition which has the same language.

Repeal amendment to definition of “WALL, LOAD BEARING” that inserted the language “*or mass timber*” and adopt 2021 IBC amendment which now includes that language.

**Item 3.**

**Chapters 3-10, 12, 14**

Adopt chapters 3-10 and 12 of the 2021 IBC without amendment and chapter 14 as amended with existing California amendments carrying forward without change.

**Item 4.**

**Chapter 15 ROOF ASSEMBLIES AND ROOFTOP STRUCTURES**

**Section 1511.9 and 1511.9.1** - This is a retention of 1510.7.2 (renumbered to 1511.9) which has been removed from model code, and continued amendment 1510.7.2.1 (renumbered to 1511.9.1). Only adjustments are to nomenclature (PV Panel systems) and

to updated UL standards to align with similar adjustments done in 2021 IBC for BIPVs (Section 1507.17.5) and PV shingles (Section 1507.16.6).

**Item 5.**

**Chapter 16 STRUCTURAL DESIGN**

**Section 1617.3.2** – Variable load requirement for the alternative allowable stress design load combinations is added as previously covered in 2018 IBC Section 1605.1.

**Section 1617.3.3** – Editorial changes.

**Section 1617.4** – Updated pointer to model code reference since the numbering was changed from the last model code version.

**Section 1617.5.1.3** – Updated item number and title to be consistent with changes to Table 1607.1 in 2021 IBC.

**Section 1617.5.1.4** – Updated item number to be consistent with changes to Table 1607.1 in 2021 IBC.

**Section 1617.5.1.5** – Updated item number to be consistent with changes to Table 1607.1 in 2021 IBC.

**Section 1617.5.1.6** – Section is deleted since load combination requirements are now referenced from Section 1607.19.

**Section 1617.5.3** – Pointer to load combination requirements in Section 1617.3.3 is relocated here from Section 1617.5.1.6.

**Section 1617.6** – Editorial correction.

**Section 1617.9** – New amendment language to add Sections 1617.9.1 and 1617.9.2 to replace Tables 1613.2.3(1) and 1613.2.3(2) to be consistent with ASCE 7-16 Supplement 3 as proposed in CBC Chapter 35. Editorial change – Renumbered Sections 1617.9.1, 1617.9.2, 1617.9.3, 1617.9.3.1, 1617.9.3.2 and 1617.9.4 accordingly.

**Section 1617.11.2** – New amendment language to be consistent with ASCE 7-16 Supplement 3 as proposed in CBC Chapter 35.

**Section 1617.11.4** – Amendment in this section is revised to be consistent with ASCE 7-22.

**Section 1617.11.5** – Relocated amendment to 1617.11.4.3, Item h.

**Section 1617.11.9** – Amendment in this section is revised to be consistent with ASCE 7-22.

**Section 1617.11.13** – Relocated amendment from 1617.11.14.

**Section 1617.11.14** – Clarification that lateral building response need not be considered concurrently with differential settlements for shallow foundations on liquefiable sites.

**Section 1617.11.15** – The application of this section was confusing as to which equipment is anchored and which is exempt. The current language modifies exceptions and exemptions to exceptions. To avoid confusion and bring clarity to requirements, this provision is rewritten in the affirmative as to which equipment is required to be anchored and which is exempt, rather than exceptions with exemptions. The new language furthers defines the equipment classification based on the location of the equipment. This language has been drafted and refined in collaboration with OSHPD.

**Section 1617.11.19** – Amendment is revised to be consistent with OSHPD. The statement “do not support piping with  $I_p$  greater than 1.0” is confusing, as the context for the applicability of the exception for piping with  $I_p$  greater than 1.0 is lost. This change eliminates any ambiguity on the applicability of the provisions. Additionally, the redundant language noting “for Seismic Design Category D, E, or F” is deleted since all structures regulated by DSA-SS/CC shall be assigned to Seismic Design Category D or higher.

**Section 1617.11.20** – Clarification that minimum horizontal acceleration requirement is an allowable stress design load.

**Section 1617.11.21** – Clarification that minimum horizontal acceleration requirement is an allowable stress design load. Editorial change – Relocate Table 1224.4.11 below Item 3. Delete table number and title to be consistent with Section 1617A.1.28. The current table number is confusing since it implies the table is located in Section 1224.

## Item 6.

### Chapter 16A STRUCTURAL DESIGN

**Section 1603A.1** – Editorial correction.

**Section 1604A.3.1** – Editorial correction.

**Table 1604A.5** – Continued deletion, same as previous cycle, shown for publisher’s benefit.

**Section 1605A.2** – Variable load requirement for the alternative allowable stress design load combinations is added as previously covered in 2018 IBC Section 1605.1.

**Section 1605A.3** – Editorial changes to section numbering.

**Section 1606A.6** – Updated pointer to model code reference since the numbering was changed from the last model code version.

**Table 1607A.1** – Editorial changes to be consistent with changes to Table 1607.1 in 2021 IBC. Relocated classroom live loading requirement from footnote ‘f’ into Item 28 of table since this is an important requirement that is often missed. Removed exception for live load reduction in footnote ‘f’ to be consistent with IBC for assembly occupancies.

**Section 1607A.14.5** – Updated section number to model code reference since the numbering was changed from the last model code version.

**Section 1607A.15** – Clarification that 5 psf loading requirement is an allowable stress design load.

**Section 1607A.19** – Pointer to load combination requirements in Section 1605A.3 is relocated here from footnote c of Table 1607A.1.

**Section 1608A.2, Table 1608A.2, Figures 1608A.2(1) and 1608A.2(2)** – Continued deletion, same as previous cycle, shown for publisher’s benefit.

**Section 1612A.3** – Continued deletion, same as previous cycle, shown for publisher’s benefit.

**Section 1613A.1** – Continued deletion, same as previous cycle, shown for publisher’s benefit.

**Section 1613A.2.1** – Continued deletion, same as previous cycle, shown for publisher’s benefit.

**Section 1613A.2.3** – Continued deletion, same as previous cycle, shown for publisher’s benefit.

**Table 1613A.2.3(1)** – New amendment language for Site Class E and footnote c to be consistent with ASCE 7-16 Supplement 3 as proposed in CBC Chapter 35.

**Table 1613A.2.3(2)** – New amendment language in footnote c to be consistent with ASCE 7-16 Supplement 3 as proposed in CBC Chapter 35.

**Section 1613A.2.5** – Continued deletion, same as previous cycle, shown for publisher’s benefit.

**Table 1613.2.5(1)** – Continued deletion, same as previous cycle, shown for publisher’s benefit.

**Table 1613.2.5(2)** – Continued deletion, same as previous cycle, shown for publisher’s benefit.

**Section 1613A.2.5.1** – Continued deletion, same as previous cycle, shown for publisher’s benefit.

**Section 1613A.2.5.2** – Continued deletion, same as previous cycle, shown for publisher’s benefit.

**Section 1613A.3** – Editorial correction – Delete "exception" since this amendment is in addition to, not in lieu of, the model code language in this section.

**Section 1617A.1.3** – New amendment language to be consistent with ASCE 7-16 Supplement 3 as proposed in CBC Chapter 35 which updates various subsections in ASCE 7-16 Section 11.4 to the seismic ground motions values for clarity.

**Section 1617A.1.5** – This section is amended to incorporate the ballot change proposals related to the Two Stage Analysis Procedures that passed main committee ballot of ASCE 7-22. Section 1617A.1.5 is relocated to Section 1617A.1.5.2. Section 1617A.1.6 is relocated to Section 1617A.1.5.3, Item h. Some of these amendments will need to be deleted when ASCE 7-22 is adopted to avoid duplication.

**Section 1617A.1.6** – Relocated amendment to 1617A.1.5.3, Item h.

**Section 1617A.1.10** – This section is amended to incorporate the ballot change proposals that passed main committee ballot of ASCE 7-22. Existing amendment in this section is retained as an alternate.

**Section 1617A.1.15** – Relocated amendment from 1617A.1.16.

**Section 1617A.1.16** – Clarification that lateral building response need not be considered concurrently with differential settlements for shallow foundations on liquefiable sites.

**Section 1617A.1.18** – The application of this section was confusing as to which equipment is anchored and which is exempt. The current language modifies exceptions and exemptions to exceptions. To avoid confusion and bring clarity to requirements, this provision is rewritten in the affirmative as to which equipment is required to be anchored and which is exempt, rather than exceptions with exemptions. The new language furthers defines the equipment classification based on the location of the equipment. This language has been drafted and refined in collaboration with OSHPD.

**Section 1617A.1.19** – Use of screw anchors were previously limited to interior conditions, but some manufacturers now provide an option with stainless steel anchors that are permitted for exterior conditions.

**Section 1617A.1.26** – Amendment is revised to be consistent with OSHPD. The statement “do not support piping with  $I_p$  greater than 1.0” is confusing, as the context for the applicability of the exception for piping with  $I_p$  greater than 1.0 is lost. This change eliminates any ambiguity on the applicability of the provisions. Additionally, the redundant language noting “for Seismic Design Category D, E, or F” is deleted since all structures regulated by DSA-SS/CC shall be assigned to Seismic Design Category D or higher.

**Section 1617A.1.27** – Clarification that minimum horizontal acceleration requirement is an allowable stress design load.

**Section 1617A.1.28** – Clarification that minimum horizontal acceleration requirement is an allowable stress design load.

#### Item 7.

### Chapter 17A SPECIAL INSPECTIONS AND TESTS

**Section 1704A.2** – Continued deletions from previous code adoption cycle.

**Section 1704A.2.3** – Continued deletions from previous code adoption cycle.

**Sections 1704A.2.5 and 1704A.2.5.1** – Continued deletions from previous code adoption cycle.

**Section 1704A.3.2** – Continued deletions from previous code adoption cycle.

**Section 1704A.4** – Continued deletions from previous code adoption cycle.

**Section 1704A.5** – Continued deletions from previous code adoption cycle.

**Section 1704A.5 #3** - Repealing previous reference 1908A.5 given the 2021 IBC replaced 1908.5 with reference to ACI 318. Added reference 1705A.3.9.2 which incorporates previous 1908A.5 language with further modifications. Associated change sections: 1705A.3.9.2.

**Section 1704A.5 #6** – Striking SDC B and C since the minimum SDC of D is required for DSA regulated structures (reference Section 1617.9.3/1613A.2.5).

**Section 1704.6.1** (model code section) – The CAC requires structural observation for all DSA regulated projects rather than only certain types. Therefore, model code Section 1704.6.1 has deletions in line with past removal amendments.

**Section 1704A.6.1 and 1704A.6.2** – Relocating structural observation and preconstruction meeting requirements from the California Existing Building Code (Part 10) Sections 319.10.2.1 and 319.10.2.2, respectively, for rehabilitation projects to consolidate structural observations into a common section to promote more consistent implementation and enforcement. Added term ‘rehabilitation’ to clarify limitation of such requirements.

**Section 1705A.2.1** – Continued deletions from previous code adoption cycle.

**Table 1705A.2.1** – Revising references, generally based on relocations of testing and inspection items from material chapters to Chapter 17A.

Further reasons for specific items:

**1c, 5a.7, and footnote 'a'** – Revising references based on relocations of testing and inspection items from material chapters to Chapter 17A. For footnote 'a' renumbered reference pointer based on model code renumbering. Associated change sections: 1705A.2.5, 1705A.2.6, 1705A.3.2.2, 1909.2.4, 2212.6.1, 2212.6.2, 1910A.2, 2213A.1, 2213A.2.

**5b and sub-items** – Relocating to Table 1705A.3 and providing a reference pointer accordingly. Associated change sections: Table 1705A.3.

**Section 1705A.2.2** – Continued deletions from previous code adoption cycle.

**Table 1705A.2.3 footnote 'a'** – Renumbered reference pointer based on model code renumbering.

**Section 1705A.2.5** - Relocating requirements from Section 2212.6.2/2213A.2 to 1705A.2.5. Associated change sections: 2212.6.2, 2213A.2.

**Section 1705A.2.6** - Relocating requirements from Section 2212.6.1/2213A.1 to 1705A.2.6. Associated change sections: 2212.6.1, 2213A.1.

**Section 1705A.3** – Continued deletions from previous code adoption cycle.

**Table 1705A.3** – Revising references, generally based on: a) updated reference standard from ACI 318-14 to ACI 318-19, and b) relocations of some shotcrete testing and inspection items from Chapters 19 and 19A to Chapter 17A.

Further reasons for specific items:

1. - Added items 1a and 1b indicating continuous and periodic special inspection, respectively, to comply with ACI 318-19 Section 26.13.3.2(c). Added reference to ACI 318-19 25.5.1 since 1908A.4 was removed but its content was incorporated into that ACI section. Added reference to 1705A.3.9, 1909.4.1 and 1908A.1 due to nature of the item corresponding to those sections. Repealing reference to 1908A.3 and 1908A.4 due to model code deleting 1908.
2. Relocated Table 1705A.2.1 items 1 and 2 to new items 2d and 2e. Modified 2b for consistency with added items 2d and 2e. Added "coupling beams" to 2d for consistency with ACI 318-19 26.13.3.2(d). Adding reference to ACI 318-19 26.13.1.4, 26.13.3.2 and 26.13.3.3 due to the nature of the item corresponding to that section.
3. Adding reference to ACI 318-19 26.13.1 and 26.13.3.3 due to the nature of the item corresponding to that section.
4. Adding reference to ACI 318-19 26.7.2, 26.13.1 and 26.13.3.3 due to the nature of the item corresponding to that section.
5. Striking model code reference to ACI 318-19 26.4.3 and 26.4.4 since the existing amendment for 26.4 includes those and more concrete components (e.g., cementitious materials, aggregates, etc.). Modifying type of special inspection from periodic to continuous based on requirements in ACI 318-19 26.13.3.2. Repealing reference to 1908A.2 and 1908A.3 due to model code deleting 1908.
6. Adding back reference to ACI 318-19 26.4 for consistency with previous requirements and due to 26.4 including relevant concrete component compliance requirements. Repealing previous CBC references due to model code deleting 1908. Updating reference pointer numbering for 1909.3.9 and 1905A.1.17.

7. Adding reference to ACI 318-19 26.13 due to the nature of the item corresponding to that section. Repealing previous CBC references due to relocation of requirements to 1705A.3.9, 1909.3.7, 1909.3.8, 1905A.1.15 and 1905A.1.16.
8. Adding reference to ACI 318-19 26.13.3.3 due to the nature of the item corresponding to that section. Repealing previous CBC reference due to relocation model code deletion of Section 1908.
9. Adding reference to ACI 318-19 26.13.1 and 26.13.3.2 due to the nature of the item corresponding to that section.
- 10.- Partially repealing previous amendment to remove “9” in reference to ACI 318-19 26.9.2 since model code now references 26.9. Adding reference to ACI 318-19 26.13.1 and 26.13.3.3 due to the nature of the item corresponding to that section.
11. Striking SDC C since SDC D is the minimum required for DSA regulated structures (reference Section 1617.9.3/1613A.2.5).
13. Repealing previous incorrect CBC references.
14. Adding reference to ACI 318-19 26.13.3.3 due to the nature of the item corresponding to that section. Updating CBC references due to renumbering.

Associated change sections: 1705A.3.9 and subsections, and various subsections in 1909 and 1908A.

**Section 1705A.3.2** - Providing reference pointer for cementitious materials requirements.

**Section 1705A.3.9** - Renumbering/relocating 1705A.19 due to 2021 IBC insertions. Adding reference to ACI 318 since requirements are contained within it.

**Section 1705A.3.9.1** - Renumbering/relocating 1705A.19.1 due to 2021 IBC insertions.

**Section 1705A.3.9.2** - Relocated from 1908.5/1908A.5 and modifying as follows: a) editorial change for “test panel” and “sample panel” to “mockup panel” to coordinate with definitions in ACI 318-19; b) fifth sentence incorporates relocated 1908.4.1/1908A.4.1 now deleted by model code, c) last sentence incorporates relocated 1909.4.2 and amendment in 1908A.10.2 now deleted by model code.

**Section 1705A.4** – Continued deletions from previous code adoption cycle.

**Table 1705A.5.3** - Added “A” to reference applicable section in Chapter 17A and providing 3.1-3.5 item numbering from repealed Table 1705A.5.7. Associated change sections: 110.3.12, 1705A.5.7, 1705A.20, 3102.3, 3102.6.1.1.

**Section 1705A.5.5** – Renumbering due to model code insertion of 1705A.5.3 and corrected reference standard title. Further modifications ensure members exempted from special inspection are explicitly identified on construction documents and the nature of such members is clarified. Associated change sections: 1705A.5.3.

**Section 1705A.5.7** - Repealing 2019 IV language for 1705A.5.7 and Table 1705A.5.7 that was an early adoption of model code information now present in 1705A.5.3 and Table 1705A.5.3. Associated change sections: 110.3.12, 1705A.5.3, 1705A.20, 3102.3, 3102.6.1.1.

**Section 1705A.6.3** – Providing more specific reference pointer.

**Section 1705A.8.1** – Providing reference pointer for micropile tests.

**Section 1705A.9.1** – Providing reference pointer for helical pile tests.

**Section 1705A.12.1** – Continued deletions from previous code adoption cycle. For consistency with previous amendment deletions of model code, deleting added 2021 IBC modified exception language. Associated change sections: 1705A.12.2.

**Section 1705A.12.2** – Continued deletions from previous code adoption cycle. For consistency with previous amendment deletions of model code, deleting added 2021 IBC modified exception language. Associated change sections: 1705A.12.1.

**Section 1705A.13** – Continued deletions from previous code adoption cycle.

**Section 1705A.13.1.1** – Continued deletions from previous code adoption cycle.

**Section 1705A.13.1.2** – Continued deletions from previous code adoption cycle.

**Section 1705A.13.2** – Continued deletions from previous code adoption cycle. For consistency with previous amendment deletions of model code, deleting added 2021 IBC modified exception language. Associated change sections: 1705A.13.3.

**Section 1705A.13.3** – Continued deletions from previous code adoption cycle. For consistency with previous amendment deletions of model code, deleting added 2021 IBC modified exception language. Associated change sections: 1705A.13.2.

**Section 1705A.13.4** – Continued deletions from previous code adoption cycle. Updating reference pointer due to IBC renumbering of subsections.

**Section 1705A.13.5** – Continued deletions from previous code adoption cycle.

**Section 1705A.13.5.2** – Providing reference pointer for special inspections of SSG in Section 2410.1.2 item 9.

**Section 1705A.13.6** – Continued deletions from previous code adoption cycle.

**Section 1705A.13.8** – Continued deletions from previous code adoption cycle.

**Section 1705.13.9** - Continuing deletion of this section from previous code adoption cycle, only showing new numbering with new strikethrough.

**Section 1705A.14.1.1** – Continued deletions from previous code adoption cycle.

**Section 1705A.14.1.2** – Continued deletions from previous code adoption cycle.

**Section 1705A.14.2** – Continued deletions from previous code adoption cycle.

**Section 1705A.14.2.1** – Clarifying testing and manufacturer's certification must comply with requirements in Section 2410.1.2. Associated change sections: 1705A.13.5.2, 2410.1.2.

**Section 1705A.14.3** – Continued deletions from previous code adoption cycle.

**Section 1705A.14.4** – Continued deletions from previous code adoption cycle.

**Section 1705A.20** - Repealing 2019 IV language given 2021 IBC contains language. Associated changes sections: 110.3.12, 1705A.5.3, 1705A.5.7, 2304.10.1.2, 3102.3, 3102.6.1.1.

## **Item 8.**

### **Chapter 18A SOILS AND FOUNDATIONS.**

**Sections 1803A.1, 1803A.2, 1803A.5.4, 1805A.2, 1807A.1.1, 1807A.1.3, 1807A.1.4, 1807A.1.5, 1807.1.6 (including tables and subsections), and 1807A.2.2** – Continued deletions from the previous Code Adoption Cycle shown for the publisher's benefit.



**Section 1807A.2.5** (formerly 1807A.2.4) – DSA proposes to repeal the amendment as it is no longer required. The adopted standard ASCE 7-16, Minimum Design Loads and Associated Criteria for Buildings and Other Structures, contains provisions governing the design of freestanding cantilever walls in Section 15.6.8. OSHPD elects to retain the previous amendment language shown stricken, so the amendment will no longer be co-adopted.

Since the addition of these provisions in the current version of the adopted standard, two separate sets of design provisions have unnecessarily resulted. DSA finds the provisions in the adopted standard satisfactory to promote appropriate designs of this type of wall. The amendment was incorrectly located in the model code section for retaining walls. The amendment was also sometimes misunderstood to mean stability verification was only required for “isolated spread footings” even though most walls of this type are founded on continuous footings.

Repealing this amendment addresses these noted problems, while also providing designers the benefit of a single set of provisions governing the design of walls of this type. A reference pointer to ASCE 7 Section 15.6.8 is added for the user’s benefit.

**Sections 1808A.8, (including Table 1808A.8.1), 1808A.8.6, 1809A.7 (including table), 1809A.8, 1809A.9 (including subsections), 1809A.10, 1809A.12** – Continued deletions from the previous Code Adoption Cycle shown for the publisher’s benefit.

**Section 1809A.15** – DSA proposes editorial changes to clarify this amendment and eliminate a misunderstood interpretation.

During plan review DSA has found some design professionals have incorrectly misunderstood this provision to mean that in the Seismic Design Categories listed, grade beams are required on all projects with shallow foundations. Contrary to this misunderstanding, the intent of this provision is that when grade beams are employed by the design, they shall meet the same requirements for grade beams given in the cited section for deep foundations.

Qualification of the Seismic Design Category is removed from the provision because it is extraneous. All DSA-SS and DSA-SS/CC structures are categorized in this set of Seismic Design Categories, and the same qualification has been removed by the model code from referenced section. Additional revisions to the language prevent the misunderstanding described above.

The revised amendment benefits users by eliminating the misunderstanding described above and potentially preventing the inclusion of grade beams in designs where they are not otherwise required.

**Section 1810A.3.1.5.1** – DSA proposes an editorial change to coordinate a referenced code section with revisions to amendments made elsewhere. This change has been coordinated with OSHPD.

**Sections 1810.3.2.1.2, 1810A.3.2.4, and 1810A.3.2.4.1** – Continued deletions from the previous Code Adoption Cycle shown for the publisher’s benefit.

**Section 1810A.3.3.1.9** – DSA proposes to delete new model code language to coordinate with continuing amendments in other sections pertaining to the testing of helical piles. This change has been coordinated with OSHPD.

The new model code has added to Item #3 a qualifying clause concerning the testing of helical piles. The continuing DSA amendment in CBC Section 1810A.3.1.5.1 requires

testing to establish the capacity of helical piles in all cases. The new clause is therefore not applicable to DSA projects and is removed to maintain consistency and compatibility with the continuing amendment.

The benefit of this change is to prevent users from misunderstanding a clause that is not applicable. Removal of extraneous language generally promotes clarity through more concise regulations.

**Section 1810A.3.6** – DSA proposes to delete new model code exception for the sake of compatibility with Seismic Design Category designations applicable to DSA projects. This change has been coordinated with OSHPD.

The new model code has added an exception to the regulations concerning splices that pertains only to Seismic Design Category A and B buildings. DSA-SS and DSA-SS/CC regulations require all subject buildings be designated Seismic Design Category D or higher (refer to Sections 1617.9.3 and 1613A.2.5). The new exception is therefore not applicable to DSA projects and is removed to maintain consistency and compatibility.

The benefit of this change is to prevent users from misunderstanding an exception that is not applicable. Removal of extraneous language generally promotes clarity through more concise regulations.

**Section 1810A.3.8** – DSA proposed to delete Exceptions #1 and #2 to effectively maintain a continuation of previous amendments. This change has been coordinated with OSHPD.

The new model code has deleted the majority of regulations pertaining to precast concrete piles in deference to the requirements contained in the adopted material standard (ACI 318-19). The two exceptions proposed to be deleted here by amendment are the only portions retained in the revised model code, however, they now appear differently than in the past version of the model code on account of the other deletions.

The content of Exception #1 was contained in the previous version of the model code as an exception in Section 1810.3.8.3.2. This entire section was not permitted by DSA-SS and DSA-SS/CC in the previous Code Adoption Cycle, as it addressed buildings in Seismic Design Category C, which are not applicable to DSA projects.

The content of Exception #2 was contained in the previous version of the model code as an exception in Section 1810.3.8.3.3, Item #5. This exception alone was deleted by DSA amendment in the previous Code Adoption Cycle.

The proposed deletion of these exceptions is therefore a continuation from the previous Code Adoption Cycle and does not constitute a change in DSA amendments.

The exception DSA proposes to retain is a continuing amendment that was previously located in Section 1810A.3.8.3.4. Because this specific section has been deleted from the model code as described above, the continuing exception must be relocated to the parent section. The continuing amendment is updated to cite the location where the previous regulation is found in the new version of the adopted material standard (ACI 318-19).

**Section 1810A.3.9.4 and Section 1810A.3.9.4.1** – DSA proposes to delete model code language pertaining to Seismic Design Category designations not applicable to DSA projects. This change has been coordinated with OSHPD.

The model code section proposed for deletion pertains only to Seismic Design Category C buildings. DSA-SS and DSA-SS/CC regulations require all subject buildings be designated Seismic Design Category D or higher (refer to Sections 1617.9.3 and 1613A.2.5). These

sections are therefore not applicable to DSA projects and are removed to maintain consistency and compatibility.

The benefit of this change is to prevent users from misunderstanding regulations that are not applicable. Removal of extraneous language generally promotes clarity through more concise regulations.

**Sections 1810A.3.9.4.2.1, 1810A.3.9.4.2.2, and 1810A.3.10.4** – Continued deletions from the previous Code Adoption Cycle shown for the publisher's benefit.

**Section 1810A.3.10.4** – DSA proposes editorial changes to coordinate a referenced code section with revisions to amendments made elsewhere and to update a citation due to a change in the location of the regulations in the new version of the adopted material standard (ACI 318-19). This change has been coordinated with OSHPD.

**Section 1810A.3.11.2** – DSA proposes to delete Exception #2 of the new model code Item #3 in coordination with OSHPD and to maintain the performance required of school buildings.

The new model code has added Item #3, which includes two exceptions, to this section. The code change proposal that initiated this change did not address the rationale for nor justification of Exception #2. Due to the methodology through which this code and its adopted standards prescribe seismic forces, all conditions in which the tensile capacity of the pile is relied upon for stability may not be identified. The absence of a nominal connection as prescribed by Item #3 in combination with uplift where it is not predicted by the analysis could result in separation between the pile and foundation element (e.g., pile cap, mat foundation, etc.). Such separation could then compromise the transfer of compression and/or shear forces that may be required for the design. For these reasons, the nominal connection required by Item #3 is deemed necessary, and Exception #2 is not permitted by DSA.

The benefit of this change is to require well-connected and redundant foundation systems consistent with the expected performance of school buildings.

**Section 1810A.3.12** – DSA proposes to amend the exception of this model code section by adding a citation to a specific section of the adopted material standard in order to maintain the continued and intended meaning of this provision. This change has been coordinated with OSHPD.

The new model code has removed much of this section pertaining to grade beams in deference to the requirements contained in the adopted material standard (ACI 318-19). In so doing the model code has removed the specific citation of ACI 318 Section 18.13.3 in favor of the more general reference to ACI 318. While the general reference is satisfactory for the primary requirement it is deficient in accurately defining the excepted case. The language of the previous model code held that if the grade beam has sufficient strength to resist load effects including the overstrength factor, the requirements of ACI 318 Section 18.13.3 need not be met. The revised language of the new model code states that if the grade beam has sufficient strength to resist load effects including the overstrength factor, none of the requirements of ACI 318 need be met. The breadth of such an exception is inappropriate because ACI 318 contains numerous requirements (e.g., material, durability, quality assurance, etc.) that need to be met regardless of the load factors used in the design. The amendment restores the reference to Section 18.13.3 of ACI 318 in the exception.

The benefit of this change is to maintain the original and intended meaning of the regulation.

**Section 1810A.4.1.5** – Continued deletions from the previous Code Adoption Cycle shown for the publisher’s benefit.

**Section 1811A.3** – DSA proposes to revise the amendment item #7 for the sake of coordination with current version of the adopted standard (PTI DC35.1-14). This change has been coordinated with OSHPD.

The current version of the adopted standard (PTI DC35.1-14) defines a third category of anchors based on service life duration termed “extended temporary”, in addition to the previous definitions of “temporary” and “permanent”. The “extended temporary” designation is defined by the adopted standard as having a service life of 2 to 5 years. The revision to the amendment provides definition of corrosion requirements for anchors in this third category of “extended temporary”. The requirement for Class I corrosion protection maintains the level of protection required for anchors in service longer than two years, consistent with the previous Code Adoption Cycle.

The benefit of this change is to eliminate uncertainty that might otherwise result concerning corrosion protection requirements for “extended temporary” anchors.

**Section 1811A.4** – DSA proposes an editorial change to coordinate with model code revisions in another chapter. The previous reference to load combination requirements contained in Chapter 16A is revised to the applicable citation in adopted standard ASCE 7-16, Minimum Design Loads and Associated Criteria for Buildings and Other Structures. This change has been coordinated with OSHPD.

**Section 1812A.4.1** – DSA proposes to revise the amendment item #6 for the sake of coordination with current version of the adopted standard (PTI DC35.1-14). This proposed change is the same as proposed for Section 1811A.3. Please refer to the statement of reasons given for that section above. This change has been coordinated with OSHPD.

**Section 1812A.4.2** – DSA proposes an editorial change to coordinate with model code revisions in another chapter. The previous reference to load combination requirements contained in Chapter 16A is revised to the applicable citation in adopted standard ASCE 7-16, Minimum Design Loads and Associated Criteria for Buildings and Other Structures. This change has been coordinated with OSHPD.

**Sections 1812A.4.3 and Section 1812A.5** – DSA proposes to relocate the requirements of Section 1812A.4.3, items #2 and #3 to Section 1812A.5 items #15 and #16 for accuracy and ease of use. This change has been coordinated with OSHPD.

The provisions contained in these two items primarily describe actions required by the contractor rather the quality assurance agents (i.e., geotechnical engineer and shoring design engineer as referenced in the other two items). Due to its title “Testing of tie-back anchors”, there is a potential that provisions directed to the contractor may be missed in this location. Because Section 1812A is titled “Construction” and contains other requirements for the contractor, the relocation promotes ease and accuracy in use of these provisions by compiling the construction requirements into a common section titled accordingly.

The benefit of this change is improved organization and accuracy of use.

**Section 1812A.6** – DSA proposes an editorial change to coordinate with the distinction between “inspection” and “structural observation” defined and developed in Chapter 17A. This change has been coordinated with OSHPD.

**Section 1813A.3** – DSA proposes to delete from the amendment the phrase that contradicts a prior section. This change has been coordinated with OSHPD.

The reference to VSC as “*deep foundation elements*” contradicts the fourth sentence of Section 1813A.1, which states: “*VSCs shall not be considered a deep foundation element.*” The amendment is revised to eliminate the reference to “*deep foundation elements*” and thus the contradiction.

The benefit of this change is to eliminate a contradiction in the provisions.

**Section 1813A.5** – DSA proposes to revise the amendment with the addition of item #6. This change has been coordinated with OSHPD.

Proceeding with foundation construction prior to final verification and approval of the VSC soil improvement can result in costly and disruptive rework and delays. This revision requires the contract documents communicate the dependent relationship of the final verified report and the commencement of foundation construction to prevent these negative impacts by ensuring the contractor is adequately informed of the dependency.

## Item 9.

### Chapter 19 CONCRETE

**Section 1909.2.7.5** – DSA proposes revision to the amendment to correct the original intended meaning of the requirement.

As currently written the amendment incorrectly and unintentionally limits the requirement that the testing apparatus be outside the concrete breakout zone to adhesive anchors. This is incorrect, as the requirement applies to anchors of all types. To correct the unintended meaning, the first two clauses of the first sentence of the second paragraph are deleted. To restore and maintain the allowance for the special condition where this requirement can be waived (i.e., adhesive anchors not controlled by concrete breakout) an exception has been added.

The benefit of this change is to correct and restore the intended meaning of the provision.

**Section 1909.2.8** – DSA proposes a new amendment to facilitate the enforcement of code and industry standards where appropriate based on unique aspects of ICF construction.

**Section 1909.3.1** – DSA proposes an editorial change to this continued amendment to correct the cited section in the new version of the adopted material standard (ACI 318-19).

**Section 1909.3.6** – DSA proposes revisions to the amendment to coordinate with the new version of the adopted material standard (ACI 318-19).

The new version of ACI 318 adopted by the model code has revised the strain limit of “0.005” to “ $\epsilon_{ty}+0.003$ ” in Table 21.2.2. This change was made to accommodate higher strength steel reinforcement becoming more common in construction. To remain consistent with this change in the adopted material standard, the same term used in amendment footnote #2 is revised accordingly.

The benefit of this change is compatibility with the adopted material standard.

**Section 1909.3.7** – DSA proposes a new amendment to coordinate with revisions made to the model code.

The new version of the model code has repealed all shotcrete requirements in favor of those contained in the new version of the adopted material standard (ACI 318-19). This amendment continues the previous model code requirement of former section 1908.4.4 prohibiting shotcrete applied to spirally tied columns that is not found in ACI 318.

This amendment does not introduce a new requirement. Continuation of this regulation is deemed important for its historical contribution to the construction quality of spirally tied columns.

**Section 1909.3.8** – DSA proposes a new amendment to coordinate with revisions made to the model code.

The model code has repealed all shotcrete requirements in favor of those contained in the new version of the adopted material standard (ACI 318-19). This amendment does not introduce new requirements, but effectively relocates continuing amendments that were previously associated with model code shotcrete provisions.

The amendments to sections (l) and (m) are a continuation of the amendment previously located in Section 1909.4.5. Because the amendment is now associated with the adopted material standard rather than the model code the location has changed.

The amendment to section (n) continues the previous model code requirement of former section 1908.8 that is not found in ACI 318.

The amendment in new section (q) is a continuation of the amendment previously located in Section 1909.4.4. Because the amendment is now associated with the adopted material standard rather than the model code the location has changed.

The benefit of the change is to align the amendments with model code revisions.

**Section 1909.3.9** – DSA proposes an editorial renumbering change. Continued amendment previously numbered Section 1909.3.7 is renumbered Section 1909.3.9 to maintain the numerical order of the sections of the adopted material standard (ACI 318-19) being modified.

**Section 1909.4.1** – DSA proposes revisions to the amendment to coordinate with revisions made to the model code.

The model code has repealed all shotcrete requirements in favor of those contained in the new version of the adopted material standard (ACI 318-19).

A reference to ACI 506R is added to consolidate associated requirements into a single section and facilitate deletion of Section 1909.4.8 in alignment with the model code move to deferring shotcrete requirements to ACI 318.

In selected conditions where certain prescriptive requirements can be exceeded based on qualification by a successful shotcrete mockup panel, the language of ACI 318 does not make the exception contingent upon the “approval of the building official” as the prior model code language did. A third sentence is therefore added to this amendment to continue the previous code requirement of approval by the building official.

Model code Section 1901.7.1 has been added from the previous Code Adoption Cycle, including Exception #2, which omits shotcrete from the requirements of the section. A fourth sentence is added to this amendment to avoid the model code exception language being misunderstood to mean tolerances are not required for shotcrete construction. Section 3.8.1 of ACI 506.2-13 requires shotcrete to meet dimensional tolerances of the

contract documents. Section 3.8 of ACI 506R-16 further confirms that defined tolerances for shotcrete construction are appropriate.

The benefit of this change is to align the amendments with model code revisions.

**Section 1909.4.2** – DSA proposes revisions to the amendment to coordinate with both revisions made to the model code and the requirements of the new adopted material standard (ACI 318-19).

The section title is revised to better capture the content of the sentence relocated from Section 1909.4.8 where it occurred under an inaccurate title. The sentence concerning special inspection and testing has been relocated from Section 1909.4.8 to consolidate associated requirements into a single section and facilitate deletion of Section 1909.4.8 in alignment with the model code move to deferring shotcrete requirements to ACI 318. The referenced section in Chapter 17A has also been updated in coordination with changes made to that chapter.

Amendment language is revised to replace “test panel” with “shotcrete mockup panel” for coordination with the definition of these terms in the adopted material standard. Preconstruction test requirements have been relocated to Section 1705A.3.9.2 for consistency with other special inspection and test requirements, including the continued requirement for prior approval of the enforcement agency.

The benefit of the change is to align the amendments with model code revisions.

**Section 1909.4.3** – DSA proposes to repeal amendment in coordination with the adopted material standard (ACI 318-19).

Section 26.4.1.2 of ACI 318 requires grading in accordance with ASTM C1436. Table 1 of ASTM C1436 contains the same grading requirements as Table 1.1.1 of ACI 506R.

The benefit of this change is simplification and clarity through more concise regulations.

**Sections 1909.4.4 and 1909.4.5** – DSA proposes to relocate the content of these amendments to Section 1909.3.8 as described there. Please refer to the statement of reasons given in that section above.

The benefit of the change is to align the amendments with model code revisions.

**Section 1909.4.6** – DSA proposes to repeal amendment in coordination with the adopted material standard (ACI 318-19).

Section 26.5.3.2 of ACI 318 requires the temperature be maintained above 50 degrees through the curing period for all concrete.

The benefit of this change is simplification and clarity through more concise regulations.

**Section 1909.4.7** – DSA proposes an editorial renumbering change. Repealed amendments cause amendment previously numbered Section 1909.4.7 to be renumbered Section 1909.4.3.

**Section 1909.4.8** – DSA proposes to relocate the content of this amendment to Sections 1909.4.1 and 1909.4.2 as described there. Please refer to the statement of reasons given in those sections above.

**Item 10.**  
**Chapter 19A CONCRETE**

**Section 1901A.7.1** – DSA proposes an amendment to clarify the new language added to the model code.

This section has been added to the model code since the previous Code Adoption Cycle. The new language added to the model code in Exception #2 could be misunderstood to mean tolerances are not required for shotcrete construction. The continued amendment in Section 1908A.1 requires shotcrete construction to comply with ACI 506.2. Section 3.8.1 of ACI 506.2-13 requires shotcrete to meet dimensional tolerances of the contract documents. Section 3.8 of ACI 506R-16 further confirms that defined tolerances for shotcrete construction are appropriate. In coordination with these adopted standards, the new amendment prevents the potential misunderstanding by clarifying that shotcrete construction must meet the tolerances established by the design professionals on the construction documents.

The benefit of this change is to prevent a potential misunderstanding.

**Section 1903A.2** – DSA proposes an editorial change to clarify the continuing citation.

**Section 1903A.4** – DSA proposes a new amendment to facilitate the enforcement of code and industry standards where appropriate based on unique aspects of ICF construction.

**Section 1903A.8** – DSA proposes an editorial change to this continued amendment to correct the cited section in the new version of the adopted material standard (ACI 318-19). This change has been coordinated with OSHPD.

**Section 1904A.1** – Continued deletions from the previous Code Adoption Cycle shown for the publisher's benefit.

**Section 1905A.1** – DSA proposes an editorial change to coordinate a referenced code section with revisions to the amendments that follow. This change has been coordinated with OSHPD.

**Sections 1905.1.1, 1905.1.2, 1905.1.3, 1905.1.4, 1905.1.5, 1905.1.6, 1905.1.7** – Continued deletions from the previous Code Adoption Cycle shown for the publisher's benefit.

**Section 1905A.1.3** – DSA proposes revisions to the amendment to facilitate more practical design of foundation reinforcement in alignment with the adopted material standard. This change has been coordinated with OSHPD.

The amendment is revised to define a second condition whereby the provision contained in the adopted material standard (ACI 318-19) can be applied in members resisting seismic loads. Section 1617A.1.18 of this code results in the design of many foundation members for load combinations that include the overstrength factor. The overstrength factor is intended to produce a design that will remain elastic in the design basis earthquake and the provision of the adopted material standard requires a strength approximately 33% larger than that.

In this context the additional steel resulting from the remaining minimum reinforcement requirements of the adopted standard is not deemed beneficial to a foundation element not expected to see force levels that would otherwise require it. The sizes of foundation members are frequently driven by soil properties, which can result in designs with large quantities of reinforcement if only the geometry based minimum steel requirements are



permitted. The strength-based minimum steel limit is thus appropriate and beneficial to the design of foundation members based on load combinations with the overstrength factor, where the same structural performance can be expected.

The benefit of this change is to facilitate more practical design of foundation reinforcement.

**Section 1905A.1.9** – DSA proposes an editorial renumbering change. Continued amendment previously numbered Section 1905A.1.10 is renumbered to Section 1905A.1.9 to maintain the numerical order of the sections in the new version of the adopted material standard (ACI 318-19) being modified.

**Section 1905A.1.10** – DSA proposes an editorial renumbering change. Continued amendment previously numbered Section 1905A.1.11 is renumbered to Section 1905A.1.10 to maintain the numerical order of the sections in the adopted material standard (ACI 318) being modified.

**Section 1905A.1.11** – DSA proposes an editorial renumbering change. Continued amendment previously numbered Section 1905A.1.12 is renumbered to Section 1905A.1.11 to maintain the numerical order of the sections in the new version of the adopted material standard (ACI 318-19) being modified.

**Section 1905A.1.12** – DSA proposes an editorial renumbering change and revisions to the coordinate the amendment with revisions to the new version of the adopted material standard (ACI 318-19). This change has been coordinated with OSHPD.

Continued amendment previously numbered Section 1905A.1.9 is renumbered to Section 1905A.1.12 to maintain the numerical order of the sections in the new version of ACI 318 being modified.

The amendment is continued from the previous Code Adoption Cycle with the same regulatory effect; however, changes to the presentation of the amendment are required due to changes made to the table and section of ACI 318 being modified. The minimum concrete strength remains 3,000 psi, as does the requirement that specified strengths over 8,000 psi require prior approval of the design method and acceptance criteria.

The minimum compressive strength for shotcrete applications has been relocated to this amendment from its previous location as an amendment to Section 1908A.1. This consolidates compressive strength requirements into a common amendment for clarity.

The benefit of the change is compatibility with the adopted material standard.

**Section 1905A.1.13** – DSA proposes revisions to the amendment to coordinate with the new version of the adopted material standard (ACI 318-19). This change has been coordinated with OSHPD.

The new version of ACI 318 adopted by the model code has revised the strain limit of “0.005” to “ $\epsilon_{ty}+0.003$ ” in Table 21.2.2. This change was made to accommodate higher strength steel reinforcement becoming more common in construction. To remain consistent with this change in the adopted material standard, the same term used in amendment footnote #2 is revised accordingly.

The benefit of this change is compatibility with the adopted material standard.

**Section 1905A.1.15** – DSA proposes a new amendment to coordinate with revisions made to the model code. This change has been coordinated with OSHPD.

The new version of the model code has repealed all shotcrete requirements in favor of those contained in the new version of the adopted material standard (ACI 318-19). This amendment continues the previous model code requirement of former section 1908.4.4 prohibiting shotcrete applied to spirally tied columns that is not found in ACI 318.

This amendment does not introduce a new requirement. Continuation of this regulation is deemed important for its historical contribution to the construction quality of spirally tied columns.

**Section 1905A.1.16** – DSA proposes a new amendment to coordinate with revisions made to the model code. This change has been coordinated with OSHPD.

The model code has repealed all shotcrete requirements in favor of those contained in the new version of the adopted material standard (ACI 318-19). This amendment does not introduce new requirements, but effectively relocates continuing amendments that were previously associated with model code shotcrete provisions.

The amendments to sections (l) and (m) are a continuation of the amendment previously located in Section 1908A.7. Because the amendment is now associated with the adopted material standard rather than the model code the location has changed.

The amendment to section (n) continues the previous model code requirement of former section 1908A.8 that is not found in ACI 318.

The amendment in new section (q) is a continuation of the amendment previously located in Section 1908A.1. Because the amendment is now associated with the adopted material standard rather than the model code the location has changed.

The benefit of the change is to align the amendments with model code revisions.

**Section 1905A.1.17** – DSA proposes an editorial renumbering change. Continued amendment previously numbered Section 1905A.1.15 is renumbered to Section 1905A.1.17 to maintain the numerical order of the sections in the new version of the adopted material standard (ACI 318-19) being modified.

**Section 1908A.1** – DSA proposes revisions to the amendment to coordinate with revisions made to the model code. This change has been coordinated with OSHPD.

The model code has repealed all shotcrete requirements in favor of those contained in the new version of the adopted material standard (ACI 318-19).

The amendment requiring the minimum specified strength of concrete has been relocated to Section 1905A.1.11 for consistency with the requirements of ACI 318.

In selected conditions where certain prescriptive requirements can be exceeded based on qualification by a successful shotcrete mockup panel, the language of ACI 318 does not make the exception contingent upon the “approval of the building official” as the prior model code language did. A sentence is therefore added to this amendment to continue the previous code requirement of approval by the building official.

The benefit of the change is to align the amendments with model code revisions.

**Section 1908A.2** – DSA proposes revisions to the amendment to coordinate with revisions made to the model code. This change has been coordinated with OSHPD.

The model code has repealed all shotcrete requirements in favor of those contained in the new version of the adopted material standard (ACI 318-19).

This amendment provides a reference pointer to test and inspection requirements, including preconstruction tests, in Chapter 17A. The amendment is, in part, a continuation of the amendment previously in Section 1908A.5, which cannot remain in that location due to its removal from the model code. The amendment is also a coordination with the relocation of these requirements to Section 1705A.3.9.2 for consistency with other special inspection and test requirements.

The benefit of the change is to align the amendments with model code revisions.

**Section 1908A.3** – DSA proposes an editorial renumbering change. Preceding repealed model code sections cause the amendment previously numbered Section 1908A.11 to be renumbered Section 1908A.3. This change has been coordinated with OSHPD.

**Section 1908A.12** – DSA proposes to repeal amendment based on equivalent requirements being consolidated into Sections 1908A.1 (placement in accordance with ACI 506R and ACI 506.2) and 1908A.2 (special inspection and testing in accordance with Chapter 17A) above. This change has been coordinated with OSHPD.

**Section 1910A.5.5** – DSA proposes revision to the amendment to correct the original intended meaning of the requirement. This change has been coordinated with OSHPD.

As currently written the amendment incorrectly and unintentionally limits the requirement that the testing apparatus be outside the concrete breakout zone to adhesive anchors. This is incorrect, as the requirement applies to anchors of all types. To correct the unintended meaning, the first two clauses of the first sentence of the second paragraph are deleted. To restore and maintain the allowance for the special condition where this requirement can be waived (i.e., adhesive anchors not controlled by concrete breakout) an exception has been added.

The benefit of this change is to correct and restore the intended meaning of the provision.

## **Item 11.**

### **Chapter 20 ALUMINUM**

Adopt Chapter 20 of the 2021 IBC. All existing California amendments that are not revised below shall continue without change.

## **Item 12.**

### **Chapter 21 MASONRY**

**Section 2115.1.1** – Long-standing existing amendment prohibiting certain types of masonry design methods, systems and materials. Proposal simply adds reference to TMS 402/602 in order to clarify that although the noted systems are mentioned in TMS, they are not adopted by DSA (existing amendment aligns 2101A.1.3).

**Section 2115.3** – Revise amendment to prohibit use of air-entraining admixtures in grout, in coordination with public comment from the Masonry Institute of America (MIA) and Concrete Masonry Association of California and Nevada (CMACN). ASTM C476-19, Section 3.1.4.1 permits air entraining admixtures only within conformance to ASTM C260 and provides Note 3 which states "If the grout is to be used to bond masonry units to reinforcing bars, the use of air-entraining materials or air-entraining admixtures is not recommended." Associated change section: 2103A.5

**Section 2115.8.1** - Modifying associated section in TMS 402/602 (Article 1.4B Compressive Strength Determination) with existing amendment language regarding mortar

and grout test requirements in coordination with public comment received from MIA and CMACN. No net change in regulatory effect. Associated change section: 2105A.3.

**Section 2115.8.2** – Lower the minimum threshold for masonry compressive strength from 2000 psi to 1500 psi where core tests are not required for non-bearing non-shear masonry walls. Associated change sections: 2105A.2, 2105A.4, 2107A.6, 2108A.4

**Section 2115.10.1** - Add title notation to classify existing amendment language as a modification to TMS 402, Section 8.3.4.4 Walls. Associated change section: 2107A.4.

### **Item 13.**

## **Chapter 21A MASONRY**

**Section 2101A.1.3** – Long-standing existing amendment prohibiting certain types of masonry design methods, systems and materials. Proposal simply adds reference to TMS 402/602 reference standard in order to clarify that although the noted systems are mentioned in TMS, they are not adopted by DSA (existing amendment aligns with OSHPD).

**Section 2101A.2** – Continued deletions from previous code adoption cycle.

**Section 2103A.1** – Continued deletions from previous code adoption cycle. Relocate existing amendment language from 2104A.1 Construction to this section 2103A Masonry Construction Materials; the relocated language notes that architectural cast stone construction is an alternative system and this information makes more sense to be located here.

**Section 2103A.4** – Proposed language clarifies that “unidentified reinforcement”, for purposes of this section, is “bar reinforcement without mill certification”.

**Section 2103A.5** – Revise amendment to prohibit use of air-entraining admixtures in grout, in coordination with public comment from the Masonry Institute of America (MIA) and Concrete Masonry Association of California and Nevada (CMACN). ASTM C476-19, Section 3.1.4.1 permits air entraining admixtures only within conformance to ASTM C260 and provides Note 3 which states "If the grout is to be used to bond masonry units to reinforcing bars, the use of air-entraining materials or air-entraining admixtures is not recommended." Associated change section: 2115.3

**Section 2104A.1** – Relocate existing amendment language noting that architectural cast stone construction is an alternative system, from this section, to section 2103A.1, as it makes more sense to be located in an area addressing selection of materials rather than in an area addressing construction. No change in regulatory effect.

**Section 2104A.1.3** – Add “Reinforced” to the Section title in order to clarify this section applies to reinforced grouted masonry, not for grouted masonry without reinforcement.

Relocate and adjust existing amendment language in Section 2104A.1.3.1 through 2104A.1.3.1.2.3, renumbering as 2104A.1.3.1 through 2104A.1.3.11.2. The relocations are proposed in order to arrange the language into a chronological sequence of construction; the adjustments are proposed in order to remove duplication of requirements and to provide pointers to, and align with, language of TMS 402/602 where feasible.

What is currently several un-numbered paragraphs is proposed to be rearranged and subsection numbers assigned in order to provide better clarity in navigating the provisions; using relocated existing amendment text and revised text modifying associated sections in TMS 402/602.

While the proposed relocations and adjustments appear extensive, they result in no net change in regulatory effect. They have been initiated in the pursuit of removing duplication and providing better consistency with the national referenced standard, TMS 402/602, in coordination with public comment received from MIA and CMACN.

**Section 2105A.2** – Minimum specified compressive strength  $f'_m$  defined as 1500 psi to align with minimum permitted by TMS 402, in coordination with public comment received from MIA and CMACN. Revised pointers to repealed amendments for unit strength and prism testing to reference the appropriate sections in TMS 602. Associated change sections: 2105A.4, 2105A.5, 2105A.6, 2107A.6, 2108A.4.

**Section 2105A.3** – Repealing first sentence of existing amendment and modifying associated section in TMS 402/602 (Article 1.4B Compressive Strength Determination) with existing amendment language regarding mortar and grout test requirements in coordination with public comment received from MIA and CMACN. No net change in regulatory effect. Associated change section: 2215.8.1

**Section 2105A.4** – Lower the minimum threshold for masonry compressive strength from 2000 psi to 1500 psi where core tests are not required for non-bearing non-shear masonry walls. Associated change sections: 2115.8.2, 2105A.2, 2107A.6, 2108A.4

**Section 2105A.5** – Repealing language that is redundant with the reference standard.

**Section 2105A.6** – Repealing language that is redundant with the reference standard.

**Sections 2106A.1.1, 2106A.1.2, 2106A.1.3** contain relocated and revised text from previous amendment section 2106A.1.1 modifying associated sections in TMS 402/602 in coordination with public comment received from MIA and CMACN. No net change in regulatory effect.

**Section 2107A.4** – Add title notation to classify existing amendment language as a modification to TMS 402, Section 8.3.4.4 Walls. Associated change section: 2115.10.1.

**Section 2107A.6** – Create new subsection within Section 2107A Allowable Stress Design in order to specify minimum specified compressive strength,  $f'_m$  shall be equal to or exceed 1500 psi, and shall not exceed 3000 psi for concrete masonry nor 4500 psi for clay masonry. This is a relocation of min/max compressive strength requirements from 2105A.2. Minimum specified compressive strength has been reduced to be consistent with TMS 402 Section 9.1.1.1 and maximum strength for clay masonry is modified in response to public comments received from the Masonry Institute of America. Maximum strength of concrete masonry remains the same as originally specified in Section 2105A.2. Section 2105A addresses Quality Assurance, and the requirement for minimum/maximum specified compressive strengths is better suited to be located within this “design” related section 2107A. Associated change sections: 2105A.2, 2108A.4

**Section 2108A.1** – Continued deletions from previous code adoption cycle.

**Section 2108A.4** – Create new subsection within Section 2108A Strength Design of Masonry in order to specify minimum specified compressive strength,  $f'_m$  shall be equal to or exceed 1500 psi, and shall not exceed 3000 psi for concrete masonry nor 4500 psi for clay masonry. This is a relocation of min/max compressive strength requirements from 2105A.2. Minimum specified compressive strength has been reduced to be consistent with TMS 402 Section 9.1.1.1 and maximum strength for clay masonry is modified in response to public comments received from MIA and CMACN. Maximum strength of concrete masonry remains the same as originally specified in Section 2105A.2. Section

2105A addresses Quality Assurance, and the requirement for minimum/maximum specified compressive strengths is better suited to be located within this “design” related section 2108A. Associated change sections: 2105A.2, 2107A.6.

**Item 14.**

**Chapter 22 STEEL**

**Section 2212.5.3** – Editorial correction.

**Section 2212.6.1** – Relocating requirements from Section 2212.6.1 to 1705A.2.6.  
Associated change sections: 2213A.1, 1705A.2.6

**Section 2212.6.2** – Relocating requirements from Section 2212.6.2 to 1705A.2.5.  
Associated change sections: 2213A.2, 1705A.2.5

**Item 15.**

**Chapter 22A STEEL**

**Section 2205A.2.1.1** – Repeal model code language added in 2021 IBC since Seismic Design Category B and C are not permitted by DSA-SS.

**Section 2205A.2.1.2** – Continued deletion from previous code adoption cycle.

**Section 2205A.2.2** – Continued deletions from previous code adoption cycle.

**Section 2207A.4** – Continued deletion from previous code adoption cycle.

**Section 2210A.1** – This item was previously included as a DSA-SS amendment in the Express Terms for the 2018 Triennial Code Adoption Cycle but was missed in the printed version. It is now being added as an editorial correction.

**Section 2210A.2** – Continued deletion from previous code adoption cycle.

**Section 2211A.1.1.1** – Continued deletions from previous code adoption cycle.

**Section 2211A.1.2** – Continued deletion from previous code adoption cycle.

**Section 2211A.1.3** – This item is an existing amendment that was missed in the printed version of the 2019 CBC and is now being added back into the 2022 CBC.

**Section 2212A.1.2** – Editorial correction.

**Section 2212A.2.1** – Editorial correction.

**Section 2213A.1** – Relocating requirements from Section 2213A.1 to 1705A.2.6.  
Associated change sections: 2212.6.1, 1705A.2.6

**Section 2213A.2** – Relocating requirements from Section 2213A.2 to 1705A.2.5.  
Associated change sections: 2212.6.2, 1705A.2.5

**Item 16.**

**Chapter 23 WOOD**

**Section 2303.1.3.1** – Providing reference pointer for special inspection requirements.

**Section 2304.10.2.1** – Addition of Section 2304.10.1 regarding connection fire resistance rating by 2021 IBC resulted in subsequent numbering change in model code section for fastener requirements from 2304.1 to 2304.2. The existing amendment language noting additional requirements for fasteners continues unchanged, but the section must be renumbered from 2304.10.1.1 to 2304.10.2.1

**Section 2304.10.1.2** - Repeal 2304.10.1.2 from 2019 IV cycle and adopt new 2021 IBC Section 2304.10.1 regarding connection fire resistance which has the same language. Associated change sections: 1705A.5.7, 1705A.20, 2304.10.1.2, 3102.3, 3102.6.1.1

#### **Item 17.**

#### **Chapter 24 GLASS AND GLAZING, Section 2410.1**

**Section 2410.1.2** – DSA proposes an editorial change of the itemized list from alphabetic characters to numeric characters for consistency with other similar itemized lists in Sections 2410 and 2411. This change has been coordinated with OSHPD.

**Section 2410.1.2, Item #1 (formerly item “a”)** – DSA proposes revisions to the amendment for clarity and to provide an alternate compliance option for certain systems in risk category I, II, and III buildings. This change has been coordinated with OSHPD.

The reference to ASCE 7 Section 13.5.9.2 is removed for clarity, as the language contained therein contradicts the requirements of Item #1 by allowing engineering analysis in lieu of testing. ASCE 7 Section 13.5.9.2 does not include any testing requirements as implied. Its removal eliminates the misunderstanding that sometimes results from this contradiction without effectively changing the regulations. The second sentence from Item #6 (formerly Item “f”) is relocated to this section because it is a universal requirement of the testing and not specific only to the structural sealant product.

An exception is added to reduce testing requirements for Risk Category I, II, and III buildings where the prevention of glass fallout is not dependent on the structural sealant in two sided configurations. The original provisions were authored with primary consideration of multi-story Risk Category IV buildings. The introduction of this exception acknowledges a broader range on building types and systems and allows the use of engineering analysis in lieu of testing when specifically deemed appropriate.

The benefit of these changes is improved clarity and expanded compliance options for certain systems in Risk Category I, II, and III buildings.

**Section 2410.1.2, Item #6 (formerly item “f”)** – DSA proposes to relocate the second sentence to Item #1 (formerly Item “a”) for the reason noted above. This change has been coordinated with OSHPD.

**Section 2410.1.2, Item #9 (formerly item “i”)** – DSA proposes a revision to the amendment through the addition of a sentence to clarify the nature of special inspections for SSG.

**Section 2410.1.3** – DSA proposes an editorial change to correct the ASTM document number and include additional triggering events or periods for which inspections ought to occur that were implied in the previous statement of the section.

**Section 2410.1.4** – DSA proposes clarifying language regarding the nature of information provided on the construction documents, and a reference pointer as a new item to ensure owners are aware of expectations specified in 2410.1.3.

#### **Item 18.**

#### **Chapter 25 GYPSUM BOARD, GYPSUM PANEL PRODUCTS AND PLASTER**

Adopt Chapter 25 of the 2021 IBC as amended below. All existing California amendments that are not revised below shall continue without change.

**Item 19.**  
**Chapter 26 PLASTIC**

Adopt Chapter 26 of the 2021 IBC as amended below. All existing California amendments that are not revised below shall continue without change.

**Item 20.**  
**Chapter 30 ELEVATORS AND CONVEYING SYSTEMS**

Adopt Chapter 30 of the 2021 IBC as amended below. All existing California amendments that are not revised below shall continue without change.

**Item 21.**  
**Chapter 31 SPECIAL CONSTRUCTION**

**Section 3102.3** – Repeal amendment added in 2019 Intervening Code Adoption Cycle and adopt 2021 IBC Section 3102.3 which has the same language. Associated change sections: 1705A.5.3, 1705A.5.7, 1705A.20, 2304.10.1.2, 3102.6.1.1.

**Section 3102.6.1.1** – Repeal amendment added in 2019 Intervening Code Adoption Cycle and adopt 2021 IBC Section 3102.6.1.1 which has the same language. Associated change sections: 1705A.5.3, 1705A.5.7, 1705A.20, 2304.10.1.2, 3102.3.

**Section 3111.1.1** – Editorial change and updated pointer to relocated amendment since the numbering was changed from the last model code version.

**Section 3111.3** – Repeal amendment for reference pointer to Section 1512 since Section 1512 was deleted from model code.

**Section 3115.1** – New amendment language to disallow exceptions since Chapter 14 of the CEBC is not adopted by DSA.

**Section 3115.6** – New amendment language to disallow exception since Chapter 15 is required by DSA.

**Section 3115.8.2** – New amendment language to provide clearer direction for which welds and connections this applies and what is meant by “equal to or greater than” (strength, size, or other). This amendment clarifies that it is the “strength” of the welds and connections that should be assessed for equivalency. The proposed language also clarifies that new welds shall comply with minimum design standards as already specified elsewhere in the CBC.

**Section 3115.8.4.1** – New amendment to repeal model code language since material properties shall be provided on the manufacturer’s original design/fabrication drawings for the container as enforced by DSA.

**Section 3115.8.4.2** – New amendment language to include direct reference to ASCE 7 to capture the seismic design provisions regardless of which of the design methodologies from this section is used, such as combinations of seismic force-resisting systems. Additionally, new amendment language is provided in Item 1 to disallow intermediate light-frame bearing-wall systems with shear panels of all other materials as a seismic force-resisting system since this system is not permitted by DSA as enforced in CBC Sections 1617.11.3 and 1617A.1.4.

**Section 3115.8.5** – New amendment language to disallow simplified structural design method since the allowable shear values derived from ISO 1496-1 for this method are not established on the basis of cyclic test results.



**Section 3115.9** – New amendment language to provide clearer direction for selection of containers, general condition assessment, submittal requirements, structural integrity verification, inspection and testing, and additional seismic design requirements as enforced by DSA.

**Item 22.**

**Chapter 32 ENCROACHMENTS INTO THE PUBLIC RIGHT-OF-WAY**

Adopt Chapter 32 of the 2021 IBC as amended below. All existing California amendments that are not revised below shall continue without change.

**Item 23.**

**Chapter 35 REFERENCED STANDARDS**

**ACI 355.2—19** – Amendment is updating reference standard.

**ANSI/AISC 358 —16/s1—18/s2—20** – Amendment is adopting Supplement 2, in addition to Supplement 1. Editorial correction.

**ANSI/APA PRG 320-19** – Repeal added reference standard from 2019 IV cycle and adopt 2021 IBC reference standards which are the same or updated. Editorial correction.  
Associated changes sections: 110.3.12, 1705A.5.3, 1705A.5.7, 2304.10.1.2, 3102.3, 3102.6.1.1.

**ASCE/SEI 7-16** – Amendment is adopting Supplements 2 and 3, in addition to Supplement 1. Editorial correction.

**ASCE/SEI 41-17** – Editorial correction.

**ASCE/SEI 49-12** – Repeal added reference standard from 2019 CBC and adopt 2021 IBC reference standards which are the same or updated.

**ASTM A153/153M—2016A** – 2021 IBC now adopts this edition of this standard. Editorial correction.

**ASTM B695—2004(2016)** – 2021 IBC now adopts this edition of this standard. Editorial correction.

**ASTM C94/C94M—2017A** – 2021 IBC now adopts this edition of this standard.

**ASTM C595/C595M—18** – 2021 IBC now adopts this edition of this standard.

**ASTM C618—19** – Amendment is updating reference standard. Editorial correction.

**ASTM C635/C635M—2017** – 2021 IBC now adopts this edition of this standard.

**ASTM C618—19** – Amendment is updating reference standard.

**ASTM C989—18a** – 2021 IBC now adopts this edition of this standard.

**ASTM C1019—16** – Editorial correction. Editorial correction.

**ASTM C1157/C1157M—17** – 2021 IBC now adopts this edition of this standard.

**ASTM C1249—18** – Amendment is updating reference standard.

**ASTM C1249—18** – Amendment is updating reference standard.

**ASTM C1392—20** – 2021 IBC now adopts this edition of this standard.

**ASTM C1394—20** – 2021 IBC now adopts this edition of this standard.

**ASTM D1586—20** – Amendment is updating reference standard.

**ASTM D3498-03(2011)** – Repeal added reference standard from 2019 IV cycle and adopt 2021 IBC reference standards which are the same or updated. Editorial correction. Associated changes sections: 110.3.12, 1705A.5.3, 1705A.5.7, 2304.10.1.2, 3102.3, 3102.6.1.1.

**ASTM D5778–20** – Amendment is updating reference standard.

**ASTM E580/E580M–17** – Editorial correction.

**ASTM E605/E605M–93(2015)e1** – Editorial correction.

**ASTM E662–19** – Amendment is updating reference standard.

**AWPA U1–20** – Amendment is updating reference standard. Editorial correction.

**AWS D1.1/D1.1M–15** – Editorial correction.

**AWS D1.2/D1.2M–14** – Amendment is updating reference standard.

**AWS D1.4/D1.4M–2018** – Editorial correction.

**AWS D1.8/D1.8M–2016** – Editorial correction.

**AWS QC1–2016** – Editorial correction.

**FM 1950–2016** – Editorial correction.

**ICC-ES AC125–21** – Amendment is updating reference standard. Editorial correction.

**ICC-ES AC156–21** – Amendment is updating reference standard. Editorial correction.

**ICC-ES AC178–21** – Amendment is updating reference standard. Editorial correction.

**ICC-ES AC358–21** – Amendment is updating reference standard. Editorial correction.

**TMS 602–2016** – Editorial correction.

**UL 857–13** – Editorial correction.

**UL 61730-1–2017** – Editorial correction.

**UL 61730-2–2017** – Editorial correction.

## **TECHNICAL, THEORETICAL, AND EMPIRICAL STUDY, REPORT, OR SIMILAR DOCUMENTS**

Government Code Section 11346.2(b)(3) requires an identification of each technical, theoretical, and empirical study, report, or similar document, if any, upon which the agency relies in proposing the regulation(s).

2021 IBC: International Building Code.

2021 IEBC: International Existing Building Code.

ASCE 7-16: Minimum Design Loads and Associated Criteria for Buildings and Other structures with Supplement No. 1

ASCE 24-14: Flood Resistant Design and Construction.

ASCE 41-17: Seismic Evaluation and Retrofit of Existing Buildings

ACI 318-19: Building Code Requirements for Structural Concrete and Commentary.

AISC 360-16: Specification for Structural Steel Buildings

AISC 341-16: Seismic Provisions for Structural Steel Buildings.

AISC 358-16: Prequalified Connections for Special and Intermediate Steel Moment Frames for Seismic Applications including Supplement No. 1.

TMS 402-16: Building Code Requirements for Masonry Structures.

TMS 602-16: Specification for Masonry Structures.  
AWC NDS-18: National Design Specification (NDS) for Wood Construction.  
AWC SDPWS-2021: Special Design Provisions for Wind and Seismic.

### **STATEMENT OF JUSTIFICATION FOR PRESCRIPTIVE STANDARDS**

Government Code Section 11346.2(b)(1) requires a statement of the reasons why an agency believes any mandates for specific technologies or equipment or prescriptive standards are required.

Health and Safety Code section 18941 requires consistency with state and nationally recognized standards for building construction in view of the use and occupancy of each structure to preserve and protect the public health and safety.

### **CONSIDERATION OF REASONABLE ALTERNATIVES**

Government Code Section 11346.2(b)(4)(A) requires a description of reasonable alternatives to the regulation and the agency's reasons for rejecting those alternatives. In the case of a regulation that would mandate the use of specific technologies or equipment or prescribe specific action or procedures, the imposition of performance standards shall be considered as an alternate. It is not the intent of this paragraph to require the agency to artificially construct alternatives or describe unreasonable alternatives.

DSA did not identify nor determine any reasonable alternatives to these regulations. The alternative to these proposed regulations would be to leave regulations as they are which will be inconsistent with Health and Safety Code section 18941 requirements.

### **REASONABLE ALTERNATIVES THE AGENCY HAS IDENTIFIED THAT WOULD LESSEN ANY ADVERSE IMPACT ON SMALL BUSINESS**

Government Code Section 11346.2(b)(4)(B) requires a description of any reasonable alternatives that have been identified or that have otherwise been identified and brought to the attention of the agency that would lessen any adverse impact on small business.

There will be no adverse impact on small business.

### **FACTS, EVIDENCE, DOCUMENTS, TESTIMONY, OR OTHER EVIDENCE OF NO SIGNIFICANT ADVERSE IMPACT ON BUSINESS**

Government Code Section 11346.2(b)(5)(A) requires the facts, evidence, documents, testimony, or other evidence on which the agency relies to support an initial determination that the action will not have a significant adverse economic impact on business.

The regulations proposed will have no overall cost impact on business, since they are equivalent to current requirements in the Code. Technical updates to the national standards for structural design are incorporated, mostly by reference.

### **ASSESSMENT OF EFFECT OF REGULATIONS UPON JOBS AND BUSINESS EXPANSION, ELIMINATION OR CREATION**

Government Code Sections 11346.3(b)(1) and 11346.5(a)(10)  
Division of the State Architect has assessed whether or not and to what extent this proposal will affect the following:

- A.** The creation or elimination of jobs within the State of California.  
The Division of the State Architect did not identify any amended regulation that would lead to the creation or elimination of jobs.

- B.** The creation of new businesses or the elimination of existing businesses within the State of California.

The Division of the State Architect did not identify any amended regulation that would lead to creation of new business or elimination of existing businesses.

- C.** The expansion of businesses currently doing business within the State of California.

The Division of the State Architect did not identify any amended regulation that would lead to the expansion of businesses currently doing business with the State of California.

- D.** The benefits of the regulation to the health and welfare of California residents, worker safety, and the state's environment.

The Division of the State Architect did not identify any amended regulation that would have a significant positive or adverse impact. These regulations will promote safer building design by the adoption of current national model codes, so that they will remain safe following major earthquake as required by statute.

### **ESTIMATED COST OF COMPLIANCE, ESTIMATED POTENTIAL BENEFITS, AND RELATED ASSUMPTIONS USED FOR BUILDING STANDARDS**

Government Code Section 11346.2(b)(5)(B)(i) states if a proposed regulation is a building standard, the initial statement of reasons shall include the estimated cost of compliance, the estimated potential benefits, and the related assumptions used to determine the estimates.

The proposed changes to the regulations are editorial to provide clarity, and do not result in an increase to the cost of compliance in the application and implementation of the California Building Code, since they are equivalent to current requirements. Technical updates to the national standards for structural design are incorporated, mostly by reference.

### **DUPLICATION OR CONFLICTS WITH FEDERAL REGULATIONS**

Government Code Section 11346.2(b)(6) requires a department, board, or commission within the Environmental Protection Agency, the Resources Agency, or the Office of the State Fire Marshal to describe its efforts, in connection with a proposed rulemaking action, to avoid unnecessary duplication or conflicts with federal regulations contained in the Code of Federal Regulations addressing the same issues. These agencies may adopt regulations different from these federal regulations upon a finding of one or more of the following justifications: (A) The differing state regulations are authorized by law and/or (B) The cost of differing state regulations is justified by the benefit to human health, public safety, public welfare, or the environment.

These regulations do not duplicate or conflict with federal regulations.