

**INITIAL STATEMENT OF REASONS
FOR PROPOSED BUILDING STANDARDS
OF THE OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT
REGARDING THE 2019 CALIFORNIA BUILDING CODE
CALIFORNIA CODE OF REGULATIONS, TITLE 24, PART 2, VOLUME 2
(OSHDP 03/19)**

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 16 STRUCTURAL DESIGN
SECTION 1613 EARTHQUAKE LOADS**

1613.4 – Component Importance Factors. [OSHDP 1R, 2 & 5].

Clarified which equipment or component is required to be designed with an importance factor of 1.5. Language as written implied all medical, architectural, or electrical components are required to be designed with an with $I_p = 1.5$ which is contrary to the model code requirement and not the intent.

ITEM 2

**CHAPTER 16A STRUCTURAL DESIGN
SECTION 1617A MODIFICATIONS TO ASCE 7**

1617A.1.18 ASCE 7, Section 13.1.4.

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 further defines the equipment classification based on the location of the equipment. This language has been drafted and refined in collaboration with, and extensive input and deliberations from the Hospital Building Safety Board Structural and Nonstructural Regulations Subcommittee.

ASSOCIATED SECTIONS TO ITEM 2:

Represents section that may be impacted by this proposed code change item – Refer to those items in parentheses for related changes.

(Part 2, Volume 1, ITEM 4) Chapter 2, *DEFINITIONS*

(ITEM 4) Chapter 17A, SPECIAL INSPECTIONS AND TESTS, *Section 1705A.13.3.1*

ITEM 3

CHAPTER 16A STRUCTURAL DESIGN SECTION 1617A MODIFICATIONS TO ASCE 7

1617A.1.26 ASCE 7, Section 13.6.7.3. Additional Provisions for Piping and Tubing Systems.

Clarify the code intent. Chapter 16A applies to OSHPD 1 and 4 buildings. The I_p for all non-structural components regulated by Chapter 13 of ASCE 7 replaced by this section is 1.5. 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.

ITEM 4

CHAPTER 17A SPECIAL INSPECTIONS AND TESTS SECTION 1705A REQUIRED SPECIAL INSPECTIONS AND TESTS

1705A.12.5 Architectural components.

Clarify the code intent. All work constructed under an OSHPD permit, is required to have continuous inspection. Where the work cannot be inspected after it is placed or assembled constant presence of the Inspector Of Record (IOR) or special inspector is required. Where work can be fully inspected after the work is installed, does not require continuous presence of the IOR. Having another special inspector assigned to the same work is duplicative an unnecessary. Having only periodic special inspection is also less restrictive than the requirements by statute. This provision addresses this concern.

ITEM 5

CHAPTER 17A SPECIAL INSPECTIONS AND TESTS SECTION 1705A REQUIRED SPECIAL INSPECTIONS AND TESTS

1705A.13.3.1 [OSHPD 1 & 4].

Imaging equipment required for diagnostic services of emergency/trauma patients, include x-ray, fluoroscopy, and Computerized Tomography (CT). To diagnose injury to trauma patients post-earthquake, these equipment are required to remain functional. For a trauma facility, there may be multiple equipment that is required to be seismically certified to meet the patient demand in an emergency. Current language is too general and does not adequately capture which such equipment is required to seismically certified and implies any equipment that can perform this function. In addition the

specific exception for CT equipment used for treatment or in hybrid operating rooms, including those used for interventional CT implied this exemption does not apply to fluoroscopy equipment. The new code language clarifies code intent and also addresses the public comment from MITA below.

Comment from MITA

“The specific allowance of an exception for CT equipment used for treatment or in hybrid operating rooms, including those used for interventional CT, unless used for diagnostic assessment of trauma injuries here could imply that no such exemption would be applied to other types of equipment not mentioned in the exception, including all types of fluoroscopy equipment.”

Hospital functions are now increasingly dependent on the functioning of its servers and routers and the network switch (also called switching hub, bridging hub, officially MAC bridge) that is a computer networking device that connects devices on a computer network by using packet switching to receive, process, and forward data to the destination device. If a server that stores or operates vital data or operating functions in a hospital required for continued operation after a seismic event goes down, it will impact the operation of the hospital and potentially endanger lives. Because of the criticality of these equipment, they are typically tested through a series of tests including seismic testing to ensure they continue to function post a strong shaking event. Retesting of equipment not already shake table tested is not required if the testing is adequate to meet the seismic design demands at the site where the equipment is being installed. Another failure mode is that of the racks into which these components are placed. Racks need not be shake table tested if they are demonstrated analytically to be robust enough to hold the server, router or switch that it supports. These equipment must be adequately secured to the rack where they stay in the rack. This proposal clarifies which of these equipment/components requires special seismic certification. Clarifying that special seismic certification is not required for temporary and interim uses of the equipment during construction for that project.

Clarifying that special seismic certification is not required for temporary and interim uses of the equipment during construction for that project.

ASSOCIATED SECTIONS TO ITEM 5:

(Part 2, Volume 1, ITEM 4) Chapter 2, *DEFINITIONS*

(ITEM 2) Chapter 16A, *STRUCTURAL DESIGN*, *Section 1617A.1.18*

ITEM 6

CHAPTER 18A SOILS AND FOUNDATIONS SECTION 1809A SHALLOW FOUNDATIONS

1809A.10 Pier and curtain wall foundations.

This section does not apply to OSHPD 1 and 4 buildings and is being specifically referenced for exclusion in the mid-cycle. OSHPD is aligning its amendments with DSA. No change in code intent or application.

ITEM 7

CHAPTER 21 MASONRY

SECTION 2103 MASONRY CONSTRUCTION MATERIALS

SECTION 2104 CONSTRUCTION

SECTION 2105 QUALITY ASSURANCE

SECTION 2106 SEISMIC DESIGN

SECTION 2106 SEISMIC DESIGN

SECTION 2107 ALLOWABLE STRESS DESIGN

At the Building Standards Commission hearings for the 2018 Triennial Code Adoption cycle of the OSHPD amendments, OSHPD stated that it would work with the masonry industry to address their public comments to the masonry chapter. The OSHPD amendments made to the masonry section in Chapter 21 were primarily editorial as the requirements in the “A” chapter were also applicable to the non-A chapter to align with the new definitions for OSHPD 1R, 2 and 5 buildings. There was no change in regulatory effect.

2103.5 Air entrainment. [OSHPD 1R, 2 & 5].

Public comment received related to this section:

“This provision is not only duplicative (TMS602, Article 2.2, ASTM C476, Section 3, Note 2), it is not enforceable since compliance for air entrainment is not defined in the code. Conflicts with Nine Point Criteria, Items 1 and 4.”

Proposed language deletes the word “substances” and replaces with specific terminology given in TMS to eliminate ambiguity in interpretation.

2104.2 Grouted masonry. [OSHPD 1R, 2 & 5]; Section 2104.2.1 General conditions.

Public comment received related to this section:

“6th paragraph duplicates the Referenced National Standard, TMS 602, Article 3.5 E. 1b. Conflicts with Nine Point Criteria Item 1.”

Proposed language deletes duplicative language of same meaning in referenced national standard and references the specific section in the referenced standard to avoid duplication and interpretation of code intent.

Public comment received related to this section:

“Last paragraph addressing the 'description of grouting procedures'. This provision is ambiguous cannot be uniformly applied since there is no referenced criteria for describing grouting procedures other than complying with detailed grouting requirements contained in the National Masonry Referenced Standard and Code (TMS 402/602).”

Proposed language deletes the existing language in response to the public comment eliminating the ambiguity and potential for nonuniform enforcement.

2105.2 Compressive Strength, f'_m . [OSHPD 1R, 2 & 5].

Public comment received related to this section:

“Paragraph 1-A design values are calculated, not assumed. If the word 'minimum' was added after “The” and the word 'assumed' deleted in the first sentence, then the requirement would be valid. The second sentence of the first paragraph is already required by the National Masonry Referenced Standard (TMS 402, Section 3.1, TMS 602, Articles 1.4 and 1.6 A). Duplication of a National Referenced Standard conflicts with Nine Point Criteria, Item 1.”

Proposed language addresses this public comment by adding the word “minimum” and deleting the word “assumed”.

Public comment received related to this section:

“Exception, Paragraph 1, Third Sentence-“The design shall take into account the mortar joint depth”. Whoever wrote this is unfamiliar with masonry design. Mortar joint depth is a horizontal dimension which is irrelevant to masonry performance in a solid grouted masonry system. Code requires a minimum mortar joint depth of the face shell for hollow unit masonry. Design of the masonry system takes into account the mortar joint configuration.”

Proposed language addresses this public comment by deleting the consideration for “mortar joint depth” in the design.

2105.3 Mortar and grout tests. [OSHPD 1R, 2 & 5].

Public comment received related to this section:

“2nd Paragraph – The referenced to TMS 402, Section 7.4.4.2.2 is simply wrong since it has nothing to do with strength requirements. It is a Seismic Restriction for certain types of materials.”

Proposed language addresses this public comment by deleting incorrectly referenced section. No change in regulatory effect.

2106.1 Seismic design requirements for masonry. 2106.1.1 Modifications to TMS 402. [OSHPD 1R, 2 & 5], 2. Minimum reinforcement for masonry columns.

Public comment received related to this section:

“The National Referenced Masonry Standard requires column ties at 8 inch spacing, which is a masonry module, for the full column height (TMS 402 Section 7.4.4.2.1). For many typical column configurations, the proposed spacing would actually be less conservative than the National Standard and would not match the unit depth. There is no known research to substantiate the spacing calculation in the Express Terms.”

Proposed language addresses this public comment by limiting maximum tie spacing to 8 inches consistent with the national standard.

2107.4 [OSHPD 1R, 2 & 5] TMS 402, Section 8.3.7, maximum bar size. [OSHPD 1R, 2 & 5].

Public comment received related to this section:

“This maximum bar size of 1/8th nominal wall thickness is a duplication of the National Referenced Standard (TMS 402), Section 6.1.2.5 which conflicts with Nine Point Criteria Item 1. The National Standard also applies to all masonry, not just Allowable Stress

Design.”

Proposed language references the section of TMS that addresses the maximum bar size. No change in regulatory effect.

2107.6 [OSHPD 1R, 2 & 5] Modify TMS_402, Section 8.3.4.4.

Public comment received related to this section:

“This provision is contained in the National Masonry Standard for elements of SDC D and above. The proposed language has no rationale to apply to an undefined term ‘masonry components’. All, or almost all, masonry structural members are ‘subjected to in-plane forces’. The intent of this section does not apply to many of these structural members.”

Proposed language clarifies the undefined term “Masonry Components” to terms defined in the national standard. No change in regulatory effect.

ITEM 8

**CHAPTER 22 STEEL
SECTION 2205 STRUCTURAL STEEL**

2205.4 Modifications to AISC 358. [OSHPD 1R, 2 & 5].

2205.4.1 Design Requirements, 2.1 Special and Intermediate Moment Frame Connection Types, Table 2-1 Prequalified Moment Connections modifications.

Permit the use of prequalified sideplate field bolted connections adopted in the national standard AISC 358-16 including supplement 1 Chapter 11 for uses in hospital buildings with applicable amendments. OSHPD has already permitted such connections for use in hospital buildings using alternate methods of compliance as permitted by the code. Adopting this provision eliminates the need for alternate methods of compliance for each new building utilizing this system as the lateral resisting system for the building.

2205.4.3 Bolted Moment Connection - Chapter 11, Supplement No. 1.

Permit the use of prequalified sideplate field bolted connections adopted in the national standard AISC 358-16 including supplement 1 Chapter 11 for uses in hospital buildings with applicable amendments. OSHPD has already permitted such connections for use in hospital buildings using alternate methods of compliance as permitted by the code. Adopting this provision eliminates the need for alternate methods of compliance for each new building utilizing this system as the lateral resisting system for the building.

The amendments listed in this section are based on extensive and careful study of the testing performed to meet the prequalification standards and its applicability to hospital building construction. The provisions have been developed using fundamentals of engineering and limiting applications and sized to be reasonably within the bounds of the specimens tested.

2205A.4 Modifications to AISC 341. [OSHPD 1 and 4], 2205A.4.9 Section K2.

Code language is clarified to be consistent with the national standard. Existing amendment which states “At least one of the test beams or links” implies there are

multiple beams of minimum size variations as stated in the section, are required to prequalify the connection. This exceeds the minimum number of tests of the maximum size that can be used in the prototype to be in the tested for prequalification, in the national standard. The proposed amendment revises the language to align with the national standard and reduces the cost for testing. The maximum size and weight of the beam or link that can be used in the hospital building cannot be less than the maximum size tested. This existing language in the amendment is unchanged.

CHAPTER 22A STEEL

SECTION 2205A STRUCTURAL STEEL

2205A.5 Modifications to AISC 358. [OSHPD 1 & 4]

2205A.5.1 Design Requirements, 2.1 Special and Intermediate Moment Frame Connection Types, Table 2-1 Prequalified Moment Connections modifications.

Permit the use of prequalified sideplate field bolted connections adopted in the national standard AISC 358-16 including supplement 1 Chapter 11 for uses in hospital buildings with applicable amendments. OSHPD has already permitted such connections for use in hospital buildings using alternate methods of compliance as permitted by the code. Adopting this provision eliminates the need for alternate methods of compliance for each new building utilizing this system as the lateral resisting system for the building.

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Permit the use of prequalified sideplate field bolted connections adopted in the national standard AISC 358-16 including supplement 1 Chapter 11 for uses in hospital buildings with applicable amendments. OSHPD has already permitted such connections for use in hospital buildings using alternate methods of compliance as permitted by the code. Adopting this provision eliminates the need for alternate methods of compliance for each new building utilizing this system as the lateral resisting system for the building. The amendments listed in this section are based on extensive and careful study of the testing performed to meet the prequalification standards and its applicability to hospital building construction. The provisions have been developed using fundamentals of engineering and limiting applications and sized to be reasonably within the bounds of the specimens tested.

ITEM 9

APPENDIX L EARTHQUAKE RECORDING INSTRUMENTATION

SECTION L101 GENERAL

1.101.3 Maintenance.

Alignment with model code language and clarification of the requirements to be performed by the owner of the building and the enforcement agency.

ASSOCIATED SECTIONS TO ITEM 9:

Represents section that may be impacted by this proposed code change item – Refer to those items in parentheses for related changes.

(Part 2, Volume 1, ITEM 3) Part 2, Volume 1, Chapter 1, DIVISION II SCOPE AND ADMINISTRATION, *Section 104.11.4*

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).

Response:

Item 1 is clarification of existing provisions and did not require additional documentation.

Items 2 is based on the requirements in ASCE 7-16 with additional clarifications for equipment anchorage.

Item 3 is clarification of existing provisions and did not require additional documentation.

Item 4 is clarification of existing provisions and did not require additional documentation.

Item 5 is clarification of existing provisions and did not require additional documentation; code intent that IT equipment is required to remain functional after a seismic event is seismically certified; and switches that perform that function for communication are added to the list.

Item 6 is clarification of existing provisions and did not require additional documentation.

Item 7 is based on TMS 402/602-16 Building Code and Specification for Masonry Structures.

Item 8 is based on AISC 358-16/358s1-18. Section 2205A.4.9 is an alignment of the provisions with AISC 341-16 Section K2.

Item 9 is an alignment of the provisions with 2018 IBC.

OSHPD has developed these provisions in consultation with the Hospital Building Safety Board (HBSB) in multiple Structural Nonstructural Subcommittee meetings over the past year. Meeting minutes are available on request.

The following documents were referenced in the determination of these proposed amendments: 2018 IBC: International Building Code.

- ASCE 7-16: Minimum Design Loads and Associated Criteria for Buildings and Other structures with Supplement No. 1*
- AISC 358-16/358s1-18: Prequalified Connections for Special and Intermediate Steel Moment Frames for Seismic Applications, including Supplement No. 1*
- ANSI/AISC 341—16: Seismic Provisions for Structural Steel Buildings*
- TMS 402-16 Building Code for Masonry Structures*
- TMS 602-16 Specification for Masonry Structures*

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.

Response: The proposed amendments do not contain any mandates for specific technologies or equipment or prescriptive standards.

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.

Response: The proposals in this package, are clarifications of the existing language and did consider any all reasonable alternatives in these proposals and ensures full compliance with statute.

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.

Response: The Office of Statewide Health Planning and Development did not identify any reasonable alternatives to the proposed regulations that would lessen 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.

Response: No significant adverse impact on business was determined and no other documents or evidence was determined applicable to the proposed provisions.

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)

The OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT 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.

Response: The Office of Statewide Health Planning and Development 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.

Response: The Office of Statewide Health Planning and Development did not identify any amended regulation that would lead to the creation of new businesses or the elimination of existing businesses within the State.

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

Response: The Office of Statewide Health Planning and Development did not identify any amended regulation that would lead to the expansion of businesses currently doing business within 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.

Response: Clarification of existing language and lessening the requirements for compliance to items critical to functioning of the hospital post-earthquake will directly benefit the health and welfare of California residents. The Office of Statewide Health Planning and Development did not identify any amended regulation that would directly benefit worker safety, and the state's environment.

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.

Response: OSHPD did not identify any cost to comply with the proposed adoption and amendments. The proposal includes minor technical and editorial modifications that will provide clarification and consistency within the code.

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.

Response: The proposed provisions do not duplicate or conflict with federal regulations.