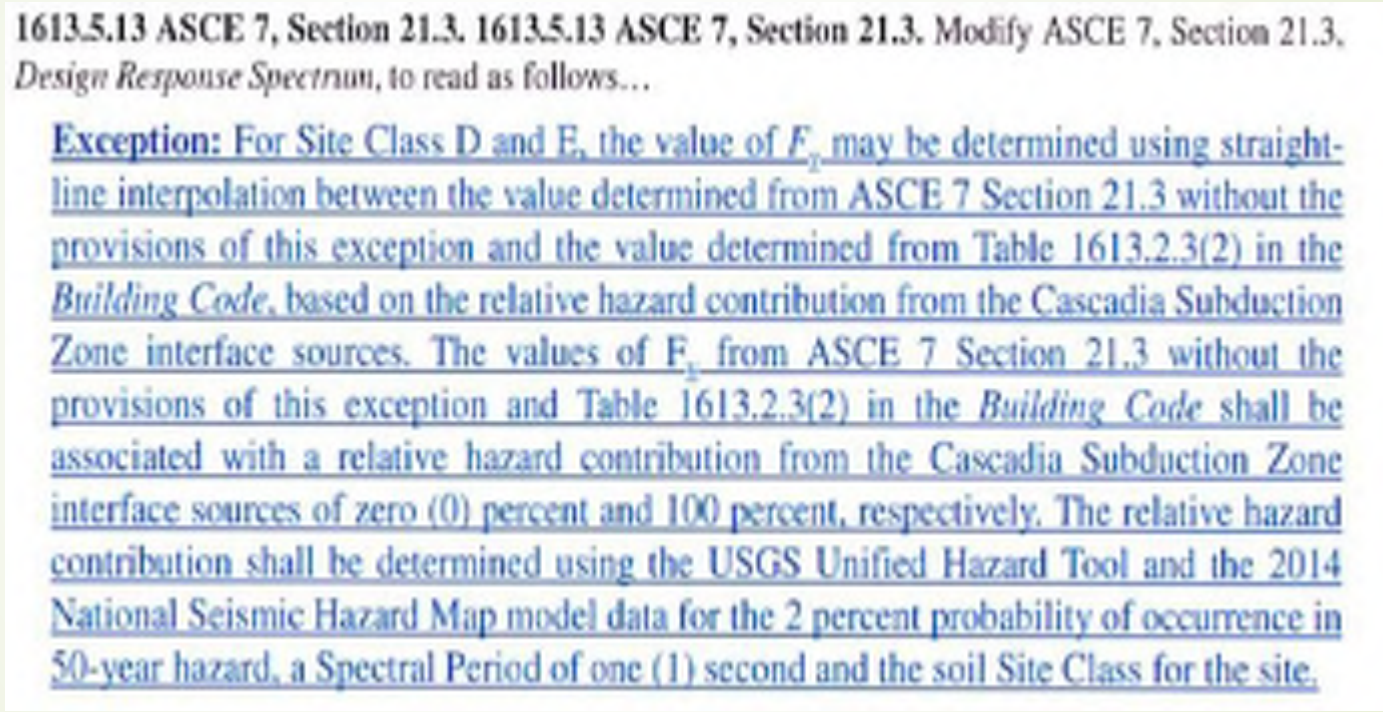
Chapter 16 – Modifications to ASCE 7

- **CHANGE**: Amends ASCE 7 Site specific procedures in Ch. 21 to specifically address our Cascadia subduction zone hazard.



1613.5.13 ASCE 7, Section 21.3. 1613.5.13 ASCE 7, Section 21.3. Modify ASCE 7, Section 21.3. *Design Response Spectrum*, to read as follows…

Exception: For Site Class D and E, the value of F_v may be determined using straight-line interpolation between the value determined from ASCE 7 Section 21.3 without the provisions of this exception and the value determined from Table 1613.2.3(2) in the *Building Code*, based on the relative hazard contribution from the Cascadia Subduction Zone interface sources. The values of F_v from ASCE 7 Section 21.3 without the provisions of this exception and Table 1613.2.3(2) in the *Building Code* shall be associated with a relative hazard contribution from the Cascadia Subduction Zone interface sources of zero (0) percent and 100 percent, respectively. The relative hazard contribution shall be determined using the USGS Unified Hazard Tool and the 2014 National Seismic Hazard Map model data for the 2 percent probability of occurrence in 50-year hazard, a Spectral Period of one (1) second and the soil Site Class for the site.

Note: *Per SEAO, "Without the exception, it would result in significantly higher (up to double) long-period accelerations that are not representative of our seismic hazard in Western Oregon." This would likely be fixed in the next ASCE 7 iteration*

Chapter 17 – Special Inspection

- **CHANGE**: New section that consolidates and clarifies the requirements for submittal of reports and certificates to the Building Official for items subject to special inspections and tests.

1704.5 Submittals to the building official. In addition to the submittal of reports of special inspections and tests in accordancewith Section 1704.2.4, reports and certificates shall be submitted by the owner or the owner's authorized agent to thebuilding official for each of the following:

1. Certificates of compliance for the fabrication of structural, load-bearing or lateral load-resisting members or assemblies on the premises of an approved fabricator in accordance with Section 1704.2.5.1.
2. Certificates of compliance for the seismic qualification of nonstructural components, supports and attachments in accordance with Section 1705.13.2.
3. Certificates of compliance for designated seismic systems in accordance with Section 1705.13.3.
4. Reports of preconstruction tests for shotcrete in accordance with Section 1908.5.
5. Certificates of compliance for open web steel joists and joist girders in accordance with Section 2207.5.
6. Reports of material properties verifying compliance with the requirements of AWS D1.4 for weldability as specified in Section 26.6.4 of ACI 318 for reinforcing bars in concrete complying with a standard other than ASTM A706 that are to be welded.
7. Reports of mill tests in accordance with Section 20.2.2.5 of ACI 318 for reinforcing bars complying with ASTM A615 and used to resist earthquakeinduced flexural or axial forces in the special moment frames, special structural walls or coupling beams connecting special structural walls of seismic force-resisting systems in structures assigned to Seismic Design Category B, C, D, E or F.

Chapter 17 – Structural Observations

- **CHANGE**: Clarifies the triggers for structural observations.

1704.6 Structural observations. Where required by the provisions of Section 1704.6.1, 1704.6.2 or 1704.6.3, the owner or the owner's authorized agent shall employ a registered design professional to perform structural observations. Structural observation does not include or waive the responsibility for the inspections in Section 110 or the special inspections in Section 1705 or other sections of this code……

At the conclusion of the work included in the permit, the structural observer shall submit to the building official a written statement that the site visits have been made and identify any reported deficiencies that, to the best of the structural observer's knowledge, have not been resolved.

1704.6.1 Structural observations for structures. Structural observations shall be provided for those structures where one or more of the following conditions exist:

1. The structure is classified as Risk Category IV.
2. The structure is a high-rise building.
3. Such observation is required by the registered design professional responsible for the structural design.
4. Such observation is specifically required by the building official.

1704.6.2 Structural observations for seismic resistance. Structural observations shall be provided for those structures assigned to Seismic Design Category D, E or F where one or more of the following conditions exist:
1. The structure is classified as Risk Category III or IV.
2. The structure is assigned to Seismic Design Category E, is classified as Risk Category I or II, and is greater than two stories above the grade plane.

1704.6.3 Structural observations for wind resistance. Structural observations shall be provided for those structures sited where V is 130 mph (58 m/sec) or greater and the structure is classified as Risk Category III or IV.

Chapter 17 – Special Inspection for Steel

- **CHANGE**: Clarifications and updates for alignment with the latest reference standards.

1705.2 Steel construction. The special inspections and nondestructive testing of steel construction in buildings, structures, and portions thereof shall be in accordance with this section and Table 1705.2.
1705.2.1 Structural steel. Special inspections and nondestructive testing of structural steel elements in buildings, structures and portions thereof shall be in accordance with the quality assurance inspection requirements of AISC 360 as modified in Section 1705.2.1.1.
Exception: Special inspection of railing systems composed of structural steel elements shall be limited to welding inspection of welds at the base of cantilevered rail posts.
1705.2.2 Cold-formed steel deck. Special inspections and qualification of welding special inspectors for cold-formed steel floor and roof deck shall be in accordance with the quality assurance inspection requirements of SDI QA/QC.

- ✓ Addition of “nondestructive testing” clarifies that the quality assurance provisions of AISC 360 not only covers special inspection s but also the testing of welds.
- ✓ The Steel Deck Institute’s SDI QA/QC is a newly referenced standard, which contains provisions for quality assurance inspections of steel floors and roof decks, and is coordinated with the requirements of AISC 360.
  - http://www.sdi.org/wp-content/uploads/2017/02/ANSI-SDI-QAQC-2017-Standard.pdf

Chapter 17 – Special Inspections for Steel

- **CHANGE**: New special inspection provisions for open web steel joists and joist girders.

1705.2.3 Open-web steel joists and joist girders. Special inspections of open-web steel joists and joist girders in buildings, structures and portions thereof shall be in accordance with Table 1705.2.3.

TABLE 1705.2.3
REQUIRED SPECIAL INSPECTIONS OF OPEN-WEB STEEL JOISTS AND JOIST GIRDERS

TYPE	CONTINUOUS SPECIAL INSPECTION	PERIODIC SPECIAL INSPECTION	REFERENCED STANDARD[a]
1. Installation of open-web steel joists and joist girders.			
a. End connections – welding or bolted.	—	X	SJI specifications listed in Section 2207.1.
b. Bridging – horizontal or diagonal.	—	—	—
1. Standard bridging.	—	X	SJI specifications listed in Section 2207.1.
2. Bridging that differs from the SJI specifications listed in Section 2207.1.	—	X	—

For SI: 1 inch = 25.4 mm.

a. Where applicable, see Section 1705.12, Special inspections for seismic resistance.

Chapter 17 – Special Inspections for Concrete

- **CHANGE:** Updates to Table 1705.3 for clarification and alignment with reference standards.

TABLE 1705.3
REQUIRED SPECIAL INSPECTIONS AND TESTS OF CONCRETE CONSTRUCTION

TYPE	CONTINUOUS SPECIAL INSPECTION	PERIODIC SPECIAL INSPECTION	REFERENCED STANDARD[a]	IBC REFERENCE
1. ~~Inspection of~~ Inspect reinforcement, including prestressing tendons, and ~~verify~~ placement.	—	X	ACI 318: Ch. 20, 25.2, 25.3, 26.6.1-26.6.3	1908.4
2. ~~Inspection of~~ Reinforcing ~~steel~~ bar welding ~~in accordance with Table 1705.2.2, Item 2b~~:				
a. Verify weldability of reinforcing bars other than ASTM A706;	—	X	AWS D1.4 ACI 318: 26.6.4	—
b. Inspect single-pass fillet welds, maximum $^5/_{16}$"; and		X		
c. Inspect all other welds.	X			
3. Inspect anchors cast in concrete ~~where allowable loads have been increased or where strength design is used~~.	—	X	ACI 318: 17.8.2	—

a. Where applicable, see Section 1705.12, Special inspections for seismic resistance.

Note: ACI 318 completely reformatted; refer to Chapter 19 slides for more information.

Chapter 17 – Special Inspections for Concrete

- **CHANGE:** Requires continuous special inspection for post installed anchors in sustained tension loading scenarios.

TABLE 1705.3
REQUIRED SPECIAL INSPECTIONS AND TESTS OF CONCRETE CONSTRUCTION

TYPE	CONTINUOUS SPECIAL INSPECTION	PERIODIC SPECIAL INSPECTION	REFERENCED STANDARD[a]	IBC REFERENCE
4. Inspect anchors post-installed in hardened concrete members.[b]				
a. Adhesive anchors installed in horizontally or upwardly inclined orientations to resist sustained tension loads.	X		ACI 318: 17.8.2.4 ACI 318: 17.8.2	—
b. Mechanical anchors and adhesive anchors not defined in 4.a.		X		

a. Where applicable, see Section 1705.12, Special inspections for seismic resistance.
b. Specific requirements for special inspection shall be included in the research report for the anchor issued by an *approved* source in accordance with ACI 318 Section 17.8.2, or other qualification procedures. Where specific requirements are not provided, special inspection requirements shall be specified by the registered design professional and shall be *approved* by the building official prior to the commencement of the work.

Chapter 17 – Special Inspection for Seismic

- **CHANGE**: New special inspection for seismic resistance; checking minimum clearances between sprinkler piping components and adjacent nonstructural components.

1705.12.6 Plumbing, mechanical and electrical components. Periodic special inspection of, mechanical and electrical components shall be required for the following: plumbing

6. Installation of mechanical and electrical equipment, including duct work, piping systems and their structural supports, where automatic fire sprinkler systems are installed in structures assigned to Seismic Design Category C, D, E or F to verify one of the following:

6.1. Minimum clearances have been provided as required by Section 13.2.3 ASCE/SEI 7.

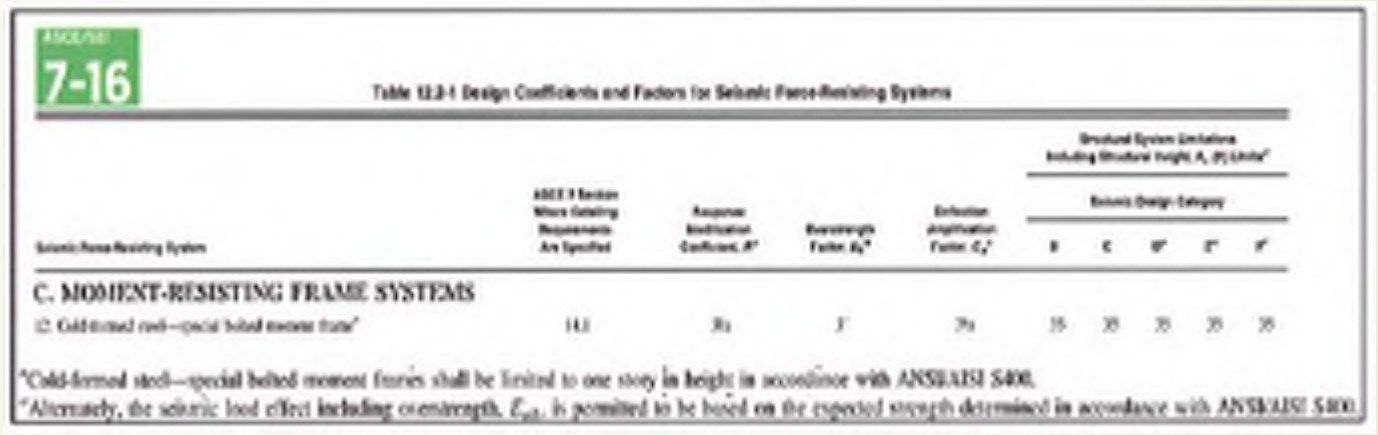
6.2. A nominal clearance of not less than 3 inches (76 mm) has been be provided between fire protection sprinkler system drops and sprigs and: structural members not used collectively or independently to support the sprinklers; equipment attached to the building structure; and other systems' piping.

Where flexible sprinkler hose fittings are used, special inspection of minimum clearances is not required.

Chapter 17 – Special Inspections for Seismic

- **CHANGE**: New model code section that requires periodic special inspection for cold formed steel special bolted moment frames (CFS-SBMF)

1705.12.9 Cold-formed steel special bolted moment frames. Periodic special inspection shall be provided for the installation of cold-formed steel special bolted moment frames in the seismic force-resisting systems of structures assigned to Seismic Design Category D, E or F.


7-16

C. MOMENT-RESISTING FRAME SYSTEMS

Note: All of section 1705.12 has been updated to clarify intent. The CFS-SBMF is a relatively new type of seismic force resisting system. Associated design provisions have been updated via ANSI/AISI S400-15 and ASCE 7-16

Chapter 17 – Testing for Seismic Resistance

- **CHANGE**: New model code provisions for designated seismic systems; Oregon amendment limits scope to RC III and RC IV structures.

1705.13.3 Designated seismic systems. Where Risk Category III or IV structures located in Seismic Design Category C, D, E or F have mechanical, electrical or plumbing components of the designated seismic systems that are subject to the requirements of Section 13.2.1 or 13.2.2 of ASCE 7 and meet the requirements for seismic qualification as specified in Item 2 of Section 13.2.1 therein, the registered design professional shall specify on the approved construction documents the requirements to be met for seismic qualification by analysis, testing or experience data as specified therein. Certificates of compliance for seismic qualification, prepared by or reviewed and accepted by a registered design professional and demonstrating fulfillment of the seismic certification requirements from the manufacturer of each mechanical, electrical or plumbing component of the designated seismic system, shall be submitted to the building official as specified in Section 1704.5.

Note:

- ✓ Designated seismic systems are those assigned a component importance factor of 1.5 per Section 13.1.3 od ASCE 7
- ✓ OR amendments limits scope to RC III and IV structures to prevent unnecessary application to RC I and RC II structures
- ✓ OR amendment requires a RDP to prepare or review and accept the certificate of completion before submitting to the building official since the scope

Chapter 17 – In-situ Load Tests

- **CHANGE**: Load test procedures where not specified by a referenced standard have been revised to align with the industry standard practice.

1708.2.2 Load test procedure not specified. In the absence of applicable load test procedures contained within a material standard referenced by this code or acceptance criteria for a specific material or method of construction, such existing structure shall be subjected to an approved test procedure developed by a registered design professional that simulates applicable loading and deformation conditions. For components that are not a part of the seismic force-resisting system, at a minimum the test load shall be equal to the specified factored design loads. For materials such as wood that have strengths that are dependent on load duration, the test load shall be adjusted to account for the difference in load duration of the test compared to the expected duration of the design loads being considered. For statically loaded components, the test load shall be left in place for a period of 24 hours. For components that carry dynamic loads (for example, machine supports or fall arrest anchors), the load shall be left in place for a period consistent with the component's actual function. The structure shall be considered to have successfully met the test requirements where the following criteria are satisfied:…..

- ✓ Intended to essentially match the in-situ load test procedures in ACI 318 and AISC 360
- ✓ No more arbitrary testing to 2x unfactored loads; now test to the factored design loads
- ✓ Load duration must be considered for wood structures
- ✓ Test time for components tested for dynamic loads shall be the same as actual conditions

Chapter 18 – Geotechnical Investigations

- **CHANGE**: The requirements addressing the evaluation of rock materials for foundation support have been updated to be more consistent with current geotechnical engineering practices.

1803.5.6 Rock strata. Where subsurface explorations at the project site indicate variations in the structure of rock on which foundations are to be constructed, a sufficient number of borings shall be drilled to sufficient depths to assess the competency of the rock and its load-bearing capacity.

- ✓ Contractor to notify geotech when they encounter cracks, joints, and other defects in rock strata during excavation
  - ➢ Actual rock conditions observed through excavation can vary significantly from the initial locations sampled by the geotech.
  - ➢ Geotech to drill more borings as necessary and update their foundation design recommendations.

Chapter 18 – Excavation Near Foundation

- **CHANGE**: Deleted the active pressure on keyway provisions, and provided a trigger for consideration of seismic loading on regulated training walls.

1803.5.7 Excavation near foundations. Where excavation will reduce support from any foundation, a registered design professional shall prepare an assessment of the structure as determined from examination of the structure, the review of available design documents and, if necessary, excavation of test pits. The registered design professional shall determine the requirements for underpinning and protection and prepare site-specific plans, details and sequence of work for submission. Such support shall be provided by underpinning, sheeting and bracing, or by other means acceptable to the building official.

- ✓ Consistent with Section 3304 Site Work
- ✓ Provides clear expectations for all stakeholders when excavating existing structures.
  - ➢ RDP (geotechnical/structure coordination)
    - ✓ Assessment
    - ✓ Plans details and sequence of work
    - ✓ Submit to building official for approval
- ✓ Compare with local grading ordinance if enacted (Appendix J)

Chapter 18 – Regulated Retaining Walls

- **CHANGE**: Deleted the active pressure on keyway provisions, and provided a trigger for consideration of seismic loading on regulated retaining walls.

1807.2.1 General. Retaining walls shall be designed to ensure stability against overturning, sliding, excessive foundation pressure and water uplift.

~~Where a keyway is extended below the wall base with the intent to engage passive pressure and enhance sliding stability, lateral soil pressures on both sides of the keyway shall be considered in the sliding analysis.~~ (was deleted from 1807.2.1)

1807.2.2 Design lateral soil loads. Retaining walls shall be designed for the lateral soil loads set forth in Section 1610. For structures assigned to Seismic Design Category D, E, or F, the design of retaining walls supporting more than 6 feet (1829 mm) of backfill height shall incorporate the additional seismic lateral earth pressure in accordance with the geotechnical investigation where required in Section 1803.2.

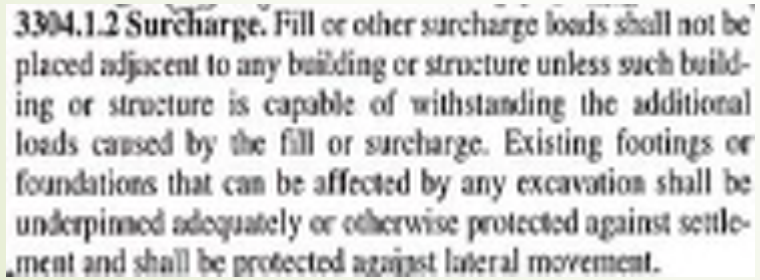
- ✓ The application active pressure on a keyway was found to be in conflict with accepted engineering practice and the principles of soil mechanics.
- ✓ Cite-it path for seismic design considerations.
- ✓ See Section 101.2 Scope for clarification on regulation of retaining walls.

Chapter 18 – Surcharging Existing Foundations

- **CHANGE:** Brought site work provisions from Chapter 33 Safeguards During Construction into this section for redundancy and to clarify the intent, and added an exception for minor grading operations.

1808.3.2 Surcharge. Fill or other surcharge loads shall not be placed adjacent to any building or structure unless such building or structure is capable of withstanding the additional loads caused by the fill or the surcharge. Existing footings or foundations that will be affected by any excavation shall be underpinned or otherwise protected against settlement and shall be protected against detrimental lateral or vertical movement or both.

Exception: Minor grading for landscaping purposes shall be permitted where done with walk-behind equipment, where the grade is not increased more than 1 foot (305 mm) from original design grade or where approved by the building official.

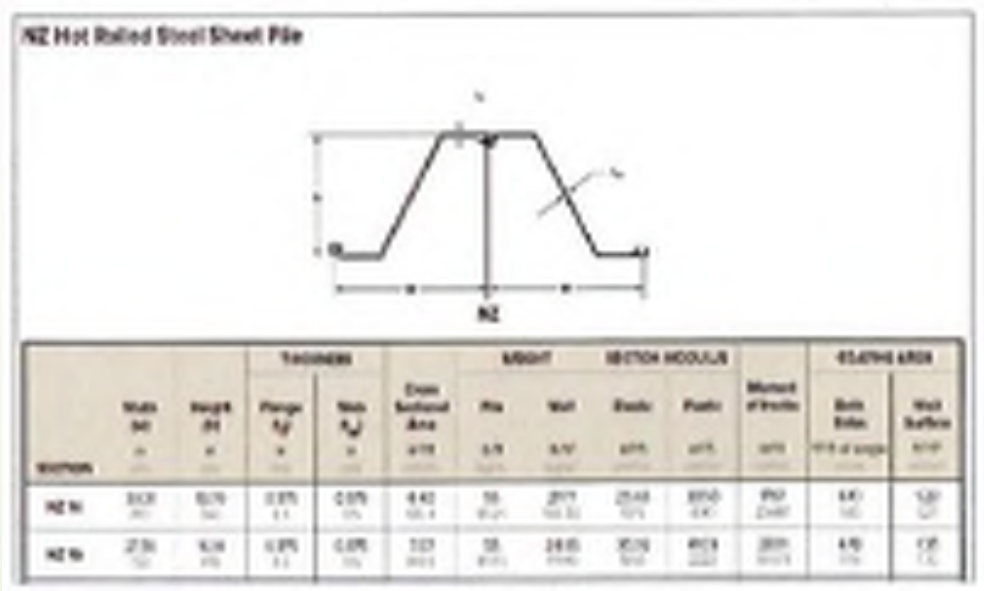


3304.1.2 Surcharge. Fill or other surcharge loads shall not be placed adjacent to any building or structure unless such building or structure is capable of withstanding the additional loads caused by the fill or surcharge. Existing footings or foundations that can be affected by any excavation shall be underpinned adequately or otherwise protected against settlement and shall be protected against lateral movement.

Chapter 18 – Structural Steel Sheet Piling

- **CHANGE**: New section for structural steel sheet piling, which points to manufacturer and ASTM A6 for conformance.

1810.3.5.3.3 Structural steel sheet piling. Individual sections of structural steel sheet piling shall conform to the profile indicated by the manufacturer, and shall conform to the general requirements specified by ASTM A6.



Chapter 18 – Precast Prestressed Piles

- **CHANGE**: Updated Equations 18-5 & 18-6, minimum spiral reinforcement index for seismic design on recent research, and added an exception when overstrengthed factor is used.

1810.3.8.3.2 Seismic reinforcement in Seismic Design Category C.

~~$\rho_s = 0.12 f'_c / f_{yh}$~~

$$\rho_s = 0.04(f'_c/f_{yh})\,[2.5 + 2.34P/(f'_c A_g)] \qquad \text{(Equation 18-5)}$$

1810.3.8.3.3 Seismic reinforcement in Seismic Design Categories D through F.

~~$\rho_s = 0.25(f'_c/f_{yh})(A_g/A_{ch} - 1.0)[0.5 + 1.4P/(f'_c A_g)]$~~

$$\rho_s = 0.06(f'_c/f_{yh})\,[2.8 + 2.34P/(f'_c A_g)] \qquad \text{(Equation 18-6)}$$

Exception: The minimum spiral reinforcement index required by Equation 18-5 shall not apply in cases where the design includes full consideration of load combinations specified in ASCE 7, Section 2.3.6 and the applicable overstrength factor, Ω_0. In such cases, minimum spiral reinforcement index shall be as specified in Section 1810.3.8.1.

Chapter 18 – Precast Prestressed Piles

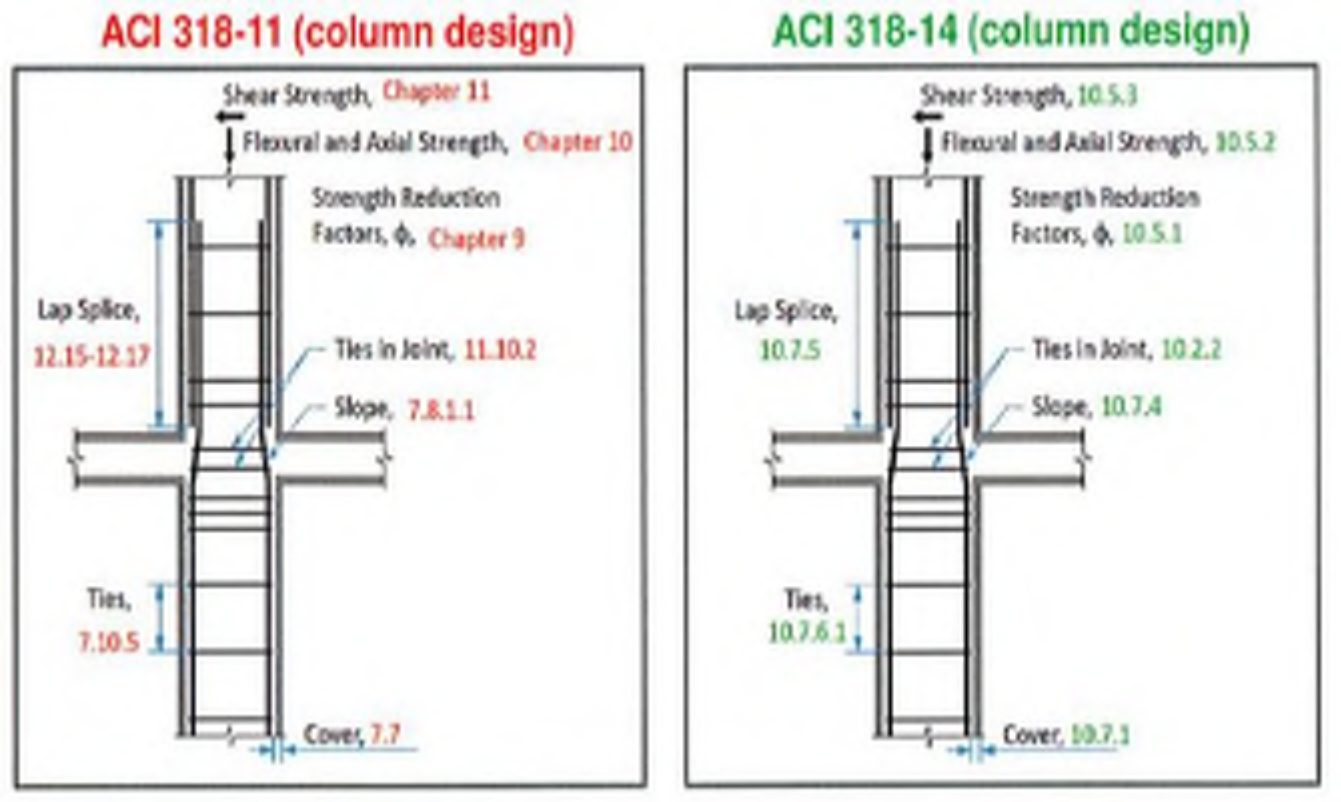
- **CHANGE**: New Section that limits the design axial load where precast prestressed piles are used in combination to resist seismic lateral forces.

Section 1810.3.8.3 Precast prestressed piles,
1810.3.8.3.4 Axial load limit in Seismic Design Categories C through F. For structures assigned to Seismic Design Category C, D, E, or F, the maximum factored axial load on precast prestressed piles subjected to a combination of seismic lateral force and axial load shall not exceed the following values:

1. 0.2f □ c Ag for square piles
2. 0.4f □ c Ag for circular or octagonal piles

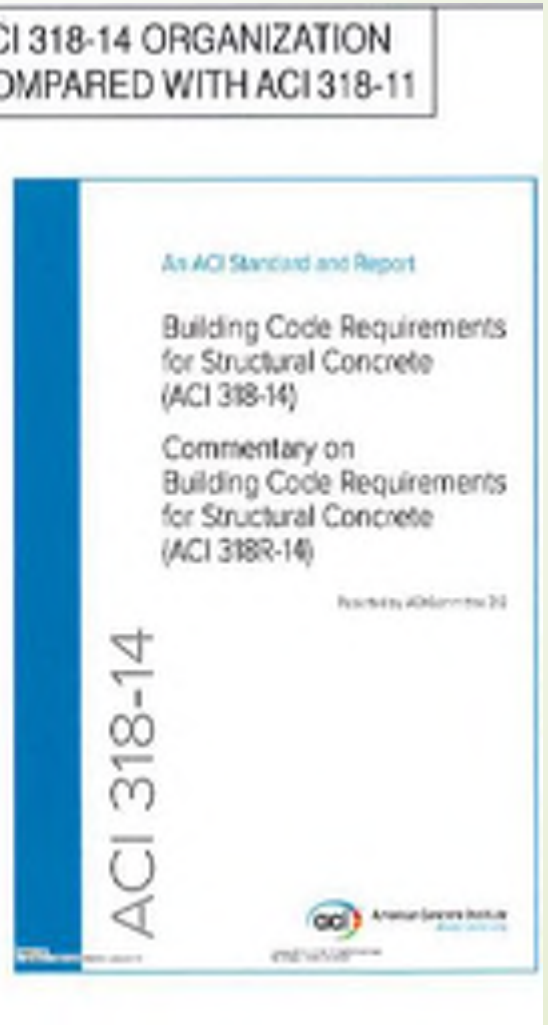
Chapter 19 - Concrete

- **CHANGE:** ACI 318-14 is the referenced standard for concrete design, which has been completely reorganized (Compared to ACI 318-11) as a member based document. The rationale for the overhaul was that within each chapter devoted to a particular member type, such as a beam or column, the user would find all the requirements necessary to design that particular member type. See illustrations below.



Chapter 19 - Concrete

- http://www.skghoshassociates.com/sk publication/ACI-318.14 Changes PCI Journal.pdf



Chapter 19 – Precast Diaphragms

- **CHANGE**: Pointer to new Section of ASCE 7-16 for additional design and detailing requirements for precast concrete diaphragms in SDC C through F.

1901.2 Plain and reinforced concrete. Structural concrete shall be designed and constructed in accordance with the requirements of this chapter and ACI 318 as amended in Section 1905 of this code. Except for the provisions of Sections 1904 and 1907, the design and construction of slabs on grade shall not be governed by this chapter unless they transmit vertical loads or lateral forces from other parts of the structure to the soil. Precast concrete diaphragms in buildings assigned to Seismic Design Category C, D, E or F shall be designed in accordance with the requirements of ASCE 7, Section 14.2.4.

For associated design examples and background information:
https://www.pci.org/PCI Docs/Design Resources/Research and Development/DSDM%20report.pdf

Chapter 19 – Anchoring to Concrete

- **CHANGE**: Sections 1908 and 1909 (anchorage to concrete for allowable stress and strength design) were deleted because they were obsolete and not consistent with current reference standards.

1901.3 **Anchoring to concrete**. Anchoring to concrete shall be in accordance with ACI 318 as amended in Section 1905, and applies to cast-in (headed bolts, headed studs and hooked J- or L-bolts), post-installed expansion (torque-controlled and displacement-controlled), undercut and adhesive anchors.

Note: Reference Chapter 17 of ACI 318-14 for anchorage to concrete (no longer in Appendix D)

Chapter 19 – Durability Requirements

- **CHANGE**: The durability provisions, weathering probability map for concrete, and minimum concrete strength table have been deleted and replaced by a reference to the durability provisions in ACI 318. A new definition for “nonstructural concrete” was added for clarification.

1904.1 Structural concrete. Structural concrete shall conform to the durability requirements of ACI 318.

Exception: For Group R-2 and R-3 occupancies not more than three stories above grade plane, the specified compressive strength, f □ c, for concrete in basement walls, foundation walls, exterior walls and other vertical surfaces exposed to the weather shall be not less than 3,000 psi (20.7 MPa).

1904.2 Nonstructural concrete. The registered design professional shall assign nonstructural concrete a freeze-thaw exposure class, as defined in ACI 318, based on the anticipated exposure of nonstructural concrete. Nonstructural concrete shall have a minimum specified compressive strength, f □ c, of 2,500 psi (17.2 MPa) for Class F0; 3,000 psi (20.7 MPa) for Class F1; and 3,500 psi (24.1 MPa) for Classes F2 and F3.

Section 202
Definitions
NONSTRUCTURAL CONCRETE. Any element made of plain or reinforced concrete that is not part of a structural system required to transfer either gravity or lateral loads to the ground.

Chapter 19 – Modifications to ACI 318

- **CHANGE**: Fixed the modifications to ACI 318.

- ✓ The concrete chapter of the ‘12 IBC referenced ACI 318-11 for concrete design and construction. However, due to differing publishing timelines between ACI and IBC, the ‘12 IBC Section 1905 modifications made to ACI 318 were based on ACI 318-08, making them inconsistent with 2011 edition of the ACI 318 standard (significant changes were made to Appendix D from 318-08 to 318-11). Designers had to use ACI 318-08 wherever the ‘12 IBC modified ACI 318, use ACI 318-11 for the remainder of their design, and utilize Section 104.11 of the IBC (alternative design) where necessary to coordinate any misaligned provisions.

- ✓ No longer an issue now that ACI 318-14 is the referenced standard.
  - The requirements for design of wall piers were not included in ACI 318-08, which is why they were added to the ‘12 IBC as a modification to ACI 318. Wall pier design requirements are included in the provisions of Section ACI 318-14, thus the amendments are no longer necessary and have been deleted.
  - Anchorage to concrete is now covered in Chapter 17 of ACI 318-14. The new language in 1905.1.8 of the ‘15 IBC represents industry consensus among various code change proposals and is intended to have a positive impact on the design community; linear path.

Chapter 21 - Masonry

- **CHANGE**: The charging language of Section 2101.2 has been modified to simply reference TMS 402, 403, or 404 for design and construction of masonry structures.

2101.2 Design methods. Masonry shall comply with the provisions of TMS 402, TMS 403 or TMS 404 as well as applicable requirements of this chapter. Design loads shall be determined in accordance with Chapter 16.

Note: TMS 403.17 points to ASCE 7-10 for design criteria, which creates misalignment with the 2019 OSSC; the OR amendment in 2101.2 was editorially made to correct this misalignment.

Chapter 21 - Masonry

Note: TMS 402 has been substantially reorganized to be more user friendly.

TMS 402-16 Organized in this manner:

Chapter 22 – Steel Joists

- **CHANGE**: The 2015 edition of the combined SJI-100, Standard Specification for K-Series, LH-series, and DLH-Series Open Web Steel and Joist Girders, is the new reference standard for steel joists.

2207.1 General. The design, manufacture and use of open web steel joists and joist girders shall be in accordance with ~~one of the following Steel Joist Institute (SJI) specifications~~ either SJI 100 or SJI 200, as applicable.

~~1. SJI CJ~~

~~2. SJI K~~

~~3. SJI LH/DLH~~

~~4. SJI JG~~

https://steeljoist.org/ansi/

https://steeljoist.org/wp-content/uploads/K-Series Final 110717.pdf

Chapter 22 – Steel Storage Racks

- **CHANGE**: Reference to the cantilevered storage rack standard, RMI ANSI/MH 16.3 has been added for clarification.

2209.2 Cantilevered steel storage racks. The design, testing, and utilization of cantilevered storage racks made of coldformed or hot-rolled steel structural members shall be in accordance with RMI ANSI/MH 16.3. Where required by ASCE 7, the seismic design of cantilevered steel storage racks shall be in accordance with Section 15.5.3 of ASCE 7.

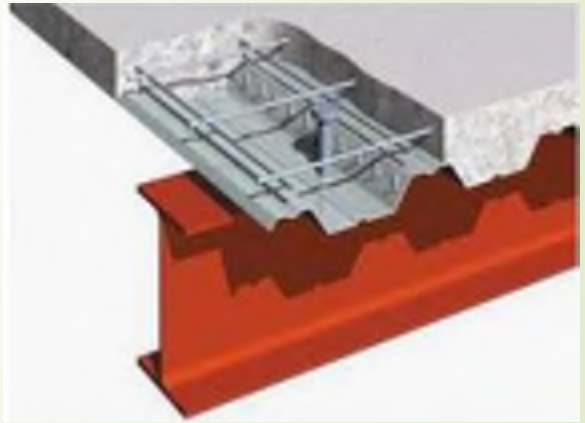
Note: The standard RMI/ANSI MH 16.1 referenced in section 2209.1. Storage Racks, specifically does not apply to cantilever racks. This new, direct reference to the cantilevered storage rack standard helps distinguish between cantilevered storage racks and more conventional systems commonly known as “pallet racks” or “selective racks”.

Chapter 22 – Cold-Formed Steel Decks

- **CHANGE**: A new Steel Deck Institute (SDI) standard addressing the design & construction of composite concrete slabs and steel decks has been added as a reference standard.

2210.1.1.3 Composite slabs on steel decks. Composite slabs of concrete and steel deck shall be permitted to be designed and constructed in accordance with SDI-C.

Note: Previous editions of the OSSC contained no specific provisions for the design of composite slabs on steel decks. The 2017 referenced standard is an update of the previous versions, and is available for download from the SDI website at: www.sdi.org .



Chapter 22- Cold-Formed Steel

- **CHANGE**: Section 2210 Cold-Formed Steel and 2211 Cold-Formed Steel Light Frame Construction have been updated to reflect the consolidated, 2015 editions of the AISI standards for cold-formed steel.

Note:

- ✓ AISI S240 supersedes AISI S200, S210, S211, S212, S213, and S214
- ✓ AISI S400 supersedes AISI S110 and seismic provisions of S213
- ✓ All AISI standards are available for free download at: www.aisistandards.org

Chapter 22 – Cold Formed Steel Framing

- **CHANGE**: Section 2211 Cold-Formed Steel Light Frame Construction seismic provisions have been updated to reflect the 2015 editions of the AISI standards for cold-formed steel framing.

2211.1.1.1 Seismic Design Categories B and C. Where a response modification coefficient, R, in accordance with ASCE 7, Table 12.2-1 is used for the design of cold-formed steel light-frame construction assigned to Seismic Design Category B or C, the seismic force resisting system shall be designed and detailed in accordance with the requirements of AISI S400.

> **Exception:** The response modification coefficient, R, designated for "Steel systems not specifically detailed for seismic resistance, excluding cantilever column systems" in ASCE 7, Table 12.2-1, shall be permitted for systems designed and detailed in accordance with AISI S240 and need not be designed and detailed in accordance with AISI S400.

2211.1.1.2 Seismic Design Categories D through F. In cold-formed steel light-frame construction assigned to Seismic Design Category D, E or F, the seismic force resisting system shall be designed and detailed in accordance with AISI S400.

Note:

- ✓ Design and detail in accordance with AISI S400 for seismic design except for SDC B and C when R=3.0 is used for design.

Chapter 23 – Cross-Laminated Timber (CLT)

- **CHANGE**: New definition and associated manufacturing standard for CLT.

SECTION 202
DEFINITIONS

CROSS-LAMINATED TIMBER. A prefabricated engineered wood product consisting of not less than three layers of solid-sawn lumber or structural composite lumber where the adjacent layers are cross oriented and bonded with structural adhesive to form a solid wood element.

2303.1.4 Structural Glued Cross-Laminated Timber. Cross-laminated timbers shall be manufactured and identified as required in ANSI/APA PRG 320.

https://www.apawood.org/publication-search?q=PRG+320-2018&tid=1

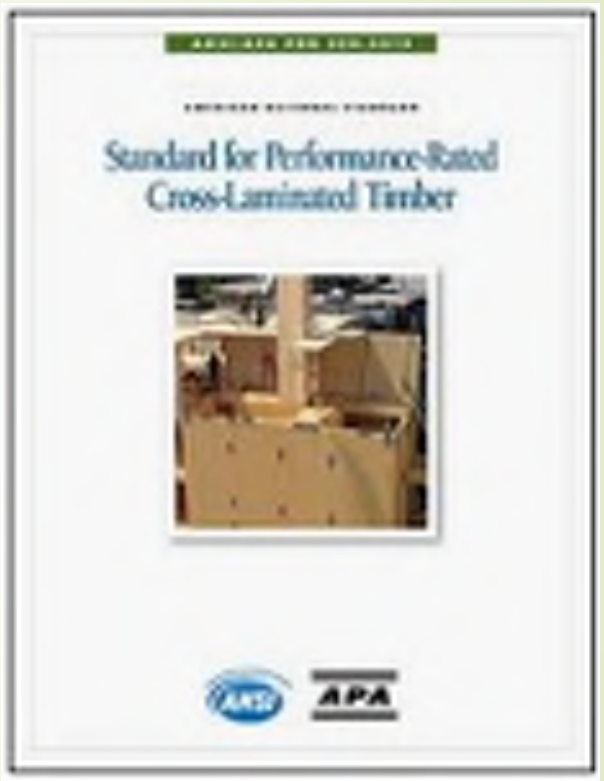
Chapter – Engineered Wood Rim Board

- **CHANGE**: New definition and association testing and evaluation standards for engineered wood rim boards.

2303.1.13 Engineered wood rim board. Engineered wood rim boards shall conform to ANSI/APA PRR 410 or shall be evaluated in accordance with ASTM D7672. Structural capacities shall be in accordance with ANSI/APA PRR 410 or established in accordance with ASTM D7672. Rim boards conforming to ANSI/APA PRR 410 shall be marked in accordance with that standard.

Chapter 2 Definitions:
ENGINEERED WOOD RIM BOARD. A full-depth structural composite lumber, wood structural panel, structural glued laminated timber or prefabricated wood I-joist member designed to transfer horizontal (shear) and vertical (compression) loads, provide attachment for diaphragm sheathing, siding and exterior deck ledgers, and provide lateral support at the ends of floor or roof joists or rafters.

https://www.apawood.org/ansi-apa-prr-410



Chapter 23 – Fire-Retardant-Treated Wood

- CHANGE: The process of manufacturing fire-retardant-treated wood has been clarified.

2303.2.2 Other means during manufacture. For wood products ~~produced~~ impregnated with chemicals by other means during manufacture, the treatment shall be an integral part of the manufacturing process of the wood product. The treatment shall provide permanent protection to all surfaces of the wood product. The use of paints, coating, stains or other surface treatments is not an approved method of protection as required in this section.

Notes: Clarifies that “produced by other means” was intended to imply impregnated with chemicals by means other than the “pressure process” prescribed by Section 2303.2.1, and was never intended to allow surface treatments.

Chapter 23 - Staples

- **CHANGE**: Added minimum bending moment values for staples.

2303.6 Nails and staples. Nails and staples shall conform to requirements of ASTM F1667, including Supplement 1. Nails used for framing and sheathing connections shall have minimum average bending yield strengths as follows: 80 kips per square inch (ksi) (551 MPa) for shank diameters larger than 0.177 inch (4.50 mm) but not larger than 0.254 inch (6.45 mm), 90 ksi (620 MPa) for shank diameters larger than 0.142 inch (3.61 mm) but not larger than 0.177 inch (4.50 mm) and 100 ksi (689 MPa) for shank diameters of ~~at least~~ not less than 0.099 inch (2.51 mm) but not larger than 0.142 inch (3.61 mm). Staples used for framing and sheathing connections shall have minimum average bending moments as follows: 3.6 in.-lbs (0.41 N-m) for No. 16 gage staples, 4.0 in.-lbs (0.45 N-m) for No. 15 gage staples, and 4.3 in.-lbs (0.49 N-m) for No. 14 gage staples.

Notes: Fixes and issue where staple manufacturers were able to produce code referenced staples which didn't meet minimum strength requirements.

Chapter 23 – Exterior Wall Sheathing

- **CHANGE**: Clarification of exterior wall sheathing design requirements (unless prescriptive per Section 2308) for out-of-plane wind loading and new, associated definition for *gable* was added.

2304.6 Exterior wall sheathing. ~~Except as provided for in Section 1405 weatherboarding or where stucco construction that complies with Section 2510 is installed, enclosed buildings shall be sheathed with one of the materials of the nominal thickness specified in Table 2304.6 or any other material of equivalent strength or durability.~~ Wall sheathing on the outside of exterior walls, including gables, and the connection of the sheathing to framing shall be designed in accordance with the general provisions of this code and shall be capable of resisting wind pressures in accordance with Section 1609.

Chapter 2 Definitions:

GABLE. The triangular portion of a wall beneath the end of a dual-slope, pitched, or mono-slope roof or portion thereof and above the top plates of the story or level of the ceiling below.

Note:

- ✓ Clarifies that unless prescriptive provisions of Section 2308 are used, the exterior wall sheathing and connections to framing must be designed to resist out-of-plane wind pressures in accordance with Section 1609.
- ✓ Clarifies that gables areas at end walls are included in this requirement.

Chapter 23- Nail-Laminated Decking

- **CHANGE**: New alternative fastening schedule for nail-laminated decking; accommodates fasteners used with nail guns for equivalency to the 20d common nail reference in 2304.9.3.2 for laminations with a 2” nominal member thickness.

New Table:

TABLE 2304.9.3.2
FASTENING SCHEDULE FOR MECHANICALLY LAMINATED DECKING USING LAMINATION OF 2-INCH NOMINAL THICKNESS

MINIMUM NAIL SIZE (Length x Diameter) (inches)	MAXIMUM SPACING BETWEEN FACE NAILS [a, b] (inches)		NUMBER OF TOENAILS INTO SUPPORTS[c]
	Decking Supports ≤ 48 inches o.c.	Decking Supports > 48 inches o.c.	
4 × 0.192	30	18	1
4 × 0.162	24	14	2
4 × 0.148	22	13	2
$3^1/_2$ × 0.162	20	12	2
$3^1/_2$ × 0.148	19	11	2
$3^1/_2$ × 0.135	17	10	2
3 × 0.148	11	7	2
3 × 0.128	9	5	2
$2^3/_4$ × 0.148	10	6	2
$2^3/_4$ × 0.131	9	6	3
$2^3/_4$ × 0.120	8	5	3

For SI: 1 inch = 25.4 mm

a. Nails shall be driven perpendicular to the lamination face, alternating between top and bottom edges.

b. Where nails penetrate through two laminations and into the third, they shall be staggered one-third of the spacing in adjacent laminations. Otherwise, nails shall be staggered one-half of the spacing in adjacent laminations.

c. Where supports are 48 inches on center or less, alternate laminations shall be toenailed to alternate supports; where supports are spaced more than 48 inches on center, alternate laminations shall be toenailed to every support.

Chapter 23 – Ring Shank Nails

- **CHANGE**: Alignment with IRC for allowance of roof sheathing ring shank nails(RSRS) as equal or better than 8d common nails for 6/12 roof sheathing attachment.

TABLE 2304.10.1—continued
FASTENING SCHEDULE

DESCRIPTION OF BUILDING ELEMENTS	NUMBER AND TYPE OF FASTENER	SPACING AND LOCATION	
Wood structural panels (WSP), subfloor, roof and interior wall sheathing to framing and particleboard wall sheathing to framing[a]			
		Edges (inches)	Intermediate supports (inches)
30. $^{3}/_{8}$″ – $^{1}/_{2}$″	6d common or deformed (2″ × 0.113″) (subfloor and wall)	6	12
	8d common or deformed ($2^{1}/_{2}$″ × 0.131″) (roof) or RSRS-01 ($2^{3}/_{8}$″ × 0.113″) nail (roof)[d]	6	12
	$2^{3}/_{8}$″ × 0.113″ nail (subfloor and wall)	6	12
	$1^{3}/_{4}$″ 16 gage staple, $^{7}/_{16}$″ crown (subfloor and wall)	4	8
	$2^{3}/_{8}$″ × 0.113″ nail (roof)	4	8
	$1^{3}/_{4}$″ 16 gage staple, $^{7}/_{16}$″ crown (roof)	3	6
31. $^{19}/_{32}$″ – $^{3}/_{4}$″	8d common ($2^{1}/_{2}$″ × 0.131″); or 6d deformed (2″ × 0.113″) (subfloor and wall)	6	12
	8d common or deformed ($2^{1}/_{2}$″ × 0.131″) (roof) or RSRS-01 ($2^{3}/_{8}$″ × 0.113″) nail (roof)[d]	6	12
	$2^{3}/_{8}$″ × 0.113″ nail; or 2″ 16 gage staple, $^{7}/_{16}$″ crown	4	8

d. RSRS-01 is a Roof Sheathing Ring Shank nail meeting the specifications in ASTM F1667.

Chapter 23 – Staples in Treated Wood

- **CHANGE**: Modification in Section 2304.10.5 that requires stainless steel staples in preservative-treated and/or fire-retardant-treated wood.

2304.10.5.1 Fasteners and connectors for preservative- treated wood. Fasteners, including nuts and washers, in contact with preservative-treated wood shall be of hot dipped zinc-coated galvanized steel, stainless steel, silicon bronze or copper. Staples shall be of stainless steel. Fasteners other than nails, staples, timber rivets, wood screws and lag screws shall be permitted to be of mechanically deposited zinc-coated steel….

Notes:

- ✓ Staples have been introduced as an alternate to nails over the past couple of code cycles.
- ✓ Staples used in Preservative-treated or FR treated wood are required to be stainless steel.
- ✓ Hot-dipped zinc-coated galvanized not allowed for staples due to the thin gauge being more susceptible to corrosion environments than other fastners.

Chapter 23 – Protection Against Decay

- **Change**: Modifications to Section 2304.12 for clarification regarding the triggers for use of *preservative treated* or naturally durable wood.

2304.~~11~~12 Protection against decay and termites. Wood shall be protected from decay and termites in accordance with the applicable provisions of Sections 2304.~~11~~12.1 through 2304.~~11~~12.7.

Notes:

- ✓ Entire section reorganized for clarity.
- ✓ Clarifies when waterborne preservatives are required and when they are not.

Chapter 23- Balconies & Decks with Impervious Moisture Barrier

- **Change**: Modification requiring drainage and ventilation in enclosed framing beneath a balcony or elevated walking surface.

2304.12.2.5 Supporting members for permeable floors and roofs. Wood structural members that support moisture-permeable floors or roofs that are exposed to the weather, such as concrete or masonry slabs, shall be of naturally durable or preservative treated wood unless separated from such floors or roofs by an impervious moisture barrier. The impervious moisture barrier system protecting the structure supporting floors shall provide positive drainage of water that infiltrates the moisture-permeable floor topping.

2304.12.2.6 Ventilation beneath balcony or elevated walking surfaces. Enclosed framing in exterior balconies and elevated walking surfaces that are exposed to rain, snow or drainage from irrigation shall be provided with openings that provide a net free cross-ventilation area not less than 1/150 of the area of each separate space.

110.3.6 Weather-exposed balcony and walking surface waterproofing. Where balconies or other elevated walking surfaces are exposed to water from direct or blowing rain, snow or irrigation, and the structural framing is protected by an impervious moisture barrier, all elements of the impervious moisture barrier system shall not be concealed until inspected and approved.
Exception: Where special inspections are provided in accordance with Section 1705.1.1, Item 3.

Chapter 23 Header and Girder Spans

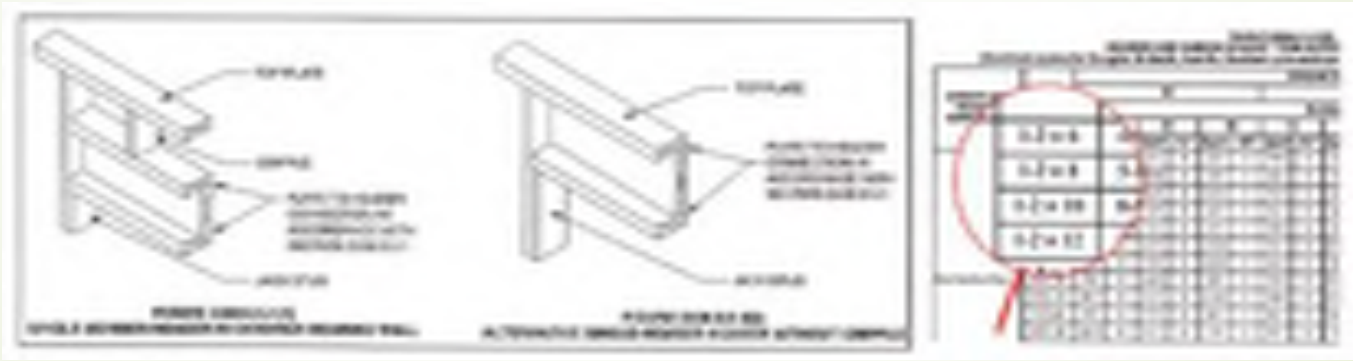
- Change: New footnote “f” in Table 2308.4.1.1(1) requiring 30% reduction in listed spans when the top of the header is dropped below the top plate (with cripple studs above); the listed spans assume out-of-plane bracing from top plate / perpendicular floor or roof framing above.

f. Spans are calculated assuming the top of the header or girder is laterally braced by perpendicular framing. Where the top of the header or girder is not Laterally braced (for example, cripple studs bearing on the header), tabulated spans for headers consisting of 2 × 8, 2 × 10, or 2 × 12 sizes shall be multiplied by 0.70 or the header or girder shall be designed.

Chapter 23 – Single Member Headers

- **CHANGE**: Modification allowing single member wood headers for conventional light-frame construction; aligns with 2017 ORSC

2308.5.5.1 Openings in exterior bearing walls…..
Single-member headers of nominal 2-inch (51 mm) thickness shall be framed with a single flat 2-inch-nominal (51 mm) member or wall plate not less in width than the wall studs on the top and bottom of the header in accordance with Figures 2308.5.5.1(1) and 2308.5.5.1(2) and face nailed to the top and bottom of the header with 10d box nails [3 inches × 0.128 inches (76 mm × 3.3 mm)] spaced 12 inches (305 mm) on center.



Notes:

- ✓ Intended to accommodate greater insulation thickness in cavity.
- ✓ See Table 2308.4.1.1(1) for allowable spans.

Chapter 24 – Safety Glazing Stair Landing

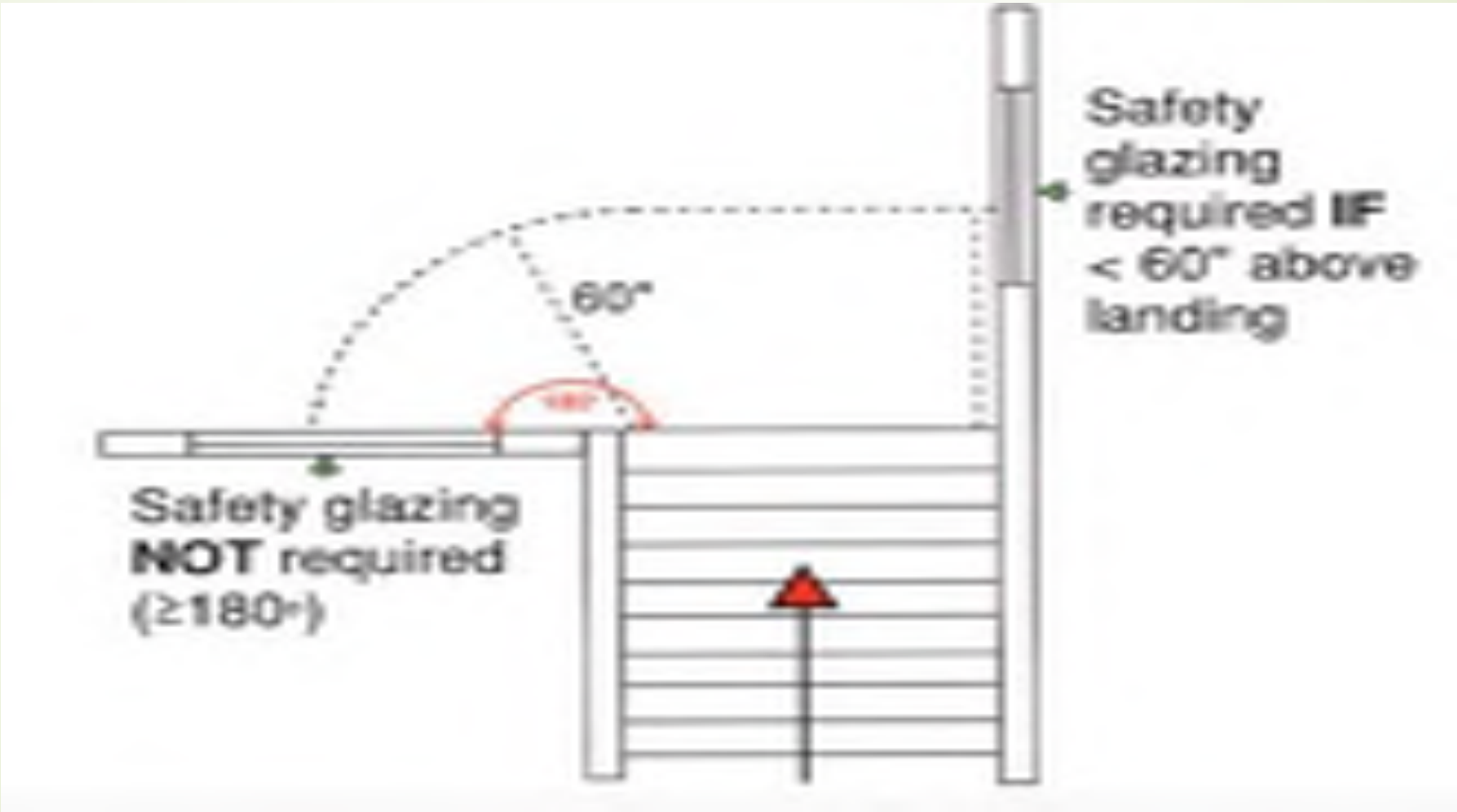
- **Change**: Safety glazing requirements in proximity to the bottom stair landing have been aligned with similar recent changes of the ORSC.

2406.4.7 Glazing adjacent to the bottom stairway landing. Glazing adjacent to the landing at the bottom of a stairway where the glazing is less than 60 inches (1524 mm) above the landing and within a ~~36 inches~~ 60-inch (1524 mm) horizontal~~ly~~ arc that is less than 180 degrees (3.14 rad) from the bottom tread nosing shall be considered to be a hazardous location.

Exception: Glazing that is protected by a guard complying with Sections 1015 and 1607.8 where the plane of the glass is greater than 18 inches (457 mm) from the guard.

Chapter 24 – Safety Glazing Stair Landing

- **Change**: Safety glazing requirements in proximity to the bottom stair landing have been aligned with similar recent changes of the ORSC.



Chapter 29 – Separate Facilities

- **CHANGE**: Additional clarifications have been retained and added to encourage flexibility for this NON LIFE SAFETY code consideration.

2902.2 Separate facilities. Where plumbing fixtures are required, separate facilities shall be provided for each sex.

Exceptions:

1. Separate facilities shall not be required for dwelling units and sleeping units.
2. Separate facilities shall not be required in structures or tenant spaces with a total occupant load, including both employees and customers, of ~~15~~ 30 or fewer. **One single-user toilet room shall be permitted.**
3. Separate facilities shall not be required in mercantile occupancies in which the maximum occupant load is 100 or fewer.
4. Separate facilities shall not be required in business occupancies in which the maximum occupant load, including both employees and customers, is ~~25~~ 50 or fewer. **One single-user toilet room shall be permitted**.
5. **Separate facilities shall not be required where the operational needs of a facility necessitate other approved configurations.**

Chapter 29 – Quick Transaction Tenants

- **CHANGE**: Additional clarifications have been retained and added to encourage flexibility for this NON LIFE SAFETY code consideration.

2902.3 Employee and public toilet facilities. For structures and tenant spaces intended for public utilization, customers, patrons and visitors shall be provided with public toilet facilities. Employees associated with structures and tenant spaces shall be provided with toilet facilities. The number of plumbing fixtures located within the required toilet facilities shall be provided in accordance with Section 2902 for all users. Employee toilet facilities shall be **either separate or combined** employee and public toilet facilities.

Exception: Public toilet facilities shall not be required for:

1. Parking garages where operated without parking attendants.
2. Structures and tenant spaces intended for quick transactions, including takeout, pickup and drop-off, having a public access area less than or equal to 300 square feet (28 m2).

Chapter 29 – Separate Facilities

- **CHANGE**: Additional clarifications have been retained and added to encourage flexibility for this NON LIFE SAFETY code consideration.

2902.4 Signage. Required public facilities shall be provided with signs that designate the sex where separate facilities are required, ~~as required by Section 2902.2~~ unless otherwise approved by the building official. Signs shall be readily visible and located near the entrance to each toilet facility. Signs for accessible toilet facilities shall comply with Section 1111.

2902.4.1 Directional signage. Directional signage indicating the route to the required public toilet facilities shall be posted in a lobby, corridor, aisle or similar space, such that the sign can be readily seen from the main entrance to the building or tenant space.

Chapter 30 – 3006.2.1 Rated Corridors

- **CHANGE**: Model Clarification related to elevator hoistways opening into rated corridors.

3006.2.1 Rated corridors. Where corridors are required to be fire-resistance rated in accordance with Section 1020.1, elevator hoistway openings shall be protected in accordance with Section 3006.3.

702.1 Multiple use fire assemblies.
Fire assemblies that serve multiple purposes in a building shall comply with all of the requirements that are applicable for each of the individual fire assemblies

Sprinklered, non high-rise	Nonsprinklered (3 story hoistway max)
Group R, OL >50	Groups A, B, E, F, M, S and U, OL >30
Groups H-1, H-2, and H-3	
Groups H-4 and H-5, OL >20	

Note:

- ✓ Clarifies 702.1 requirement, as elevator doors do not typically address air leakage
- ✓ Three options for conformance:
- ❑ Enclosed elevator lobby / Additional doors / Pressurized hoistway

Chapter 31 – 3113 Temporary Special Event Structures

- **CHANGE**: Addition for temporary special event structures greater than 400 square feet.

Definitions:

TEMPORARY SPECIAL EVENT STRUCTURE. Any temporary ground-supported structure, platform, stage, stage scaffolding or rigging, canopy, tower supporting audio or visual effects equipment or similar structures.

ANSI E1.21 – 2013: Entertainment Technology: Temporary Ground Supported Overhead Structures Used to Cover the Stage Areas and Support Equipment in the Production of Outdoor Entertainment Events.

Notes:

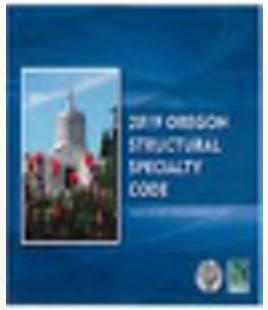
- ✓ Applies to structures greater than 400 Sq Ft.
- ✓ Limited to six consecutive weeks or less.
- ✓ Requires design by a registered design professional.
- ✓ Designed to OSSC and ANSI E1.21.

Chapter 34 – Existing Buildings

- **CHANGE**: Chapter 34 was removed in the 2015 IBC and replaced exclusively by the IEBC. Chapter 34 is retained and outlines mandatory modifications of the IEBC.

102.6 Existing structures. The legal occupancy of any structure existing on the date of adoption of this code shall be permitted to continue without change, except as otherwise specifically provided in this code~~., the International Existing Building Code, the International Property Maintenance Code or the International Fire Code.~~

102.6.1 Compliance. The repair, alteration, change of occupancy, and addition to existing buildings shall comply with the International Existing Building Code as amended by Chapter 34 of this code.



PLUS

Chapter 34 – Existing Buildings

- **CHANGE**: Chapter 34 was removed in the 2015 IBC and replaced exclusively by the IEBC. Chapter 34 is retained and outlines mandatory modifications of the IEBC.

Existing building and rehabilitation codes – brief Oregon history

1990's under UBC format until 2004 OSSC (effective October 1 of 2004). Chapter 34 – Existing Structures in the UBC was less than two pages.

Under the I-Codes, this chapter became more robust and comprehensive as portions of the merging national building codes were combined: (BOCA, SBCCI and ICBO).

The 2003 IEBC was originally based on New Jersey's Code for Rehabilitation of Existing Buildings' – which included the Uniform Code for Building Conservation (ICBO) and provisions from Chapter 34 of the BOCA National Building Code. The Nationally Applicable Recognized Rehabilitation Provisions (NARRP) published by H.U.D. was also incorporated into the initial iteration.

The 2006 IEBC was the first iteration permitted to be used in Oregon as a Statewide Alternate Method (08-05), in 2008.

Chapter 34 – Existing Buildings

- **CHANGE**: Chapter 34 was removed in the 2015 IBC and replaced exclusively by the IEBC. Chapter 34 is retained and outlines mandatory modifications of the IEBC.

Existing building and rehabilitation codes – brief Oregon history (continued)

Up until the 2019 OSSC, customers had the choice to use either the “prescriptive” Chapter 34 approach within the body of the OSSC of the Statewide Alternate Method permitting the use of the IEBC, as amended.

The ICC Board of Directors chose to delete Chapter 34 from the IBC prior to publishing the 2015 iteration, but added the “prescriptive” Chapter 34 provisions into the IEBC as an optional compliance path.

Our Building Codes Structures Board, the advisory board for OSSC adoption, had a choice to either:

- ✓ Retain existing Chapter 34 as an Oregon amendment, or;
- ✓ Recognize the IEBC as the compliance path for existing buildings

The IEBC is now the recognized compliance path for existing buildings in Oregon, as modified by the Chapter 34 provisions.

Chapter 34 – Existing Buildings

- **CHANGE**: Chapter 34 was removed in the 2015 IBC and replaced exclusively by the IEBC. Chapter 34 is retained and outlines mandatory modifications of the IEBC.

***Existing building compliance principles – summarized*:**

1. No unnecessary increase to construction costs.
2. Support the use and reuse of existing buildings legally in existence.
3. Consider those reasonable safeguards when rehabilitating is undertaken.
4. Welcome the use of new materials, products, and methods of construction.
5. Provide optional predictable paths for the customer to consider.
6. Allow building owners to repair existing buildings to correct damage without mandating other “upgrades” unrelated to the damage correction.
7. Ensure the existing building, together with it’s alteration or rehabilitation, is no less conforming with the current code that it was prior to the new work.

Chapter 34- Existing Buildings

OSSC Section	IEBC Chapter Modified	IEBC Chapter Subject
3401	Chapter 1	Administrative provisions
3402	Chapter 2	Definitions
3403	Chapter 3	Provisions for **all** compliance methods
3404	**Chapter 4**	**Repairs**
3405	**Chapter 5**	**Prescriptive compliance method (Ch 34)**
3406	Chapter 6	Classification of work (for **work area**)
3407	Chapter 7	**Work area** – Level 1 Alterations
3408	Chapter 8	**Work area** – Level 2 Alterations
3409	Chapter 9	**Work area** – Level 3 Alterations
3410	Chapter 10	**Work area** – Change of Occupancy
3411	Chapter 11	**Work area** – Additions
3412	Chapter 12	**Work area** – Historic buildings
3413	**Chapter 13**	**Performance compliance method**

Chapter 34 – Existing Buildings

- **CHANGE**: Scoping of Section 3401, general organization of modifications.

SECTION 3401
MODIFICATIONS TO IEBC CHAPTER 1
SCOPE AND ADMINISTRATION

3401.1 Administration and scope, IEBC Chapter 1. IEBC Chapter 1 is deleted in its entirety. The provisions of Chapter 1 of the Building Code shall apply. The text of the 2018 International Existing Building Code (IEBC) shall be modified as indicated in this chapter.

3401.2 Local seismic rehabilitation. See ORS 455.020 (4).

455.020 Purpose; scope of application; exceptions; scope of rules; fees by rule.

(4) This chapter and any specialty code does not limit the authority of a municipality to enact regulations providing for local administration of the *state building code*; local appeal boards; fees and other charges; abatement of nuisances and dangerous buildings; enforcement through penalties, stop-work orders or other means; or minimum health, sanitation and safety standards for governing the use of structures for housing, except where the power of municipalities to enact any such regulations is expressly withheld or otherwise provided for by statute. Pursuant to the regulation of dangerous buildings, a municipality may adopt seismic rehabilitation plans that provide for phased completion of repairs that are designed to provide improved life safety but that may be less than the standards for new buildings. [Formerly 456.755; 1991 c.227 §2; 1991 c.310 §2; 1995 c.304 §1; 1995 c.400 §5; 1999 c.1045 §13; 1999 c.1082 §11; 2001 c.710 §8]

Chapter 34 – Existing Buildings

- **CHANGE**: Section 3403 – Provisions for all compliance methods

SECTION 3401
MODIFICATIONS TO IEBC CHAPTER 1
SCOPE AND ADMINISTRATION

APPLICATION: Chapter 3 of the IEBC including modifications by Section 3403 of the OSSC applies to all compliance methods for existing buildings.

This chapter includes provisions covering:

- ✓ Repairs, alterations, additions, change of occupancy
- ✓ Accessibility for existing buildings
- ✓ Structural design loads, structural evaluation and design procedures
- ✓ Fire Alarms, smoke alarms and carbon monoxide alarm requirements**

** The fire, smoke and CO alarm requirements are found in Chapter 34 of the OSSC, Section 3403. These provisions only apply where specifically required by the compliance path selected. Language from the 2018 International Fire Code was used.

Chapter 34 – Existing Buildings

- CHANGE: Section 3403 – Fire alarms, smoke alarms & CO alarms

IEBC SECTION 306
FIRE ALARMS

306.1 Fire alarm systems. Where required by the compliance path selected, an *approved fire alarm system* shall be installed in existing buildings and structures in accordance with IEBC Sections 306.1.1 through 306.1.6 and provide occupant notification in accordance with Section 907.5 of the *Building Code* unless other requirements are specified by other sections of this chapter.
(See Exceptions)

IEBC SECTION 307
SMOKE ALARMS

307.1 Single- and multiple-station smoke alarms. Where required by the compliance path selected, single- and multiple-station smoke alarms shall be installed in existing Group I-1 and R occupancies in accordance with IEBC Sections 307.1.1 through 307.1.3.
(See Exceptions)

Chapter 34 – Existing Buildings

- CHANGE: Section 3403 – Fire Alarms, smoke alarms, & CO alarms

SECTION 3403
MODIFICATIONS TO IEBC CHAPTER 3
PROVISIONS FOR ALL COMPLIANCE METHODS

IEBC SECTION 308
CARBON MONOXIDE ALARMS

308.1 Carbon monoxide alarms. Where required by the compliance path selected, carbon monoxide alarms shall be installed in existing dwelling units and sleeping units where those units include any of the conditions identified in Sections 915.1.2 through 915.1.6 of the *Building Code*. The carbon monoxide alarms shall be installed in the locations specified in Section 915.2 of the *Building Code* and the installation shall be in accordance with Section 915.4 of the *Building Code*.

(See Exceptions)