IBC Significant Changes Report						
2021 Code Section	2018 Code Section	Title or Subject	Reviewers Comments	Cost (Y/N)	Amend Needed (Y/N)	TAG Comments / Recommendations
Chapter 15—Roof Assemblies and Rooftop Structures						
TAG Member: Chris						
1502.1	1502.1	General	This section provides reference to Chapter 11 of International Plumbing Code.	N	Y	Change the reference with a reference to Uniform Plumbing Code
1502.2	1502.2	Secondary (emergency overflow) drains or scuppers.	This section provides reference to Chapter 11 of International Plumbing Code.	N	Y	Change the reference with a reference to Uniform Plumbing Code
1503.3.1 & 1503.3.2	1503.3	Parapet Walls	Requirements added to clarify coping not to impact rating of fire wall and to provide drainage	N	N	
1504.3.1.3	None	Air permeability testing	Gives default coefficient for tile roofs	N	N	
1504.5	1504.4	Ballasted low-slope single-ply roof systems.	All requirements applicable to the design and construction of ballasted low-slope roofs are now contained in the ANSI/ SPRI RP-4 standard.	N	N	
1504.9	None	Wind resistance of aggregate-surfaced roofs.	Requirement for parapet to keep aggregate from blowing around. Unclear how common this roof type is.	Y	N	Past provisions regulating aggregate blow-off from aggregate-surfaced roofs were not based on a quantitative analysis of observed roofing system performances in real wind events. Rather, the requirements were based on variations in surface pressure with building height. Fully revised Section 1504.9 is now based on wind speeds for blowoff and only deals with smaller aggregate used for the surfacing of built-up roofs (BUR) and sprayed polyurethane foam (SPUF) roofs, both of which are different systems than ballasted roofs. Table 1504.9 considers aggregate size, roof height and wind speed to determine the minimum required parapet height.
1507.3.1	1507.3.1	Clay and concrete tile	New exception to solid sheathing requirement in seismic design A-C	Reduced	N	
1509	None	Roof Coatings	New section to list appropriate ASTM standards for various coatings	N	N	
1511.2.2	1510.2.2	Use Limitations	Clarification that penthouses may include spaces used to access elevators	N	N	
Chapter 16—Structural Design						
TAG Member: Sue Coffman						
Table 1604.5	Table 1604.5	Table 1604.5 – Risk Category of Buildings and Other Structures	Mixed occupancy buildings with assembly spaces are now designated as Risk Category III when the total public assembly occupant load is greater than 2,500 people	N	N	Don't need the existing amendments in this table.
1605	1605	Load combinations	The strength design and allowable stress design load combinations have been deleted while direct reference to Chapter 2 of ASCE 7 has been added. (Sections 1605.1 and 1605.2)	N	N	

1606.2	1606.2	Weight of materials of construction	Modifies the title and the text to specify that Section 1606.2 applies to weight of materials of construction and doesn't include fixed service equipment.	N	N	
1606.3	None	Weight of fixed service equipment	New section addressing weight of fixed service equipment.	N	N	
1606.4	None	Photovoltaic panel systems	New section addressing photovoltaic panel systems.	N	N	Historically, the code has not addressed variable content weight in dead loads nor explicitly described certain loads. The weights of vegetative roofs, solar panels and fixed service equipment have been clarified to provide consistency between the IBC and ASCE 7.
1606.5	None	Vegetative and landscaped roofs	New section addressing vegetative and landscaped roofs.	N	N	
1607.11.4	1607.10.4	Fall arrest, lifeline, and rope descent system anchorages.	Rope descent system anchorage has been added to the section on fall arrest and lifeline anchorage.	Y	N	In 2017, the Occupational Safety and Health Administration (OSHA) adopted new regulations in Section 1910.27 that specifically require all anchorages of rope descent systems (such as boatswain's chairs) to be able to support 5,000 pounds in any direction for each attached worker. Since OSHA has added specific language addressing rope descent systems, and because the systems and loads are basically identical to those for other fall arrest lines, Section 1607.11.4 has been updated to mirror OSHA's requirements and includes minimum design loads for rope descent systems.
1607.17	None	Fixed ladders	Adds requirements for live loads for fixed and ship's ladders.	N	N	Live loads to be used in the design of ladders have not previously been specified in the IBC; however, Requirements for fixed ladders are now coordinated between the IBC and ASCE 7. Ladder live loads contained in ASCE 7 have been added to the IBC. The addition of live load values provides the necessary load values in the IBC but maintains the accompanying design information within ASCE 7.
1608.2	1608.2	Ground snow loads	The ground snow load map has been updated to provide consistency with ASCE 7-16 snow maps by adding a reference to ASCE 7 snow tables in states with large case study areas.	N	N	
1610.2	None	Uplift loads on floor and foundations	New section. Concrete slabs on ground must now be designed for uplift due to soil expansion and water pressure in areas prone to soil movement or a shallow water table.	Y	N	Section 1610 has not previously addressed uplift loads from hydrostatic pressure or expansive soils. Requirements addressing uplift forces are now to be applied when appropriate and included in the design. The hydrostatic pressure provisions include a required determination of loads based on measuring to the underside of the construction per ASCE 7, Section 3.2.2.
1611.1	1611.1	Design rain loads	Secondary drainage system rain loads have been updated to be consistent with ASCE 7.	Y	N	
1612.4	1612.4	Flood hazard documentation	The design of hydrostatic loads on breakaway walls is required when the walls do not meet the requirements of ASCE 24.	Y	N	
Chapter 17—Special Inspections and Tests						
TAG Member: Sue Coffman						
1704.6	1704.6	Structural observations	Because the definition of structural observations in the 2018 IBC was considered	N	N	

	1704.6.1	1704.6.1	Structural observations for structures	vague and disconnected from Chapter 17 requirements, a new description in Section 1704.6 provides clearer direction for the	N	N	
	Table 1705.3	Table 1705.3	Required Special Inspections and Tests of Concrete Construction	Special inspection requirements for precast concrete diaphragm connections have been added to the list of general concrete special inspections and tests.	Y	N	
	1705.4.1	1705.4.1	Glass unit masonry and masonry veneer in Risk Category IV.	Special inspection of empirically designed masonry in Risk Category IV buildings is no longer required because the masonry standard, TMS 402, Building Code Requirements and Specification for Masonry Structures, does not allow Risk Category IV buildings to be designed following the empirical design method.	N	N	
	1705.5.3	None	Mass timber construction	Special inspection requirements have been added to address the anchorage and connection of mass timber structural elements.	Y	N	
	1705.2	None	Sealing of mass timber		Y	N	
	1705.1	None	Structural Integrity of Deep Foundation Elements.	When installed deep foundation elements appear to be understrength due to quality, location or alignment, an engineering assessment must now be done.	Y	N	Safety measure
	1705.13.7	1705.12.7	Storage racks	Steel storage rack special inspection duties have been clarified with the addition of special inspection tasks.	N	N	
	1705.18	1705.17	Fire-resistant penetrations and joints.	The installation of firestops, fire-resistant joint systems and perimeter fire barrier systems in residential-use buildings now requires special inspection in those Group R fire areas having an occupant load exceeding 250.	Y	N	Too much work for inspector; the special inspection saves time during construction. Also provides clarity.
	1709.5	1709.5	Exterior window and door assemblies	Testing standards and analysis procedures have been clarified for exterior door and window assemblies, including garage door assemblies.	N	N	
	1709.5.3	None	Windborne debris protection	Required windborne debris protection for glazing has been clarified through the addition of a design standard and a definition of impact protective systems.			
	1709.5.3.1	None	Impact protective systems testing and labeling		N	N	
Chapter 18—Soils and foundations							
TAG Member: Sue Coffman							
	1807.2.2	1807.2.2	1807.2.2 Design lateral soil loads	Amendment clarifies backfill height is measured from bottom of footing.	N	Y	Keep – clarification from 2021 codes

	1802.1	1802.1	General	Amendment adds availability of using load combinations in ASCE 7, Section 2.4 along with 1603.	N	N	Adding Reference
	1803.5.7	1803.5.7	Excavation near foundations	Amendment clarifies "support" vs. specifying underpinning and adds "excavation retaining systems" under options to support excavation.	N	N	
	1804.1	1804.1	Excavation near foundations	Clarifies that the intent is to require assessment in accordance with 1803.5.7.	N	N	Adding Reference
	1806.1	1806.1	Load Combinations	Amendment adds availability of using load combinations in ASCE 7, Section 2.4 along with 1605.3.	N	N	Adding Reference
	1807.2.4	N/A	Segmental Retaining Walls	Added new section on Segmental Retaining walls to comply with ASTM C1372	N	N	
	1808.3	1808.3	Design loads	Amendment adds availability of using load combinations in Section 2.3 or 2.4 of ASCE 7	N	N	
	1808.3.1	1808.3.1	Seismic overturning	Amendment adds availability of using load combinations in Section 2.3 or 2.4 of ASCE 7	N	N	
	1808.8.1	1808.8.1	Concrete or grout strength of mix proportioning	Removed section specifying requirements when concrete is placed through a funnel hopper.	N	N	
	1809.5.1	N/A	Frost protection at required exits	New section requiring frost protection at required exits so the door will swing without obstruction.	Y	N	
	1810.3.1.1	1810.3.1.1	Design methods for concrete elements.	Amendment adds availability of using load combinations in ASCE 7, Section 2.4 along with 1605.3.	N	N	Adding Reference
	1810.3.3.1	1810.3.3.1	Allowable axial load.	Adds exception to load testing if approved by Building Official	N	N	
	1810.3.3.1.9	1810.3.3.1.9	Helical piles	Additional design criteria for helical piles	Y	N	
	1810.3.4	1810.3.4	Subsiding soils or strata	Section renamed to add "or strata" to title and in body of code section.	N	N	
	1810.3.5.3.1	1810.3.5.3.1	Structural steel H-piles	Requirement added for structures assigned to Seismic Design Category D, E or F, design for detailing of H-piles shall also conform to the requirements of AISC 341.	Y	N	
	1810.3.6	1810.3.6	Splices	Added exception for buildings assigned to Seismic Design Category A or B, splices need not comply with the 50- percent tension and bending strength requirements where justified by supporting data	N	N	
	1810.3.8	1810.3.8	Precast concrete piles	Specified precast concrete piles shall be designed and detailed in accordance with ACI 318 with exceptions for Seismic design category C and D&F.	N	N	
	1810.3.9.2	1810.3.9.2	Required reinforcement	Amendment adds availability of using load combinations in Section 2.3 of ASCE 7	N	N	
	1810.3.9.4.1	1810.3.9.4.1	Seismic reinforcement in Seismic Design Category C	Amendment adds availability of using load combinations in Section 2.3 of ASCE 7	N	N	

1810.3.9.4.2	1810.3.9.4.2	Seismic reinforcement in Seismic Design Categories D through F	Amendment adds availability of using load combinations in Section 2.3 of ASCE 7	N	N	
1810.3.11.1	1810.3.11.1	Seismic Design Categories C through F.	Removed sections and referred to design of ACI 318	N	N	
1810.3.11.2	1810.3.11.2	Seismic Design Categories D through F.	New item #3 with requirements for connection of pile caps to H-piles	N	N	
1810.3.12	1810.3.12	Grade Beams	Design requirement changed to just ACI 318 with ASCE 7 as an exception for overstrength factor	N	N	
1810.3.13	1810.3.13	Seismic Ties	Design requirements changed to just ACI 318	N	N	
1810.4.1.2	1810.4.1.2	Casings	Section renamed.	N	N	
1810.4.1.3	1810.4.1.3	Driving near uncased concrete	Removed sentence about installing in heaving soils	N	N	
1810.4.5	1810.4.5	Vibratory Driving	Added 2 exceptions for vibratory driving	N	N	
1810.4.11	1810.4.11	Helical Piles	Added requirement for manufacturer rating for torque	N	N	
Chapter 19—Concrete						
TAG Member: Sue Coffman						
1901.2	1901.2	Plain and reinforced concrete	Removed requirement for precast concrete diaphragms for Seismic design categories C-F.	N	N	
1901.3	1901.3	Anchoring to concrete	Removed screw anchors	N	N	
1901.7	N/A	Tolerances for structural concrete	New section added	N	N	
1902	1902	Coordination of Terminology	Renamed section and added new subsections on Design Displacement and Special Structural Wall	N	N	
1903.1	1903.1	General	Removed Exception for use of ASTM standards	N	N	
1906	1906	Footings for light framed construction	New section that replaces 2018 section titled "Structural Plain Concrete" comprised of an exception for plain concrete in 2018 code	N	N	
1908	1908	Shotcrete	Many subsections removed and just refers to compliance with ACI 318	N	N	
Chapter 20—Aluminum						
TAG Member: Sue Coffman						
No Changes						
Chapter 21—Masonry						
TAG Member: Sue Coffman						

	2109.2.4.8	2109.2.4.8	Exterior finish	Several subsections added with requirements for plaster	N	N	
				Chapter 22—Steel			
TAG Member: Sue Coffman							
	2205.2.1.1	2205.2.1.1	Seismic Design Category B or C	Amendment added for beam to column moment connections in special and intermediate moment frames	N	N	
	2205.2.1.2	2205.2.1.2	Seismic Design Category D, E or F.	Amendment added for beam to column moment connections in special and intermediate moment frames	N	N	
	2209	2209	Steel Storage Racks	added new section 2209.3 Certification requiring a certificate of compliance for certain storage racks	Y	N	Cert of Compliance adds to cost
				Chapter 23—Wood			
TAG Member: Sue Coffman							
	2303.2	2303.2	Fire-retardant treated wood	minor amendments related to fire testing requirements	N	N	
	2303.4	2303.4	Trusses	amendments added for permanent individual truss member restraint and diagonal bracing section, including 5 new figures -2303.4.1.2(1-5) with installation diagrams and alternatives	N	N	
	2303.7	2303.7	Shrinkage	Clarification of shrinkage as a result of changes in the wood moisture after installation	N	N	
	2304.9	2304.9	Lumber Decking	Amendment to allow other lumber decking patterns and connections with engineering substantiations	N	N	
	2304.10.1	N/A	Connection fire-resistance ratings	New section with requirements for fire-resistance ratings for connections in Type IV-A, IV-B, or IV-C construction	N	N	
	Table 2304.10.2	Table 2304.10.2	Fastening Schedule	Minor additions/changes to fastener types for various building elements	N	N	
	2304.11.4	2304.11.4	Roof decks	Amendment to allow concealed spaces complying w/Section 602			
	N/A	2304.12.2.4	Laminated timbers	Section removed from 2021 code	N	N	
	2304.12.2.6	2304.12.2.6	Ventilation beneath balcony or elevated walking surfaces	Changed to "weather exposed surfaces" vs.rain, snow, etc.	N	N	
	Table 2306.1	N/A	Standards for design and construction of wood elements in structures using allowable stress design	New table added identifying all the standards	N	N	

Table 2306.1.4	Table 2306.1.4	Allowable loads for lumber decking	Revised load calculation for 3- and 4-inch decking	N	N	
2308.5.9	2308.5.9	Cutting and notching.	Terminology changed to "depth" of wood stud	N	N	
2308.5.10	2308.5.10	Bored holes.	Terminology changed to "depth" of wood stud	N	N	
2308.6.6.2	2308.6.6.2	Cripple wall bracing in Seismic Design Categories D and E.	Solid blocking of cripple wall for full perimeter of dwelling and interior walls on foundations. Exception for WSP and DWB to reduce bracing removed	Y	N	
TABLE 2308.7.3.1	TABLE 2308.7.3.1	Rafter tie connections	Table reconfigured with minor changes to # of nails in some categories	Y	N	
TABLE 2308.7.3.1(1)	N/A	Heel Tie Connection adjustment factors	New table in 2020 code	Y	N	
Chapter 24—Glass and glazing						
TAG Member: Chris						
2403.3	2403.3	Framing	Changes to how to calculate if glass is firmly supported based on glass edge length	N	N	
2405.2	2405.2	Slope Glazing – Allowable Materials	Clarification that laminated glass and plastic materials do not require screening and are not limited by height restrictions	N	N	
Chapter 25—Gypsum board						
TAG Member: Mark						
2510.6; 2510.6.1; 2510.6.2	2510.6	Water-resistive barriers	Water-resistive barrier requirements for stucco have been divided into two categories based on whether the building is in a dry or moist climate.	N	N	The provisions for stucco have been reorganized by deleting the two exceptions. The exceptions have been replaced by subsections that indicate when an air gap is required by separating the requirements into dry and wet climate provisions. Additionally, a revised format recognizes two methods of compliance to the stucco water-resistive barrier provisions by requiring materials meet either ASTM E2556 Type I or Type II.
Appendix F Rodentproofing						
No changes						
Appendix G Flood-Resistant Construction						
No changes						
Appendix H Signs						
No changes						
Appendix I Patio Covers						
No changes						

Appendix J Grading							
No changes							
Appendix L Earthquake Recording							
No changes							
Appendix M Tsunami-Generated D Flood Hazard							
No changes							