

Analysis of Changes for the 7th Edition (2020) Florida Codes

Changes to the Florida Building Code, Mechanical

This *Analysis of Changes for the 7th Edition (2020) of the Florida Building Code* is intended to provide a comprehensive comparison of the provisions in the *6th Edition (2017) Florida Building Code, Mechanical (FBCM)* and the *7th Edition (2020) Florida Building Code, Mechanical*. The *6th Edition (2017) FBCM* is the base code for the *7th Edition (2020) FBCM*. The model code used to update the *7th Edition (2020) FBCM* is the *2018 International Mechanical Code (IMC)*. However, not all changes in the 2018 IMC are included in the *7th Edition (2020) FBCM*. As a result of changes from the 2018 IMC and Florida-specific amendments, certain provisions and criteria of the code have changed. This *Analysis* will serve as a useful tool to facilitate the transition to the new code.

This *Analysis* is arranged so that comparable provisions in the two codes can be easily located. The left two columns contain section numbers and a brief overview of the corresponding requirements from the *6th Edition (2017) FBCM*. The next two columns contain section numbers and a brief overview of the corresponding requirements in the *7th Edition (2020) FBCM*. The far-right column contains a brief analysis or comment on the differences between the provisions.

This *Analysis* is not intended to replace or interpret the provisions contained in either the *6th Edition (2017)* or the *7th Edition (2020) FBCM*. This information simply points out the differences. The *Analysis* is not designed to be used without the aid of the representative code books, as all the details pertaining to a specific section may or may not be provided. However, this *Analysis* will provide an easy means for identifying differences in the two codes, as well as enabling the user to locate issue specific provisions in the *7th Edition (2020) FBCM* by means of a numbered section cross reference.

This *Analysis* provides a cross-reference for most of the sections that changed in the *7th Edition (2020) FBCM*. In some cases, sections were grouped together due to substantial differences. This grouping enables the extent of the differences to be more readily identified.

Notable changes deemed to be the most significant or to have the greatest impact have been highlighted in **yellow**.

Note: Seismic loading and snow loading provisions in the code are not reserved (deleted) in the *7th Edition (2020) FBCM*, even though they do not apply in the State of Florida. While there are changes to some of these sections and provisions, they are not shown here in this *Analysis* because they do not apply to construction in the State of Florida.

6 th Edition (2017) FBCM		7 th Edition (2020) FBCM		Analysis
Section	Requirement	Section	Requirement	
Chapter 1: Scope and Administration				
<i>No changes.</i>				
Chapter 2: Definitions				
202	Definitions: Approved Agency	202	Definitions: Approved Agency	New language added clarifying that approved agencies also furnish product certifications.
-	-	202	Definitions: Balanced Ventilation	New definition added defining balanced ventilation as any combination of concurrently operating mechanical and exhaust and supply where the total mechanical exhaust flow rate is within 10% of the total mechanical supply airflow rate. See Section 403.3.2.1.
202	Definitions: Labeled	202	Definitions: Labeled	Definition revised to change inspection agency to approved agency for consistency in the definition throughout the FBC.
-	-	202	Definitions: Large-Diameter Ceiling Fan	New definition added referring to ceiling fans that have a diameter greater than 7 feet.
202	Definitions: Piping	202	Definitions: Piping	Definition revised to add brass and copper-alloy to the descriptions of pipe and tube used in the code.
-	-	202	Definitions: Pollution Control Unit	New definition added addressing equipment installed in a grease exhaust duct system for the purpose of extracting smoke, grease particles, and odors from the exhaust flow by means of a series of filters. See Section 506.5.2.
202	Definitions: Press Joint	202	Definitions: Press-Connect Joint	Press Joints have been changed to Press-Connect Joints.
Chapter 3: General Regulations				
Table 305.4	Piping Support Spacing	Table 305.4	Piping Support Spacing	The maximum horizontal spacing of piping support for all diameters of copper or copper-alloy tubing has been changed to 8 feet.

307.2.2	Drain pipe materials and sizes (condensate disposal)	307.2.2	Drain pipe materials and sizes (condensate disposal)	Brass and copper alloy fittings and pipe have been added approved materials to be used in condensate disposal systems.
Chapter 4: Ventilation				
Table 403.3.1.1	Minimum Ventilation Rates	Table 403.3.1.1	Minimum Ventilation Rates	<p>The minimum area outdoor airflow rate in breathing zones in coin-operated laundries has been changed from 0.06 cfm/ft² to 0.12 cfm/ft².</p> <p>Food and beverage service kitchens are now required to comply with the following:</p> <ul style="list-style-type: none"> • Occupant density = 20 #/1000 ft². • People outdoor airflow rate in breathing zones = 7.5 cfm/person. • Area outdoor airflow rate in breathing zones = 0.12 cfm/ft². <p>Shipping and receiving in retails stores, sales floors, and showroom floors are now required to comply with the following:</p> <ul style="list-style-type: none"> • Occupant density = 2 #/1000 ft². • People outdoor airflow rate in breathing zones = 10 cfm/person. <p>Warehouses in retails stores, sales floors, and showroom floors are now required to comply with the following:</p> <ul style="list-style-type: none"> • People outdoor airflow rate in breathing zones = 10 cfm/person. • Area outdoor airflow rate in breathing zones = 0.06 cfm/ft². <p>A new classification under storage has been added for refrigerated warehouses/freezers requiring a People outdoor airflow rate in breathing zones = 10 cfm/person.</p> <p>Warehouses in the storage classification are now required to have a people outdoor</p>

				airflow rate in breathing zones = 10 cfm/person.
403.3.2.1	Outdoor air for dwelling units	403.3.2.1	Outdoor air for dwelling units	<p>New exception added permitting the mechanical ventilation rate determined in accordance with Equation 4-9 to be reduced by 30% provided that the following conditions apply:</p> <ol style="list-style-type: none"> 1. A ducted system supplies ventilation air directly to each bedroom and to one or more of the following rooms: <ol style="list-style-type: none"> a. Living room b. Dining room c. Kitchen 2. The whole-house ventilation system is a balanced ventilation system. <p>See new definition of balanced ventilation system added to Chapter 2.</p>
-	-	403.3.2.4	Ventilation equipment	New section requiring exhaust equipment serving single dwelling units to be listed and labeled to provide the minimum required airflow in accordance with ANSI/AMCA 210-ANSI/ASHRAE 51.
404.1	Enclosed parking garages	404.1	Enclosed parking garages	Minimum ventilation requirements from Section 404.2 have been incorporated into Section 404.1 to clarify intermittent operation of the exhaust system.
-	-	404.2	Minimum ventilation	Section revised to require carbon monoxide detectors to be installed 3 to 5 feet above the floor level and nitrogen dioxide detectors to be installed 1 foot below the ceiling level. Detectors are required to be listed in accordance with UL 2075.
Chapter 5: Exhaust Systems				
502.16	Repair garages for natural gas- and hydrogen-fueled vehicles	502.16	Repair garages for vehicles fueled by lighter-than-air fuels	Exhaust ventilation requirements for repair garages for hydrogen-fueled vehicles has

				been revised for consistency and correlation with the FBCFG and NFPA 2. Two new exceptions to the required mechanical exhaust ventilation requirements have been added where work is limited to exchange of parts and maintenance and not requiring open flame or welding on any lighter-than-air fueled motor vehicles.
-	-	502.16.1	Repair garages used for the repair of hydrogen-fueled vehicles	New section requiring repair garages used for the repair of hydrogen-fueled vehicles to be provided with an exhaust ventilation system in accordance with this code and Chapter 6 of NFPA 2.
-	-	502.16.2	Exhaust ventilation system	New section permitting repair garages used to for lighter-than-air motor fuels other than hydrogen to be provided with mechanical exhaust in accordance with Section 502.16.2.1 or Section 502.16.2.2. New exception permits natural ventilation in lieu of mechanical ventilation where approved by the code official.
502.16.1	Design	502.16.2.1	Design	The term ventilation has been changed to exhaust ventilation
502.16.2	Operation	502.16.2.2	Operation	The term ventilation has been changed to exhaust ventilation
-	-	504.4.1	Exhaust termination outlet and passageway (clothes dryer exhaust)	New section requiring the passageway of dryer exhaust duct terminals to be undiminished in size and provide an open area of not less than 12.5 square inches.
504.8.2	Duct installation (clothes dryers)	504.8.2	Duct installation (clothes dryers)	New language added requiring dryer exhaust ducts enclosed in wall or ceiling cavities to be able to be installed without deformation of the duct.
504.10	Common exhaust systems for clothes dryers located in multistory structures	504.10	Common exhaust systems for clothes dryers located in multistory structures	New language has been added to item 7 requiring the standby power source to be in accordance with Section 2702 of the FBCB.

505.3	Common exhaust systems for domestic kitchens located in multistory structures	505.3	Common exhaust systems for domestic kitchens located in multistory structures	New language has been added to item 7 requiring the standby power source to be in accordance with Section 2702 of the FBCB.
506.3.13.2	Termination through an exterior wall (commercial Type I kitchen hoods)	506.3.13.2	Termination through an exterior wall (commercial Type I kitchen hoods)	Section revised to refer to Section 506.3.13.3 to clarify that a 10-foot separation for outdoor intakes is required unless there is a 3 foot vertical separation.
-	-	506.5.2	Pollution control units	New section added addressing equipment installed in a grease exhaust duct system for the purpose of extracting smoke, grease particles and odors from the exhaust flow by means of a series of filters. Minimum construction, labeling, and installation criteria has been added.
507.2.6	Clearances for Type I hood	507.2.6	Clearances for Type I hood	New exception to the 18-inch clearance to combustibles has been added for Type I hoods listed and labeled for clearances less than 18 inches in accordance with UL 710.
-	-	510.8.1	Duct cleanout (hazardous exhaust systems)	New section requiring cleanouts for ducts conveying combustible dust as part of a dust collection system to avoid an accumulation of combustible dust and reduce potential dust deflagration from the accumulation of dusts inside ducts.
512.2	Materials (subslab soil exhaust systems)	512.2	Materials (subslab soil exhaust systems)	Brass and copper-alloy have been added as approved materials for subslab soil exhaust system ducts.
Chapter 6: Duct Systems				
601.5	Return air openings	601.5	Return air openings	The prohibition on taking return air from a bathroom (Item 7) has been removed. New exception permits return air from closets provided to the specified conditions are met.
602.2.1.1	Wiring (plenums)	602.2.1.1	Wiring (plenums)	Section editorially revised to provide consistency with the pass/fail criteria for the testing of these products, and the listing and labeling requirements.

602.2.1.2	Fire sprinkler piping	602.2.1.2	Fire sprinkler piping	Section editorially revised to provide consistency with the pass/fail criteria for the testing of these products, and the listing and labeling requirements.
602.2.1.3	Pneumatic tubing	602.2.1.3	Pneumatic tubing	Section editorially revised to provide consistency with the pass/fail criteria for the testing of these products, and the listing and labeling requirements.
602.2.1.6	Foam plastic insulation	602.2.1.6	Foam plastic insulation in plenums as interior finish or interior trim	Sections generally editorially revised to clarify the use of foam plastic in plenums. A new exception has been added to recognize the use of masonry or concrete as a means to separate the foam plastic from the air flow in the plenum.
602.2.1.6.1	Separation required			
602.2.1.6.2	Approval			
602.2.1.6.3	Covering			
602.2.1.7	Plastic plumbing pipe and tube	602.2.1.7	Plastic plumbing piping and tubing	New exception permits the use of water distribution piping and tubing that is listed and labeled in accordance with UL 2846 as having a peak optical density not greater than 0.15 and flames spread distance not greater than 5 feet, and installed in accordance with its listing.
-	-	602.2.1.8	Pipe and duct insulation within plenums	New section added addressing pipe and duct insulation contained within plenums. Maximum flame spread and smoke developed criteria for insulation has been added. Additional limitations have been added based on required testing in accordance with ASTM E2231.
-	-	603.5.2	Phenolic ducts	New section requiring nonmetallic phenolic ducts to be constructed in accordance with SMACNA Phenolic Duct Construction Standards.
603.8.2	Sealing (underground ducts)	603.8.2	Sealing (underground ducts)	Section revised to require underground ducts to be sealed and tested prior to encasement in concrete or direct burial. Testing is required to be in accordance with Section C403 of the FBCEC.
604.11	Vapor retarders	604.11	Vapor retarders	New exception added to the required vapor retarder for spray polyurethane foam insulation having a water vapor permeance

				of not greater than 3 perm per inch at the installed thickness.
607.4	Access and identification	607.4	Access and identification	Section reorganized into multiple sections for clarity. New language requires dampers equipped with fusible links, internal operators, or both to be provided with an access door not less than 12 inches square or provided with a removable duct section. New section requiring where space constraints or physical barriers restrict access to a damper for periodic inspection and testing, the damper is required to be a single- or multi-blade type damper and comply with the remote inspection requirements of NFPA 80 or NFPA 105.
		607.4.1	Access	
		607.4.1.1	Fire-resistance-rated assemblies	
		607.4.1.2	Restricted access	
		607.4.2	Identification	
Chapter 7: Combustion Air				
<i>No changes.</i>				
Chapter 8: Chimneys and Vents				
-	-	805.8	Insulation shield (factory-built chimneys)	New section requiring insulation shields for factory-built chimneys consistent with vents in Section 802.8.
Chapter 9: Specific Appliances, Fireplaces and Solid Fuel-Burning Equipment				
916.1	General (pool and spa heaters)	916.1	General (pool and spa heaters)	New language added requiring pool and spa heat pump water heaters to comply with UL 1995 or CSA C22.2 No. 236. New exception permits portable residential spa and portable residential exercise spas to comply with UL 1563 or CSA C22.2 No. 218.1.
-	-	929	Large-Diameter Ceiling Fans	New section requiring large-diameter ceiling fans to be tested and labeled in accordance with AMCA 230, listed and labeled in accordance with UL 507, and installed in accordance with the manufacturer's instructions.
Chapter 10: Boilers, Water Heaters and Pressure Vessels				
<i>No changes.</i>				
Chapter 11: Refrigeration				

1105.6.3	Ventilation rate (machinery rooms)	1105.6.3	Ventilation rate (machinery rooms)	Section revised to clarify that the 30 air change per hour ventilation rate for ammonia is the emergency ventilation rate.
1107.5.2	Copper and brass pipe	1107.5.2	Copper, brass and copper-alloy pipe	Revised for clarity and consistency.
Chapter 12: Hydronic Piping				
Table 1202.5	Hydronic Pipe Fittings	Table 1202.5	Hydronic Pipe Fittings	Standards for various materials have been added and updated.
1203.8	Copper or copper-alloy tubing	1203.8	Copper or copper-alloy tubing	Terminology revised to change press type joints to press-connect type joints.
1203.8.3	Press joints	1203.8.3	Press-connect joints	Terminology revised to change press joints to press-connect joints.
1208.1	General (tests)	1208.1	General (tests)	New Exception 1 added for trap seal pull testing where a completed DWV system is vacuum tested with all of its traps filled with water, and the trap seals are tested with a vacuum typically between one and two inches of water column. New Exception 2 added for plastic piping systems specifically designed for use with compressed air or gas. New Exception 3 added permitting air or other gas pressure testing where the written instructions of the manufacturer permit compressed air or other gas pressure testing.
-	-	1209.3.5	Cross-linked polyethylene (PEX) joints.	New section permitting PEX tubing to be installed in continuous lengths or be joined by hydronic fittings listed in Table 1202.5.
Chapter 13: Fuel Oil Piping and Storage				
1303.1.1	Joints between different piping materials	1303.1.1	Joints between different piping materials	Section revised to add copper-alloy converter fitting for use with joints between different metallic piping materials.
Chapter 14: Solar Systems				
1402.4	Roof-mounted collectors	1402.4	Roof-mounted collectors	Exception revised to change approved plastics to approved light-transmitting plastics.
1402.4.1	Collectors mounted above the roof	1402.4.1	Collectors mounted above the roof	Exception revised to change approved plastics to approved light-transmitting plastics.

