#### 2019 California Fire Code Changes

#### SUMMARY

Some of the significant changes are: There has been an increased emphases on Title 19 for enforcement and staff training regardless of occupancies. There is a new Chapter, Chapter 12, Energy Systems. This chapter covers rapid shutdown for first responders and also moves stationary battery storage systems from Chapter Six to 12. Requesting water supply for designing fire sprinkler systems has also been updated in Chapter 80. Now the State has increased the requirements for water supply from 12 to six months. Enhanced lockdown procedures have been revised in educational type occupancies for grade schools and universities (B's & A's). Occupancies with class II hoods (domestic cooking systems) are permitted to install an aerosol extinguishing system per NFPA 2010 which is now adopted. Mobile food preparation vehicles now requires an operating permit. There is a page and an half of requirements. A good footnote is that all the current editions of the NFPA standards are still adopted in the 2019 CFC even though several of the common use standards have an updated edition.

#### SIGNIFICANT CHANGES

NEW	- CHANGE	CFC SECTION/TABLE NUMBER	COMMENTARY	MASTER IMPA YES -	CT
	$\boxtimes$	1.1.7.3.1	Clarifies that either the CRC or the CBC may be used for detached one- and two-family dwellings, efficiency dwelling units, lodging houses, live/work units, townhouses with not more than 3 stories above the grad plane with separate means of egress, and their accessory structures.		$\boxtimes$
	$\boxtimes$	1.11.6	The responsibility for issuing a Certificate of Occupancy for Groups R-3 and U is by the Building Official only.		$\boxtimes$
	$\boxtimes$	202-Definition	<b>Care Suite.</b> Suites have been redefined to include both I-2 and I-2.1. This coordinates with other changes made in Chapters 9 and 10, CFC.		
	$\boxtimes$	202-Definition	COMMUNITY CARE FACILITY (has been redefined).  Define to "exclude" Foster Family Agencies, Foster Family Homes, Small Family Homes and Noncustodial Adoption Agencies. Coordinates with other California Regulations. In addition, this change moves these facilities to typical R-3 occupancies, thereby removing the approval by the Fire Code Official to clear the STD 850 form, which is no longer issued by Community Care licensing.		$\boxtimes$
	$\boxtimes$	202-Definition	Foster Family Home. Definition has been "removed" and the definition of "Residential Group R-3" and "Residential Group R-3.1" has been revised. This change moves several occupancies such as Foster Family Agencies, Foster Family Homes, Small Family Homes and Noncustodial Adoption Agencies to typical R-3 occupancies, thereby removing the approval by the Fire		$\boxtimes$

NEW	- CHANGE	CFC SECTION/TABLE NUMBER	COMMENTARY	MASTE IMP/ YES	ACT
		NOMBER	Code Official to clear the STD 850 form, which is no	120	110
			longer issued by Community Care licensing.		
		202-Definition	OCCUPANCY CLASSIFICATION RESIDENTIAL GROUP R-2.2 (CDCR ONLY - New Definition).  California Department of Corrections & Rehabilitation.  Required for compliance with SB 221 of 2017 which required the SFM, in consultation with Dept. of Corrections and Rehabilitation to establish minimum standards for the prevention of fire and protection of life safety in any structure used or intended to be used as a community correctional reentry facility. Corresponding changes have also been made to Sections 1019.3 (stories with 1 exit), 1020.4 (dead ends), 1030.1 (emergency escape and rescue openings), 804.3.3.2 (minimum critical radiant flux), 906.1 (portable fire extinguishers), 907.2.9 (fire alarms), and 907.2.10.12 (smoke alarms)		
	$\boxtimes$	311	Vacant Premises. Per AHJ approval, sprinklers & alarm systems can be out of service in seasonal occupied bldgs. Must be less than 12K Sq. Ft		$\boxtimes$
	$\boxtimes$	315.7	Outdoor Pallet Storage. Still require size and dimensions but no longer require 12,000 lbs. impact force.		$\boxtimes$
$\boxtimes$		319	<b>Mobile Food Preparation Vehicles.</b> Operating permit is now required. Page and an half of requirements.		$\boxtimes$
		403.11.5	<b>Buildings with high-piled storage.</b> HPS buildings have now been added to when emergency evacuation plans are required. There are square footage and mix-use considerations.		$\boxtimes$
	$\boxtimes$	403.12.3	<b>Crowd Managers.</b> The threshold for crowd managers dropped from 1,000 to 500 people for certain events.		$\boxtimes$
	$\boxtimes$	404.2.3	<b>Lockdown Plan.</b> Must be approved by the fire code official before implementation.		$\boxtimes$
	$\boxtimes$	510	Emergency Responder Radio Coverage. 12 hrs. Stand by power required. Coverage now requires 95% (Instead of 90%). Reference NFPA 1221.		$\boxtimes$
	$\boxtimes$	603.3.2.1	<b>Fuel oil storage inside buildings.</b> Permitted to be 1320 gallons in a sprinklered building. Use to be 660 gallons.		$\boxtimes$
	$\boxtimes$	603.3.2.6	<b>Spill containment.</b> 55 gallons or 1,000 aggregate gallons capacity shall have spill containment of the largest tank.		$\boxtimes$
	$\boxtimes$	604.10.5	Group I-2 occupancies and ambulatory care facilities.  Space heaters shall only be used in nonsleeping staff and employee areas.		$\boxtimes$
	$\boxtimes$	Old 605.11 & 608	Solar Photovoltaic Power Systems & Stationary Storage Battery Systems moved to New Chapter 12. Procedures for photovoltaic rapid shutdown for first responders.		
		607.2	Commercial Kitchen Hoods. Added exceptions regarding factory-built and down-draft vents where Class 1 Hood Systems are not required.		$\boxtimes$

NEW	- CHANGE	CFC SECTION/TABLE NUMBER	COMMENTARY	MASTER IMPA YES	
	$\boxtimes$	704.1	Joints and Voids. New Section. Joints and voids space shall be maintained.		$\boxtimes$
	$\boxtimes$	807.2	Combustible decorative materials. 10% limit shall not apply to curtains, draperies, fabric hangings and similar combustible decorative materials used as window coverings.		$\boxtimes$
	$\boxtimes$	901.4.6.1	<b>Access.</b> Sprinkler riser and/or Pump Rooms shall be readily accessible. Does not say need to be a separate fire control room nor exterior door.		$\boxtimes$
	$\boxtimes$	Table 901.6.1	Aerosol fire-extinguishing systems. NFPA 2010 now listed for use for generally Class II Hoods.		$\boxtimes$
	$\boxtimes$	901.6.2	Integrated Testing. Test criteria has been added to the code with a reference to NFPA 4 to ensure that where multiple fire protection systems or life safety systems are integrated, that the acceptance process and subsequent testing must evaluate the all of the integrated systems as a whole.		$\boxtimes$
	$\boxtimes$	901.6.2.2	<b>Smoke control systems.</b> Must be tested per NFPA 4 or not exceeding 10 year intervals.		$\boxtimes$
	$\boxtimes$	901.8.2	Removal of existing occupant-use hose lines.  Authorizes code official to allow the removal occupant use hose lines.		$\boxtimes$
	$\boxtimes$	903.2.1	<b>Group A Occupancies.</b> Sprinklers are required on all floors and egress floors where Group A occupancy are located.		$\boxtimes$
	$\boxtimes$	903.2.3	<b>Group E Occupancies.</b> Added sprinkler requirements. Added exception once exceed 300 O.L., sprinklers are required.		$\boxtimes$
	$\boxtimes$	903.3.1.1.2	<b>Bathrooms.</b> Fire sprinklers not required in all small bathrooms for R-occupancies including Group R-4 (New).		$\boxtimes$
	$\boxtimes$	903.3.1.2.1	<b>Balconies and decks (Projections).</b> Sprinklers are required on projections if Type V construction.		$\boxtimes$
	$\boxtimes$	903.3.1.2.3	<b>Attics (13R Systems).</b> Attic protection is required if roof assembly is 55 feet above fire department access road.		$\boxtimes$
	$\boxtimes$	903.3.3	<b>Obstruction locations.</b> The code now directs the user to the sprinkler design standard to address sprinkler obstructions.		$\boxtimes$
		904.13	<b>Domestic cooking systems.</b> Requires automatic fire- extinguishing system to protect domestic cooking appliances in care facilities and college dorms (NFPA 2010 – Aerosol Extinguishing Systems).		
	$\boxtimes$	905.3	<b>Standpipe Systems.</b> Class 1 allowed in B's and E's if fully sprinklered.		$\boxtimes$
	$\boxtimes$	905.4	Location of Class 1 standpipe hose connections.  Location now on main floor landing and not intermediate (As per NFPA 14).		$\boxtimes$
	$\boxtimes$	905.11	<b>Locking standpipe outlet caps (New).</b> Authorizes fire code official to require locking caps on dry standpipe hose connection outlets.		$\boxtimes$

NEW	- CHANGE	CFC SECTION/TABLE	COMMENTARY	MASTEI IMP	ACT
INLVV	- CHANGE	NUMBER		YES	- NO
	$\boxtimes$	907.1.2	<b>Fire alarm shop drawings.</b> The punch list of plan check items in the 2016 Edition were removed.		$\boxtimes$
	$\boxtimes$	907.2.1	<b>FA – Group A Occupancies.</b> Manual fire alarm system now required in Group A occupancies where there are 100 or more occupants on a level above or below the lowest level of exit discharge, unless fully sprinklered.		
	$\boxtimes$	907.2.10 (Deleted)	<b>Group R-4 Occupancy</b> no longer requires fire and smoke alarm systems.		$\boxtimes$
	$\boxtimes$	907.2.23	Capacitor energy storage systems. Automatic smoke detection system shall be installed in areas containing capacitor energy storage systems per Section 1206.3		$\boxtimes$
	$\boxtimes$	910.5	Maintenance and testing (Smoke and Heat Vents). A written record of inspection, testing and maintenance shall be kept on the premise.		$\boxtimes$
	$\boxtimes$	913.2.2	Circuits supplying fire pumps. Cables used for supplying the fire pumps shall have a survivability rating on 1-Hour, UL 2196 (Use to be 2 hrs)		$\boxtimes$
	$\boxtimes$	915.2.3	<b>Group E Occupancies (CO Detectors).</b> Shall be installed if fuel-burning forced-air furnaces is installed in or adjacent to classrooms.		$\boxtimes$
	$\boxtimes$	916	<b>Gas Detection Systems.</b> Requirements for gas detection systems are clarified and consolidated in new Section 916.		$\boxtimes$
	$\boxtimes$	917 (New)	Mass Notification Systems (College Campuses).  Occupant load over 1,000 cumulative occupant load shall have a risk analysis performed to determine if a need for such system.		
	$\boxtimes$	Table 1004.5 Section 1004.8	Concentrated business use areas (B-Occupancy).  Example would be a Call Center. O.L. factor lower is 50 (instead of 100).		$\boxtimes$
		Table 1006.2.1 Section 1006.2.1	Egress based on occupant load and common path of egress travel distance. Determination of cumulative occupant loads is clarified and correlated with other code requirements. All R's are required to be sprinklered, including R-4s (which is a change from 2016)		
	$\boxtimes$	1006.2.2.6 Table 1006.2.1 Table 1017.2	Group R-3 & R-4 (Travel Distances). Exit access travel distances are provided for Groups R-3 (125 Ft) and R-4 (75 Ft) when sprinklered with NFPA 13D sprinkler systems.		
	$\boxtimes$	1006.3 & 1006.3.1	Adjacent story (Exit on). Determining egress requirements has been clarified when the occupants travel to an adjacent story to reach the exit (New 5 exceptions).		$\boxtimes$
	$\boxtimes$	1008.2.3	Exit discharge (New section). Illumination of exit discharge can now terminate at a safe dispersal area via exception.		$\boxtimes$
	$\boxtimes$	1009.7.2	<b>Separation (Area of rescue).</b> The 1-hour fire-resistance-rated separation between an exterior of assisted rescue and the building is not required if the building is protected		$\boxtimes$

NEW	- CHANGE	CFC SECTION/TABLE NUMBER	COMMENTARY	MASTEI IMPA YES	ACT
		TOMBLIX	with an automatic sprinkler system designed to NFPA 13 or 13R.		
	$\boxtimes$	1010.1.4.4 & 1010.1.4.4.1	Locking arrangements in educational occupancies (E's and B's). Guidance is provided to allow enhanced security measures yet still meet egress requirements on classroom doors, i.e. "Keep intruders from entering"		$\boxtimes$
	$\boxtimes$	1010.1.9.8 & 1010.1.9.8.1	<b>Delay egress (&amp; Locking system).</b> Guidance is provided to allow enhanced security measures yet still meet egress requirements on classroom doors.		$\boxtimes$
		1010.1.9.12	Stairway doors. The limitation is removed which prohibited locking doors on the stairway side when the stairway was more than four stories, but less than a high-rise (previously limited to 4 stories in height).		$\boxtimes$
	$\boxtimes$	1010.1.10	Panic and fire exit hardwire. Sensor release of electrically locked doors is now allowed on egress doors in Groups A's and E's. Also, the section is clarified to state that panic hardware or fire exit hardware are only required on swinging doors.		$\boxtimes$
	$\boxtimes$	1010.3 1010.3.1 to 1010.3.4	<b>Turnstiles and similar devices.</b> This new section allows security turnstiles or similar barriers, in the means of egress path.		$\boxtimes$
	$\boxtimes$	1013.2	Floor-level exit signs in Group R-1. The location of low-level exit signs can now be 18 inches above the floor (use to be 8 inches previously).		$\boxtimes$
	$\boxtimes$	1017.3	<b>Measurement (Exit Access Travel Distance).</b> Common path of egress travel must be applied to each room or space on every story.		$\boxtimes$
	$\boxtimes$	1023.3.1	Extension (Interior Exit Stairways & Ramp). Exception 3. Fire-resistance-rated separation is not required between an interior exit stairway and exit passageways if stairway pressurization is provided.		
		1023.5 & 1024.6	Penetrations (Exit Stairway & Exit Passageway).  Security system and two-way communication system components are allowed to penetrate the fire-resistant rated enclosure of exit passageways and interior exit stairways and ramps.		
	$\boxtimes$	1026.4 & 1026.4.1	Capacity (Horizontal Exits - Refuge areas). The capacity is now determined by the total occupant load of the adjoining compartment or the door capacity, whichever is less.		
	$\boxtimes$	1029.6 & 1029.6.3	Open-air assembly seating (Capacity of aisle for assembly). A new term and definition is added for openair assembly seating. Open air seating is now essentially "smoke protected seating" and accrues the benefits traditionally assigned to smoke protected seating.		
	$\boxtimes$	1030.1	<b>Emergency Escape and Rescue.</b> Emergency escape and rescue openings are required in Groups R-3 and R		$\boxtimes$

NEW	- CHANGE	CFC SECTION/TABLE NUMBER	COMMENTARY	IMP.	R PLAN ACT - NO
			4, and Group R-2 provided with only one means of egress from a story. Also, emergency escape and rescue openings in basements are not required when sprinklered.		
	$\boxtimes$	1031.4	Exit signs (Existing Buildings). This modification clarifies that exit signs in existing buildings shall be installed and maintained in accordance with the building code that was in effect at the time of construction and the applicable provisions of Section 1104		$\boxtimes$
	$\boxtimes$	1031.10	Emergency lighting equipment inspection and testing.  Moves the requirements from Chapter 6 (general emergency and standby power requirements) to Chapter 10 (Means of Egress). Revised to allow self-diagnostics.		
	$\boxtimes$	1103.5.1	Group A-2 (Sprinkler systems). Where alcoholic beverages are consumed if their occupant load is 300 or more, fire sprinklers are required (Not Adopted by SFM)		
	$\boxtimes$	1103.9	Carbon monoxide alarms. Carbon monoxide alarms are no longer required to be retroactively installed in existing Groups I-1, I-2, I-4, and R based on occupancy classification. The retroactive installation of carbon monoxide alarms is only required in existing sleeping rooms and dwelling units.		$\boxtimes$
	$\boxtimes$	1104.16.2	<b>Opening Protectives (Fire escape stairways).</b> No longer required to have openings rating for 45 mins if sprinklered.		$\boxtimes$
		1105.6.2	Group I-2 Occupancies (Doors in existing Group I-2).  Fire protection rated doors in existing Group I-2 occupancies have 3 options for automatic closing operations:  1.Actuation of smoke detectors 2. Actuation of the fire alarm system within the zone. 3. Activation of the fire sprinkler system within the zone.		$\boxtimes$
		Chapter 12 New	Energy Systems. Address all configurations of energy systems. Includes emergency power, standby power, fuel cell power and stationary battery storage system requirements from 2016 CFC Chapter 6 and new requirements.		
	$\boxtimes$	1204.5	Buildings with rapid shutdown. Rapid shutdown is required on solar photovoltaic systems to reduce the shock hazard to emergency responders.		$\boxtimes$
	$\boxtimes$	1206.2	Stationary storage battery systems (Electrical Energy Storage Systems). Includes battery technologies and required fire protection and safety features.		
	$\boxtimes$	Chapter 22	Combustible Dust-Producing Operations. Reference to new standard NFPA 652 "Standard on the Fundamentals of Combustible Dust," is added to provide guidance and criteria when evaluating combustible dust hazards. This standard is adopted in Chapter 80.		$\boxtimes$
	$\boxtimes$	2303.2.1	<b>Height (Emergency disconnect switches).</b> Height of emergency disconnect switches for fuel dispensing		

NEW -	· CHANGE	CFC SECTION/TABLE NUMBER	COMMENTARY	IMP	R PLAN ACT - NO
		-	operations shall be not less than 42 inches nor more than 48 inches AFF to the activation button. Still location is btw 20 to 100 feet away from dispensers		
		2306.7.3.1	<b>Additional impact protection.</b> The fire code official has the authority to require additional vehicle impact protection at fuel dispensing facilities.		
	$\boxtimes$	2309.6 & 2309.6.1	Repairs, purging, defueling and discharge (Defueling of Hydrogen Fueled). The requirements for repairing vehicles fueled by compressed or liquefied hydrogen gas have been updated to address current technologies and processes. NFPA 2 has been added for reference.		$\boxtimes$
	$\boxtimes$	2311.6	Vehicles powered by liquefied naturel gas (LNG) and compressed natural gas (CNG) (Repair of Vehicles Fueled by CNG and LNG). The requirements for repairing vehicles fueled by compressed or liquefied compressed gas have been updated to address current technologies and processes.		
	$\boxtimes$	2311.8	Repair garages for vehicles fueled by lighter-than-air fuels (Repair of Vehicles Fueled by). The requirements for repairing vehicles fueled by compressed or liquefied compressed gas have been updated to address current technologies and processes.		$\boxtimes$
	$\boxtimes$	2403.2.1.3	Areas adjacent to spray booths. Classified electrical wiring and equipment around a spray booth has been reduced to 3 feet.		$\boxtimes$
	$\boxtimes$	2404.2 & 2404.3.1	Location of spray-finishing operations. 1-hour separation is required between spray booths and spray booths and the remainder of the building. Now same as building code.		
		2810 (New)	Outdoor Storage of Pallets At Pallet Manufacturing and Recycling Facilities. Includes size of separate piles, distance btw piles, buildings and property lines. Allows minimum distances to be reduced based on providing additional fire protection features.		$\boxtimes$
	$\boxtimes$	Chapter 31	Umbrella Structures (New Definition). Umbrella structures that exceeds 400 square feet has enforceable regulations.		$\boxtimes$
		3103.3.1	<b>Special amusement buildings.</b> Structures located in temporary tents are now required to be protected with automatic sprinkler systems. See 411.3 CBC.		$\boxtimes$
	$\boxtimes$	3103.6 & 3103.9	Construction documents. Temporary tents and membrane structures are required to provide construction documents which address their structural stability and load carrying capacity. Larger tents and membrane structures have been added to the list of temporary facilities which must comply.		$\boxtimes$

NEW -	- CHANGE	CFC SECTION/TABLE NUMBER	COMMENTARY	R PLAN ACT - NO
		3105	<b>Temporary Special Event Structures.</b> The requirements for temporary stage structures are expanded to include all temporary structures greater than 400 square feet when used at special events per Sections 105.6.47, 105.7.22 and 202.	$\boxtimes$
		Chapter 32	High-Pile Combustible Storage. The requirements in the chapter have been updated to correlate with current NFPA 13 requirements and recent FM Global fire tests. Last updated in year 2000.	$\boxtimes$
	$\boxtimes$	3304.5	Fire watch (During Construction and Demolition). Fire watch is now required 24/7. Clarification to the functions and duties of the fire watch personnel has been added	
	$\boxtimes$	Chapter 39 (New)	<b>Processing and Extraction Facilities.</b> Establishes regulations for the extraction of oil from plant material using solvents as a medium.	
		Table 5003.1.1 Fire Works	<b>Consumer Fireworks.</b> Addresses the explosive nature of Division 1.4G explosives and removes the 100% increase credit for sprinklers where these items are stored.	
		Table 5003.1.1(1), Table 5003.11.1, Section 6303.1.1.2	Maximum Allowable Quantity for Class 3 Oxidizers. The maximum allowable quantity for Class 3 oxidizers is increased by about 10 percent in control areas and Groups M and S occupancies.	
	$\boxtimes$	5003.8.3.4	<b>Control areas.</b> The fire-resistance-rating of the floor of a control area now includes Type IV buildings and can be reduced to 1-hour if the building is fire sprinklered and does not exceed 3-stories in height.	
	$\boxtimes$	5005.1.12	Emergency isolation (Protection of Hazardous Materials Piping Systems). Requirements for leak detection and emergency shutoff for high hazard gasses and liquids only apply when the maximum allowable quantity per control area is exceeded.	
	$\boxtimes$	5103.2 & 5104.1.2	Aerosol Products in Plastic Containers. Limitations of aerosol products in plastic containers is revised and the use of Plastic Aerosol X products is prohibited in higher life hazard occupancies. Packaging for aerosol products is limited to 33.8 Oz (1,000 ml) for plastic and metal containers and 4 oz (118 ml) for glass containers under specified conditions.	$\boxtimes$
	$\boxtimes$	5103.2.2, 5104.2.2, 5104.3.3, 5104.8, 5106.2.2	Aerosol Cooking Spray Products. Specific fire protection requirements have been added to address aerosol cooking spray products. Aerosol cooking sprays, with a flash point of less than 500 °F have been determined to pose hazards (from FM new data). This modification addresses those hazards.	$\boxtimes$
	$\boxtimes$	5306.1 & 5306.2	<b>Medical gas storage.</b> One-hour separation is required for medical gas storage rooms and ventilation increased from 24 square inches to 36 square inches. When the	$\boxtimes$

NFW	- CHANGE	CFC SECTION/TABLE	COMMENTARY	IMP	R PLAN ACT
		NUMBER	maximum allowable quantity of gas is in the control area is	YES	- NO
			exceeded, the control area is classified as Group H.		
		5007.4.0.50070	Liquid Carbon Dioxide Systems for Beverage		
		5307.1 & 53073 5307.4	Dispensing. Two location detectors are now required.		
	$\boxtimes$	5307.4	Carbon Dioxide Enrichment Systems. Now when remote refill connection is provided from the tank or vessel regardless of size. Mainly due to indoor marijuana cultivation facilities that use carbon dioxide enrichment to enhance plant growth.		
		5703.6.2.2	Below-grade or underground piping systems connected to a tank in an underground area. Additional language added to provide clarity.		
$\boxtimes$		5707 & 5801.1	On- Demand Mobile Fueling Operations. New regulations. On-demand mobile fueling is allowed at approved locations and under the control of a permit issued by the fire code official.		$\boxtimes$
	$\boxtimes$	Table 6104.3	Location of LP-Gas Containers. New footnote g specifies separations between above-ground LP-Gas containers and public ways. Above ground LP-gas containers with a water capacity of 2,000 gallons or less shall be separated from the public ways by a distance of not less than 5 feet. Containers with a water capacity greater than 2,000 gallons shall be separated from public ways in accordance with this table.		$\boxtimes$
	$\boxtimes$	NFPA 13.23.2.1.1	Requires a water flow test to be conducted within 6 months of plan review (use to be 12 months)	$\boxtimes$	$\boxtimes$
		NFPA 72.23.8.1.2.1.1	Patient room smoke detectors in Group I-2 and R-2.1 occupancies shall not include a positive alarm sequence.		
	$\boxtimes$	Appendix E	<b>Hazard Categories.</b> Changes the oxidizer classification for water and swimming pool treatment products from Class 3 to a lesser hazard Class 2.		$\boxtimes$
	$\boxtimes$	Appendix N	Indoor Trade Shows and Exhibitions. New chapter that provides specific regulation to address the hazards associated with large trade shows and exhibitions. Many of these regulations may be found elsewhere in the IFC but the appendix provides a single location for regulations dealing with these events.		$\boxtimes$