

# The Many Facets of Code Compliance

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# AGENDA

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Why is code compliance important?

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Where do codes come from?

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Who enforces code compliance?

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Common code compliance misses on CRE properties.

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Exposing properties, managers, and owners to liability.

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Safety of our customers, their guests, other visitors, and service providers.

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Compliance Calendar

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With a dive into fire life safety systems compliance as part of this first in the series of discussions.

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# Why is code compliance important?

**Code compliance**, by strict definition, is compliance with a written, adopted or required set of rules that have been set into a code format.

Codes are **designed to protect buildings and the people and property inside them** from fire, earthquakes, windstorms and other extreme events. They also ensure structural integrity; electrical, plumbing and mechanical system safety, as well as accessibility and practical and achievable levels of energy efficiency.

A side benefit is by maintaining compliance, we maintain a high level of equipment readiness thereby reducing potential liability and the risk of litigation, fine, or worse in the event a code violation is of a serious nature as to cause injury or death.

# Some Typical Codes for CRE Construction

- ▶ **BUILDING** - INTERNATIONAL BUILDING CODE (IBC), WITH GEORGIA STATE AMENDMENTS.
- ▶ **FIRE SAFETY** - INTERNATIONAL FIRE CODE (IFC), WITH GEORGIA STATE AMENDMENTS.
- ▶ **PLUMBING** - INTERNATIONAL PLUMBING CODE (IPC), WITH GEORGIA STATE AMENDMENTS.
- ▶ **MECHANICAL** - INTERNATIONAL MECHANICAL CODE (IMC), WITH GEORGIA STATE AMENDMENTS.
- ▶ **GAS CODE**- INTERNATIONAL FUEL GAS CODE (IFGC), WITH GEORGIA STATE AMENDMENTS.
- ▶ **ELECTRICAL** - NATIONAL ELECTRICAL CODE (NEC).
- ▶ **ENERGY CONSERVATION CODE** - INTERNATIONAL ENERGY CONSERVATION CODE (IECC), WITH GEORGIA STATE AMENDMENTS, ASHRAE/IESNA STANDARD 90.1, WITH GEORGIA STATE AMENDMENTS.
- ▶ **ACCESSIBILITY** - GEORGIA STATE ACCESSIBILITY CODE - GSFC RULES & REGS. 120-3-20 - LATEST REVISION.
- ▶ **LIFE SAFETY** - NFPA 101 LIFE SAFETY CODE, AS AMENDED.
- ▶ **GEORGIA STATE ACCESSIBILITY CODE** WE CERTIFY THAT WE HAVE PREPARED THESE PLANS IN CONFORMITY WITH CHAPTER 120-3-20 OF THE RULES AND REGULATIONS OF THE GEORGIA STATE SAFETY FIRE COMMISSIONER FOR MAKING BUILDINGS AND FACILITIES ACCESSIBLE TO AND USABLE BY PHYSICALLY HANDICAPPED PEOPLE TO THE BEST OF OUR KNOWLEDGE, INFORMATION AND BELIEF FOR THE SCOPE OF THE WORK HEREIN

# Where do Codes Come From?

Today's building codes can be traced back to **the Code of Hammurabi**, King of the First Dynasty of Babylon, circa 2200-1800 B.C. The Code of Hammurabi provided for the death of a builder if the construction of a dwelling collapsed and caused the death of the owner. The first building codes in what was to become the United States were enacted in 1625 to address fire safety in roofing materials for homes.

Fortunately, our penalties today are not as drastic as those of Hammurabi's time, however they can be quite severe as well, particularly if they result in injury or death.

Today's codes are developed by various entities and organizations, such as those shown at the bottom of this slide, generally through a consensus method **with the intent of being adopted by a jurisdiction as criteria for design, construction, or operation of buildings.** ... However, they may be adopted as such by a jurisdiction—at which point they become the code for that jurisdiction.

Codes are adopted and enforced by **state and local jurisdictions.** Rather than create their own codes, many states and local jurisdictions adopt building codes maintained by the International Code Council and amend them if needed. In Georgia, this process is tasked to the Georgia Department of Consumer Affairs.



# Who Enforces Code Compliance?

The code enforcement process is normally initiated with an application for a permit to construct or remodel a building. The code official is responsible for processing the applications and issuing permits for construction or modification of buildings in accordance with the code. This begins with a review of the construction plans for compliance with the building code. Once construction has begun, the code official makes inspections as necessary to determine compliance with the code. If a deficiency exists or if the building or a component does not comply with the code, it is the responsibility of the code official to issue orders to correct the illegal or unsafe condition.

# Enforcement: Building Inspections

**Building inspectors** review drawings and specifications for planned repairs of existing buildings, construction of new building projects, and building sites being considered for development. Before work begins, building inspectors investigate the construction site — checking drainage, elevation and the placement of buildings on the plot. Inspectors examine and approve floor framing, wall framing, roofs and ceilings, chimneys, and all other items that are part of the building structure. As each building phase is complete, inspections are required before the work can progress. When projects are completed, a comprehensive inspection is performed, and a certificate of occupancy is issued by the building inspector.

**Electrical inspectors** check the quality of materials, the installation work, and the safeguards in electrical systems. They make sure electrical systems meet city, state or national codes, and electrical codes and standards. Electrical inspectors look closely at new wiring and fixtures in businesses, public buildings, and in homes.

**Mechanical inspectors** focus on heating, ventilating and air-conditioning (HVAC) concerns. This includes inspection of: mechanical appliances and equipment; air distribution systems; kitchen exhaust equipment; boilers and water heaters; hydronic piping; gas piping systems; flammable and combustible liquid storage and piping systems; fireplaces, chimneys and vents; refrigeration systems; incinerators and crematories. The mechanical inspector also checks for air quality and energy conservation measures.

**Plumbing inspectors** check for proper design and installation of plumbing systems, including sanitary and storm drainage systems, sanitary facilities, water supplies, and storm water and sewage disposal in buildings.

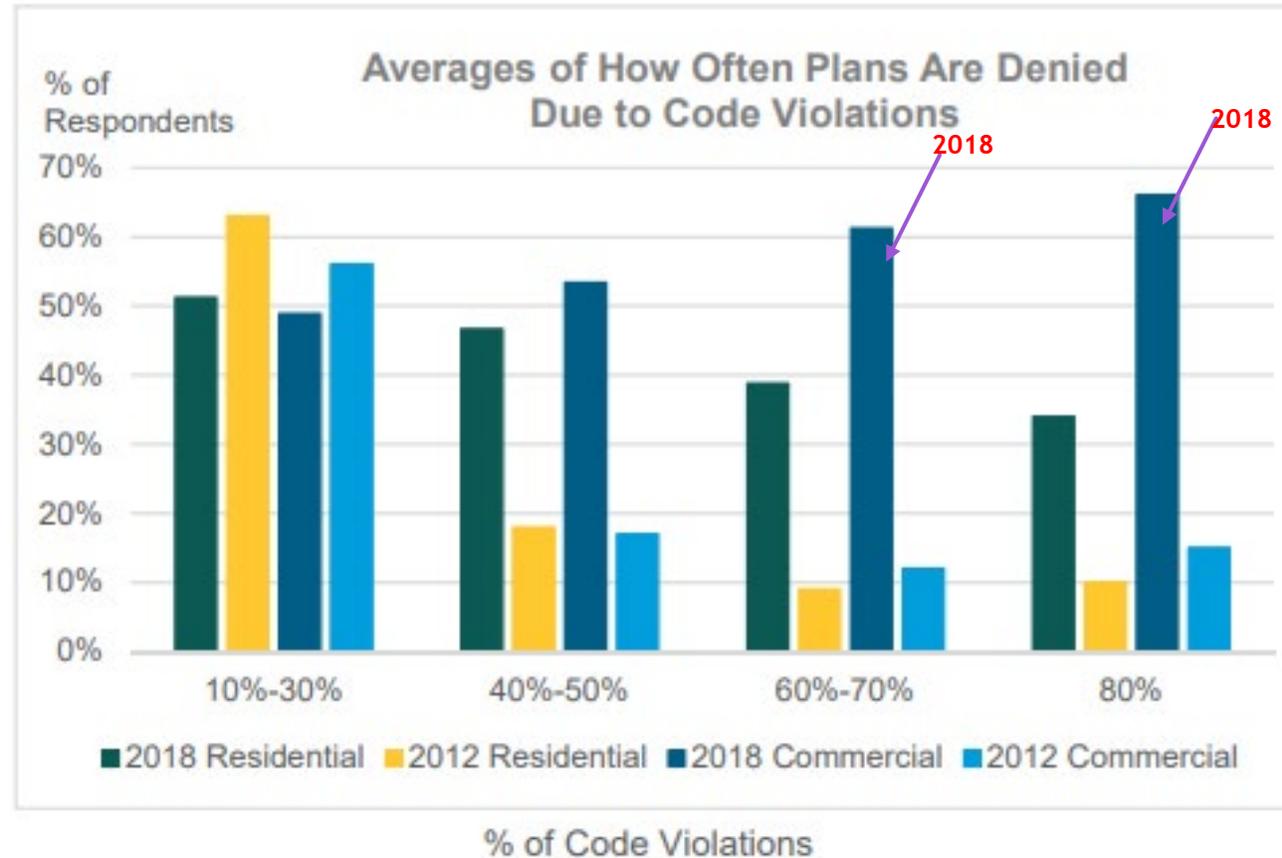
The duties of a **fire prevention inspector** are usually performed by the local fire department or fire prevention bureau. Typically, fire inspectors check nonresidential buildings on an annual basis to ensure that appropriate fire safety practices are being followed.

**Property maintenance or housing inspectors** inspect existing buildings to check for health or safety violations and the condition of the exterior property.

# Data Source: ICC Code Council / NAHB Common Code Noncompliance Survey Report

## Overall Weighted Code Violations

	<u>2018</u>	<u>2012</u>
Residential	43%	33%
Commercial	57%	38%



# Common Code Compliance Misses On CRE Properties

- ▶ Property Maintenance and Appearance
- ▶ Zoning
- ▶ Solid Waste Violations
- ▶ Sign Violations
- ▶ Handicapped Parking
- ▶ Maintenance and Appearance of
- ▶ Parking Lots
- ▶ Fence and Wall Maintenance
- ▶ Roofs, doors, walls, windows, etc.
- ▶ Fire Safety Systems testing (sprinkler systems, fire alarm A/V, and initiating device placement, dB level, candela requirements, generators, ATS, load banks, etc.)
- ▶ Handrails and stairs

# Exposing Properties, Managers, and Owners to Liability.

- ▶ One of our more critical but often overlooked roles as building engineers and property managers is the overall responsibility of providing a safe and comfortable location for our customers to conduct business and welcome their employees, guests, and other visitors.
- ▶ Some may think our role is more building centric, taking care of the property first, but it is actually people driven, and our taking care of the physical property provides the environment needed by our customers in their day-to-day business activities.
- ▶ Compliance with local codes provides a “safety net” of sorts to help us stay within the boundaries established by our AHJ’s and reduce the risk of litigation and/or significant loss, thereby creating a safer place for our customers, guests, and service providers.

# Create Your Own Compliance Calendar and Stay Current!

- ▶ Link the dates due into your budget worksheet
- ▶ for tracking from year to year so you don't miss
- ▶ something that may be coming due!

	Annual stairwell pressure/door force tests		
	Battery Powered lighting annual test		
	Fire Marshal Annual Review	TBD	TBD
	Annual floor warden training		
	Annual EVAC drill	10/2021	10/2022
	Flammable Storage Permit		
	YESDA annual inspection	11/3/20	11/2021
	Annual smoke curtains	4/21/21	4/2022
Backflow	Annual backflow test	02/11/21	Feb 2022
	5-Y elevator drop tests	2018	2023
Escalator	Annual elevator inspection	12/09/21	12/2022
	Annual escalator inspection	12/09/21	12/2022
Man lifts	Annual man lift inspections	Dec 2021	Dec 2022
PPE	Testing of PPE		
FCC Permit	5-YR FCC Permit Fees	2018	2023
Grease Trap	12-WKS commercial waste manifest	11/4/21	2/4/22
Exhaust Hoods	6-M Exhaust Hood service report		
Aviation Lighting	Quarterly aviation light inspection	1/18/22	4/18/22
Revolving Door	Annual revolver service and inspection	5/7/21	5/2022
ADA Door Operatc	Annual ADA door operator service and ins	5/7/21	5/2022
Boiler inspections	Biannual inspection by State Fire Marshal	6/21/21	6/2023
Dock Leveler	Annual dock leveler inspection		
WATERSHED	Sewer Credit Data Submission to COA	6/28/21	6/2022
WATERSHED	Stormwater annual maintenance/inspection	9/13/21	9/2022

CODA at Tech Square Compliance Calendar					
Repair and Maintenance - Last Update: 01/31/22, MK					
Gl. Account	System	Section	Last	Due	Comments
	R&M-Roof	10-Y anchor tests	2019	2029	
		Annual Fall Protection Inspection	11/11/21	11/11/22	
		2Y - Annual roof assessment	NA	TBD	
		5-Y Arc flash analysis UPDATE	2019	2024	
	Electrical R&M	Annual infrared scan	3/22/21	3/22/22	
		Annual Lightning protection insp	2021	2022	
		Lightning protection master certificate rene	3/20/19	3/20/22	
		3-Y Bus/main switch inspection	2018	2022	
		Annual Fire Alarm System Test	8/24/2021	8/24/2022	
		Annual Fire Sprinkler System Test	8/24/21	8/24/2022	
		Annual Hydrant Report	NA	NA	None owned by CODA
		Annual Fire Extinguisher Inspection	June 2021	June 2022	
		5-Y Internal fire sprinkler pipe inspection	2018	2023	
		Quarterly flow/tampers inspection	12/17/21	12/17/2022	
		2-Y Gen. fuel clean and test			
	FLS Equip R&M	5Y - Replace generator batteries	2019	2024	
		5-Y Fire Pump internal check valve	2019	2024	
		5-Y FDC hydro test	2019	2024	
		3-Y fire pump flow test	2019	2022	
		3-Y generator load bank test	2019	2022	
		Annual 2-Hour Load Bank Test			
		5-Y Off-roof flow test	2019	2024	
		5-Y PRV test	2019	2024	
		5-Y PD Dry standpipe hydro test	2019	2024	
		Annual Generator MAJOR	1/17/22	1/17/23	
		Annual Generator MINOR	8/2/21	8/2/22	
		Annual Diesel Engine Oil	1/17/22	1/17/23	
		Annual Fuel Analysis	1/17/22	1/17/23	
		Annual Coolant Analysis	1/17/22	1/17/23	
		Annual ATS inspection	1/17/22	1/17/23	
		Annual ATS inspection GIT	1/17/22	1/17/23	
		Annual stairwell pressure/door force tests			

Account:	HVAC - Supplies			
Account#:	Item	Jan	Feb	Mar
6410-0001	CHW/WW modulating valves			
	Filters			
	Miscellaneous Supplies			
	Chiller plant refrigerant monitor service and calibration			
	FCU Motors			
	Semco Pump Module Replacement			
	MTCB Pump Module Replacement			
	Total	-	-	-
Account:	BAS Service			
Account#:	Item	Jan	Feb	Mar
6410-0003	Analytics Contract Annualized- Hepta Systems (Expires 4/30/24)			
	Controls Contract - CMS Controls - annualized (Exp 7/30/22)			
	Total	-	-	-
Account:	Chemical Treatment			
Account#:	Item	Jan	Feb	Mar
6410-0005	Water Treatment- Technical Specialities (Expires 1/21/23)			
	Legionella Testing x2 per year			
	Additional chemical treatments, unplanned losses			
	Total	-	-	-
Account:	HVAC Contract			
Account#:	Item	Jan	Feb	Mar
6410-0008	HVAC PM Contract - Annualized (Expires 12/31/23)			
	Total	-	-	-
Account:	NOTES: HVAC Misc. R&M			
Account#:	Item	Jan	Feb	Mar
6410-0050	2-Y: State boiler inspections and permit fees due 2/23			
	Miscellaneous central plant repairs			
	BMS programing			
	Total	-	-	-
	TOTAL HVAC	-	-	-

# Fire Life Safety is Often Our Biggest Bear

► Fire Life Safety systems can drain a building's operating budget faster than a kid can eat candy. Next to HVAC systems, this is one of the most budget unfriendly categories we deal with from year-to-year, often exhausting this part of the budget well before the end of each fiscal cycle. Just a short list of some things that are required to remain in code compliance within FLS (not all inclusive):

- Fire alarm system annual testing/inspection
- Smoke removal/atrium pressurization
- Smoke and/or fire damper testing/inspection
- Exit stairwell door force test
- Battery powered lighting 30-day and annual test
- Parking deck NO2 and CO inspections/testing
- Smoke curtains or fire door testing
- Annual generator\* and ATS testing/inspections
- 3Y generator load bank\*
- Engine Oil Analysis\*\*
- Engine Coolant Analysis\*\*
- Diesel Fuel Analysis\*\*
- Diesel UST Class A/B operator license and annual registration
- 6M kitchen exhaust hood inspection and cleaning
- Kitchen fire suppression systems inspection and testing
- Stairwell and/or elevator hoistway pressurization testing
- Fire alarm system monitoring (24/7 onsite or offsite)
- 5Y generator battery replacement
- Elevator Recall, Phase I and II, monthly
- Fire sprinkler systems annual testing/inspection
- Fire hydrant annual test (if owned by property)
- Fire pump annual churn test
- Fire sprinkler quarterly flow/tamper test
- Fire extinguisher monthly and annual inspections
- 5Y internal fire sprinkler pipe inspection
- 5Y fire pump internal check valves inspection
- 5Y FDC hydro test
- 3Y fire pump flow test
- 5Y roof flow test
- 5Y PRV test (or 20% annually)
- 5Y PD Dry standpipe hydro test
- Fire pump weekly and monthly tests
- Generator weekly, monthly w/ATS

\*Or as determined by AHJ

\*\*In conjunction with annual testing

# Accurate Record Keeping is Critical!

- ▶ Create digital folders, by system, to upload copies of all tests, inspections, and correspondence
- ▶ Update your records frequently or as new documentation arrives.
- ▶ Ask your local Fire Marshal if he/she will provide you with a list of what they expect to see on the annual visit so the records can be ready on their arrival.
- ▶ Create your own Compliance Calendar to stay current and incorporate due dates and cost for upcoming inspections in your annual budget worksheets and submissions to property management for continuous tracking of upcoming events.
- ▶ If you are cited for a violation, TAKE CARE OF IT IMMEDIATELY OR WITHIN THE TIME FRAME ALLOWED by the AHJ. It is VERY important to communicate with the AHJ representative if you are having trouble meeting their deadlines. Honest communication will often result in an extended deadline.
- ▶ Establish good relationships with your fire alarm and fire sprinkler system service providers.
- ▶ Fire Life Safety systems can't be pushed to the back burner! Make sure when you speak to your managers when something happens that needs fixing, that you go to them not just with the problem, but with the solution and cost in hand. This pretty much applies to anything we do.