

Code Update 2023

FBC 2023, 8th Edition

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October 2023

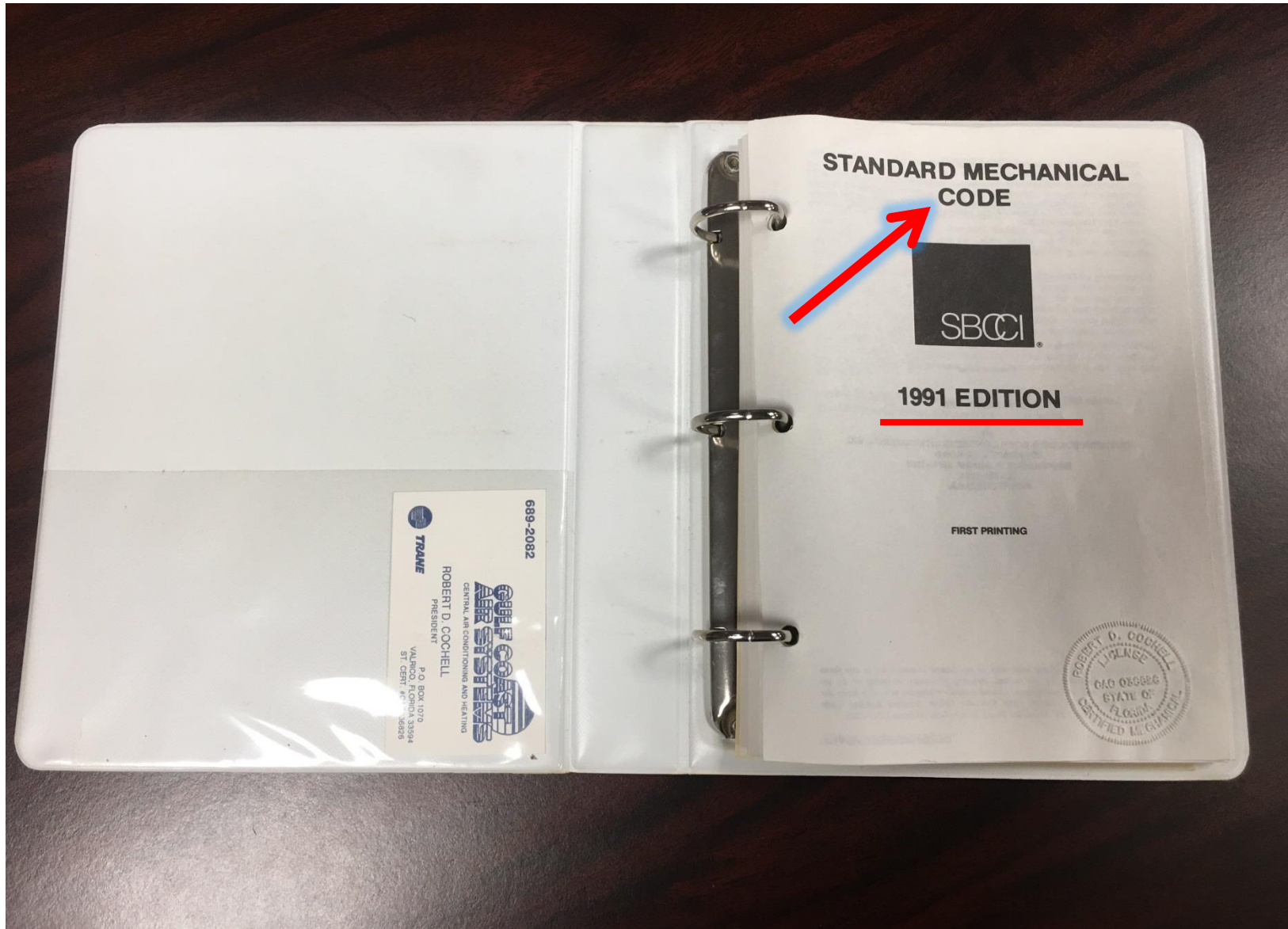
ACCA 2024



“What Code” and Why is it IMPORTANT?

- The three most prevalent Building Codes in use in the US are?
- **International Building Code** - the “I-Code”, ICC (International Code Council). Three “regional codes” merged to create in 2000. This Code is the strongly supported in Florida by BOAF (Building Officials) **commentary**
- **NFPA** – National Fire Prevention Association, this is actually the “*oldest*” Code... from 1896 headquarters Quincy, Massachusetts
- **Florida Building Code** – FBC... this is largely the ICC with Florida specific amendments...
- The FBC came into being as we used to be required to use the I-Code (as written) as the base with “Florida Specific Amendments”... that “sunset” each Code cycle and if we wanted them to remain would need to “reapply” and vote each change again

What is this “Historic Document”?



No Joke!

- In 1991, this little binder contained **ALL** the Mechanical Code you needed to know and comply
- Some 30 years ago (actually 1993) our lives began to change... some say “not for the better”
- What happened to trigger such profound change and increase the complexity within the Building Trades and enormous expense to consumers and commercial customers??

It was 1993! (1984 was George Orwell)

- Plumbing
- Electric
- Roofing
- Structural
- Mechanical
- **Energy!**
- Yes, Energy became its own Code Chapter in 1993.
- It was so simple to comply that many of the required forms were one or two pages and you could “run” the “Energy Budget” on a calculator in about 20 minutes...
- The “big push” came when Bill Clinton was elected and it was “**time to regulate**”!

The Need...

- What comes to mind when you hear?...
- **“Builder”** windows?
- **Builder**... toilet? Fixtures? Paint? A/C?
- **Anything positive?**
- Hardly... the term **“Builder anything”** is synonymous with **“cheap”**
barely meeting minimum standards
- In an attempt to improve on that and provide consumers with
“better” by increasing the stringency of the CODE
- More regulation, tighter specs would be the **“Road to Utopia”!**

Who??

- Who made the decision to “*strengthen*” the Code?
- Typically, there were coalitions of “*interested parties*”
- Manufacturers loved it
- Distributors stocked the new latest compliant equipment
- “*Consumer Advocates*” (that is an oxymoron if ever there was one)
- A/C Contractors... “**We had the “new” 8-SEER equipment” ... then 10...12...13... regional standards**
- Remember it used to be **EER** which was “**hard to cheat**” as it was one rating point 95 OD, 80/67 Ent Air, **then new rating “SEER” ... now SEER2**
- **Current fight over inclusion of HVAC equipment in the Energy Calculation on “Performance Method” (“I”)**

Politics of Code

- Into the vacuum of **“not enough regulation”** jumps two main groups:
- **NFPA**, yes! The **“Fire Prevention”** boys
- They staked out the prime territory in California, a place ripe for new regulation (CA = Regs +++ to infinity)
- **International Code Congress**, the **“ICC”** and divisions like **“IECC”** (Energy)
- **The Big fight...** remember several years ago when California governor Grey Davis was ‘recalled’ by the voters and “Arnold” became gov.
- Well part of that political intrigue was, **NFPA backed Davis** and was “out” and **“ICC” backed Arnold** and was “in”
- This struggle is **“on going”... where do you mount a Smoke Detector?**
- **Depends on which Code and when? ...why... politics**

Wizard of Oz!?

- ***“We’re off to see the Wizard”...***
- Who did the “Wizard” turn out to be?
- A little man behind a screen!
- **Who are these “I” people?**
 - The “usual suspects” include:
 - Building Officials
 - Architects
 - A few Engineers
 - Consumer Advocates...
 - Notably absent are???
 - Contractors – perhaps a GC but no “trades people” (contractors)
 - Why?

Who to do the “Heavy Lifting”?

- About this time other professional groups begin “*staking out territory*”
- Who would you suppose would be most interested in “*empirical analysis*” of heat transfer, system design, insulation thickness, real technical “fun stuff”?
- **ASHRAE** of course! ASHRAE 90.1
- Slide rules set aside... HP calculators at the ready they dove in and began to quantify all sorts of things... data coming in from everywhere, papers written and the Clinton administration (Bush, Obama, Trump, Biden) is “happy”
- **ASHRAE** has a multitude of *happy little engineers*, students, etc. all wanting to be published to get ahead and have their research included in... **THE CODE!...** Primarily the **The I-Code**

Enter The DOE



The *sole mission* of the DOE, when founded in 1977 during the height of the “Oil Crisis”, was to reduce US dependence on foreign oil. This was particularly true in automobiles which had an average fuel economy at the time of about 10 mpg!

The DOE has “morphed” into a major behemoth! Last year it had over 13,000 Federal Employees, 93,000+ contract employees, and a budget of \$99 Billion USD. They are “into” everything! Toaster efficiency, light bulbs, washers, dryers, nuclear material storage, and of course **Air Conditioning (Furnace – Heat Pump) efficiency**

Major DOE Departments Include...

- **United States Secretary of Energy**
 - **United States Deputy Secretary of Energy**
 - **United States Associate Deputy Secretary of Energy**
 - Under Secretary for Science and Energy
 - Office of Science
 - Assistant Secretary for Fossil Energy
 - Assistant Secretary for Energy Efficiency and Renewable Energy
 - Assistant Secretary for Nuclear Energy
 - Assistant Secretary for Electricity Delivery and Energy Reliability
 - **Indian Energy Policy and Programs**
 - Technology Transitions
 - Under Secretary for Nuclear Security
 - National Nuclear Security Administration
 - Under Secretary for Management and Performance
 - National Laboratory Operations Board
 - Associate Under Secretary for Environment, Health, Safety and Security
 - Management
 - Chief Human Capital Officer
 - Chief Information Officer
 - Economic Impact and Diversity
 - Hearings and Appeals
 - Assistant Secretary for Environmental Management
 - Legacy Management
 - Advanced Research Projects Agency-Energy
 - Energy Information Administration
 - Bonneville Power Administration
 - Southeastern Power Administration
 - Southwestern Power Administration
 - Western Area Power Administration
 - Assistant Secretary for International Affairs
 - Assistant Secretary for Congressional and Intergovernmental Affairs
 - Federal Energy Regulatory Commission
 - General Counsel
 - Chief Financial Officer
 - Enterprise Assessments
 - Energy Policy and System Analysis
 - Intelligence and Counterintelligence
 - Loan Programs Office
 - Public Affairs
 - Small and Disadvantaged Business Utilization

“They stabbed it with their ‘steely knives’ but they just can’t kill the beast” Hotel California - Eagles

Clueless

- There were “plans put forward” **to track each and every A/C unit, Furnace and Heat Pump** with GPS tracking devices
- Every unit manufactured in US or imported would have a chip installed and the DOE would monitor compliance to its regs by tracking from the source to ultimate installation and startup.
- Forget “registration” with Carrier, Lennox, Trane, etc. these boys were out to “KNOW” who is doing What? Where? When?
- Penalties for non-compliance would be severe and those penalized would be “manufacturers”, “distributors” and those quote, ***“miscreant contractors”!***
- But **NEVER** the **homeowner...** they are ***“pure as the driven snow”!***

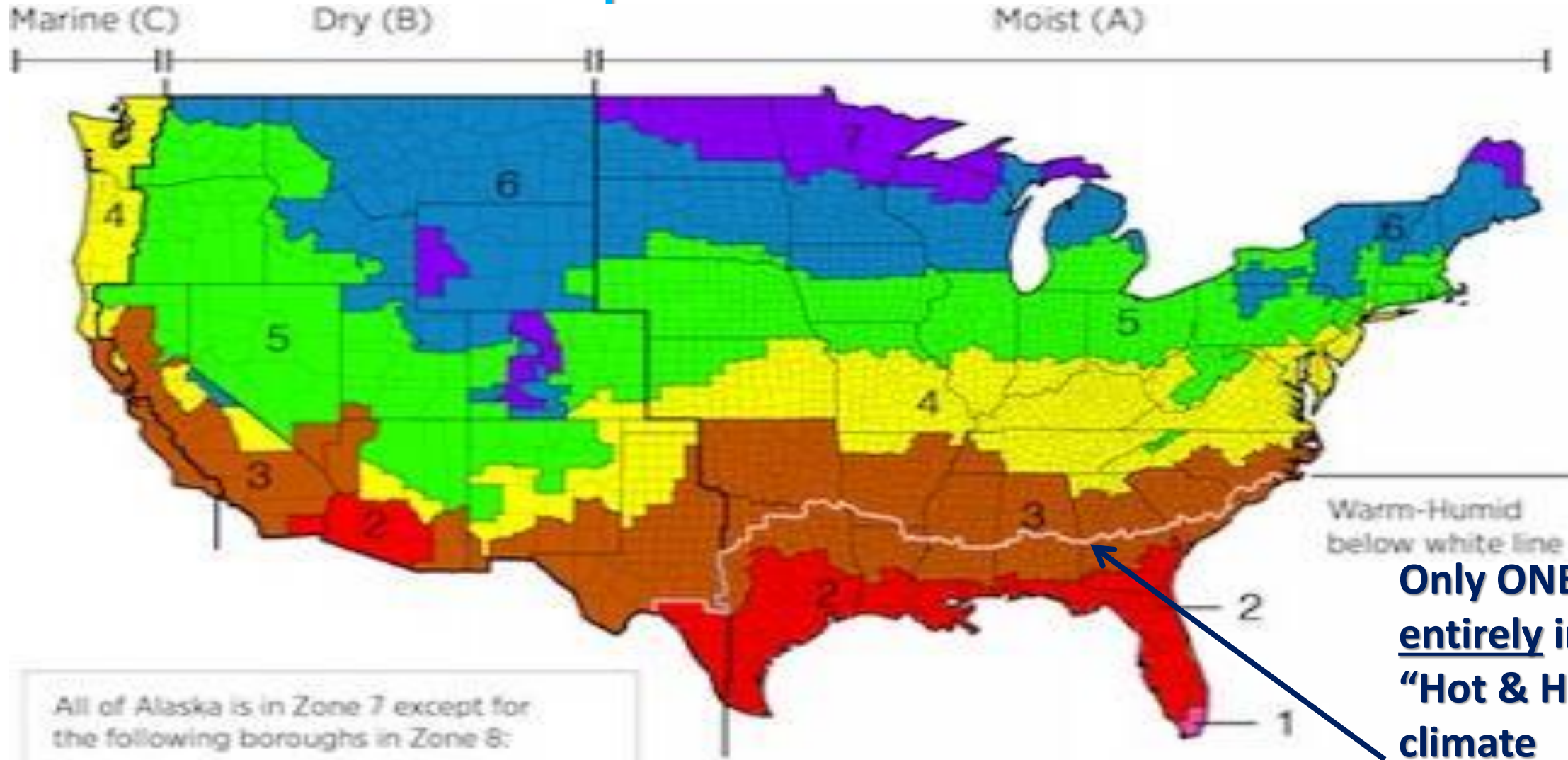
To Know How to Fight!!

- Unlike an old Hollywood western movie where a saloon fight breaks out and everyone is fighting everyone, aimlessly...
- We need to know **“who”** is generating the immense quantity of regulation and **“pick our fight”** to areas we can win, that’s the purpose of this background...
- The government has unlimited resources (*your money*) **to fight you...**
- You have little money and will be fighting an *entrenched bureaucracy* that won’t go away easily
- Many people, the **“greens”**, so called “environmentalists” and others believe we do NOT yet have enough regulation on Energy, not near enough!
- The new **“Buzzword”** is **Global Warming Potential (GWP)**

OK, Deep Breath... Where are We?

- Under constant assault is our Florida Building Commission!
- The “I” people and their acolytes come to the Energy meeting (Energy TAC) and propose we adopt the “IECC” (International Energy Code) **AS WRITTEN... AS WRITTEN – NO CHANGES!**
- The “I” remember are in the Code instruction and publishing business... for profit
- I don’t mind the “profit” but that explains much of their actions
- If they need to prepare a special, separate Code for Florida that costs time, money, resources... if Florida will just “do like everyone else” ...
- **Why the “renumbering” of the Code??**

Florida Unique?



Warm-Humid below white line

Only ONE state is entirely in the “Hot & Humid” climate condition... **guess who?**

All of Alaska is in Zone 7 except for the following boroughs in Zone 8:
Bethel, Northwest Arctic, Dillingham, Southeast Fairbanks, Fairbanks N. Star, Wade Hampton, Nome, Yukon-Koyukuk, North Slope

Zone 1 includes Hawaii, Guam, Puerto Rico, and the Virgin Islands

The Love Affair with Outdoor Air

- If you live in a predominantly **“dry”** climate and you have elevated humidity levels in the conditioned space what happens if you bring in large quantities of OA?
- The space rh will be reduced over time, perhaps a short time
- However if you do that in Florida what happens?
- Duh! With enough OA and the wrong A/C system you can make it **“rain” in the building**
- Who would be responsible for this blunder?
- The “I-Code” people will immediately take responsibility... the Federal DOE... the Architect?... the Engineer?... Building Dept?... **ALL NO!**
- **Blame the installing contractor!**

What Happened... for the Good

- State of Florida Senator, Tom Lee (R-Brandon), filed a bill [Jan 2017] that REMOVED the language dictating the “I-Code” be used as the “base Code” and enable the Florida Building Commission to use whatever is in the best interest of FLORIDA to make Code
- Can you say, “Blow Back”!
- BOAF, ASHRAE, DOE... the laundry list
- Why?
- **Who is on this Florida Building Commission?**
- **You are... you have a voice through representatives on the TAC’s and the Commission, it’s “local”**
- **What voice do you have at ICC? DOE?**
- ***None, Zero, Nada, Bupkiss!***

A Word about Refrigerant

- Whether you are a “believer” or not... another Federal Agency has tremendous sway over your life and the cost to A/C...
- **The EPA!**
- Do you remember when virtually ALL A/C and Heat Pump systems were R-22 refrigerant?
- One molecule, monochloro-difluoromethane
- Good in liquid state, vapor... relatively low pressure, cheap to produce, easy to formulate...
- But the “Cl” Chlorine component was deemed harm upper level ozone...
- What was the final “ODI” (Ozone Depletion Index)?
- R-12 was benchmark with 100
- Around 3 (no not 30... 3) all this “hoopla” for 3% or less!

GWP

- Totally driven by “computer models” and there are several competing models with various outcomes
- **GWP is “Global Warming Potential”**
- Who cares!... Better be YOU! Why?
- **R-22** in the US is a “thing of the past” but surprisingly it has a relatively low GWP, much lower than **R-410a**
- Ah... I see... the new “**green**” thing is the evil **R-410a**, but I thought that’s what would “save us”!?
- The EPA (Obama’s) has decreed an “early phase-out” of **R-410a** and all the “400” refrigerants
- There was an edict for 2019 but push back made it 2020... who knows it’s the government
- **“If we outlaw R-410a you’ll find an acceptable alternative”... EPA (spoken like a true bureaucrat)**

New to the 8th Edition

- Refrigerants Classification
- All old verbiage is out and in its place
- **Refrigerants will be designation by flammability:**
 - **Class 1** Indicates a refrigerant with no flame propagation
 - **Class 2** Indicates low flammability
 - **Class 2L** Indicates low flammability and low burning velocity
 - **Class 3** Indicates HIGH flammability

Seismic

• **301.18 Seismic resistance.** Reserved. ~~Where earthquake loads are applicable in accordance with the *Florida Building Code, Building*, mechanical system supports shall be designed and installed for the seismic forces in accordance with the *Florida Building Code, Building*.~~

• (M9996 AS)

• **Everything is out.**

Condensate Lines

• **307.1.1 Identification.** The termination of concealed condensate piping shall be marked to indicate whether the piping is connected to the primary or secondary drain.

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• **307.2.3.3 Identification.** The termination of concealed condensate piping shall be marked to indicate whether the piping is connected to the primary or secondary drain.

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• (M8444/M10-18 AM)

Condensate Discharge

- **307.2.1.1 (IPC [M] 314.2.1.1) Condensate discharge.**
Condensate drains shall not directly connect to any plumbing drain, waste or vent pipe. Condensate drains shall not discharge into a plumbing fixture other than a floor sink, floor drain, trench drain, mop sink, hub drain, standpipe, utility sink or laundry sink. Condensate drain connections to a lavatory wye branch tailpiece or to a bathtub overflow pipe, shall not be considered as discharging to a plumbing fixture. Except where discharging to grade outdoors, the point of discharge of condensate drains shall be located within the same occupancy, tenant space or dwelling unit as the source of the condensate.

Chapter 4 Ventilation

- Intake openings shall be located not less than 10 feet (3048 mm) from lot lines or buildings on the same lot.
- Intake openings shall be located not less than 3 feet (914 mm) below contaminant sources where such sources are located within 10 feet (3048 mm) of the opening. Separation is not required between intake air openings and living space exhaust air openings of an individual dwelling unit or sleeping unit where an approved factory-built intake/exhaust combination termination fitting is used to separate the air streams in accordance with the manufacturer's instructions.

Exhaust Changes

- **502.20 Manicure and pedicure stations.** **Manicure and pedicure stations shall be provided with an exhaust system in accordance with Table 403.3.1.1**, Note h. Manicure tables and pedicure stations not provided with factory-installed exhaust inlets shall be provided with exhaust inlets located not more than 12 inches (305 mm) horizontally and vertically from the point of chemical application.
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- **Add new text as follows:**
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- **502.20.1 Operation.** The exhaust system for manicure and pedicure stations shall have controls that operate the system continuously when the space is occupied.

Dryer Exhaust

- **504.6 Booster fans prohibited.** Domestic booster fans shall not be installed in dryer exhaust systems.
- **504.4.2 Termination location.** Exhaust duct terminations shall be in accordance with the dryer manufacturer's installation instructions. Where the manufacturer's instructions do not specify a termination location, the exhaust duct shall terminate not less than 3 feet (914 mm) in any direction from openings into buildings including openings in ventilated soffits.

Make up Air

- **510.6.5 Makeup air.** Makeup air from all sources shall be provided during operations at a rate approximately equal to the rate that air is exhausted by the hazardous exhaust system. Makeup air shall be provided by gravity or mechanical means or both. Mechanical makeup air systems shall be automatically controlled to start and operate simultaneously with the exhaust system. The makeup air shall not reduce the effectiveness of the exhaust system. Makeup air intakes shall be located in accordance with Section 401.4.

Duct Systems

- **604.3 Coverings and linings.** Coverings Duct coverings and linings, including adhesives where used, shall have a flame spread index not more than 25 and a smoke-developed index not more than 50, when tested in accordance with ASTM E84 or UL 723, using the specimen preparation and mounting procedures of ASTM E2231. Duct coverings and linings shall not flame, glow, smolder or smoke when tested in accordance with ASTM C411 at the temperature to which they are exposed in service. The test temperature shall not fall below 250°F (121°C). Coverings and linings shall be listed and labeled.
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- **Exception: Polyurethane foam insulation that is spray applied to the exterior of ducts in attics and crawlspaces shall be subject to all of the following requirements:**
- - 1. The foam plastic insulation shall have a flame spread index not greater than 25 and a smoke developed index not greater than 450, when tested in accordance with ASTM E84 or UL 723, using the specimen preparation and mounting procedures of ASTM E2231.
 - 2. The foam plastic insulation shall not flame, glow, smolder or smoke when tested in accordance with ASTM C411 at the temperature to which they are exposed in service. The test temperature shall not fall below 250°F (121°C).
 - 3. The foam plastic insulation complies with the requirements of Section 2603 of the International Building Code.
 - 4. The foam plastic insulation is protected against ignition in accordance with the requirements of Section 2603.4.1.6 of the International Building Code.

“Steel Duct” Wrap

- Factory manufactured duct may still use R-6.0 insulation.
- Field fabricated duct must employ R-8.0 insulation.

Solar Systems

- **1402.4.2 Rooftop-mounted solar thermal collectors and systems. The roof shall be constructed to support the loads imposed by roof-mounted solar collectors.** Where mounted on or above the roof covering, the collector array ~~and supporting construction,~~ mounting systems and their attachments to the roof shall be constructed of noncombustible materials or fire-retardant-treated wood conforming to the International Building Code to the extent required for the type of roof construction of the building to which the collectors are accessory.

Final Inspection

- **C104.2.6 Final inspection.** The building shall have a final inspection and shall not be occupied until approved. The final inspection shall include verification of the installation and proper operation of all required building controls, and documentation verifying activities associated with required building commissioning have been conducted and findings of noncompliance corrected. Buildings, or portions thereof, shall not be considered for a final inspection until the code official has received the Preliminary Commissioning Report and has also received a letter of transmittal from the building owner acknowledging that the building owner has received the Preliminary Commissioning Report as required in Section C408.2.4.

Thermal Distribution Efficiency

- **THERMAL DISTRIBUTION EFFICIENCY (TDE)**. The resistance to changes in air heat as air is conveyed through a distance of air duct. TDE is a heat loss calculation evaluating the difference in the heat of the air between the air duct inlet and outlet caused by differences in temperatures between the air in the duct and the duct material. TDE is expressed as a percent difference between the inlet and outlet heat in the duct.

Fenestration Product Rating

- *U*-factors of fenestration products shall be determined as follows:
 - 1. For windows, doors and skylights, *U*-factor ratings shall be determined in accordance with NFRC 100.
 - 2. Where required, **for garage door and rolling doors**, *U*-factor ratings shall be determined in accordance with either NFRC 100 or ANSI/DASMA 105.
- *U*-factors shall be determined by an accredited, independent laboratory, and *labeled* and certified by the manufacturer.

Building Cavities

C402.5.11.1 Vented dropped ceiling cavities. Where vented dropped ceiling cavities occur over conditioned spaces, the ceiling shall be considered to be both the upper thermal envelope and pressure envelope of the building and shall contain a continuous air barrier between the conditioned space and the vented unconditioned space that is also sealed to the air barrier of the walls. See the definition of air barrier in Section C202.

• **C402.5.11.2 Unvented dropped ceiling cavities.** Where unvented dropped ceiling cavities occur over conditioned spaces that do not have an air barrier between the conditioned and unconditioned space (such as T-bar ceilings), they shall be completely sealed from the exterior environment (at the roof plane) and adjacent spaces by a continuous air barrier that is also sealed to the air barrier of the walls. In that case, the roof assembly shall constitute both the upper thermal envelope and pressure envelope of the building.

• **C402.5.11.4 Air distribution system components.**

• **Building cavities designed to be air distribution system components shall be sealed according to the criteria for air ducts, plenums, etc., in Section C403.2.9.**

Air Leakage (*Ductwork?*)

- **C402.5.1.2.3 Building thermal envelope testing.** The building thermal envelope shall be tested in accordance with ASTM E 779, ANSI/RESNET/ICC 380, or ASTM E1827 or an equivalent method approved by the code official. **The measured air leakage shall not exceed 0.40 cfm/ft² (2.0 L/s · m²) of the building thermal envelope area at a pressure differential of 0.3 inch water gauge (75 Pa).** Alternatively, portions of the building shall be tested and the measured air leakages shall be area-weighted by the surface areas of the building envelope in each portion. The weighted average test results shall not exceed the whole building leakage limit. In the alternative approach, the following portions of the building shall be tested:

Cont. Air Leakage

- 1. The entire envelope area of all stories that have any spaces directly under a roof,
- 2. The entire envelope area of all stories that have a building entrance, exposed floor, or loading dock, or are below grade, and
- 3. Representative above-grade sections of the building totaling at least 25 percent of the wall area enclosing the remaining conditioned space.
- **Exception:** Where the measured air leakage rate exceeds 0.40 cfm/ft² (2.0 L/s•m²) but does not exceed 0.60 cfm/ft²(3.0 L/s•m²), a diagnostic evaluation using smoke tracer or infra-red imaging shall be conducted while the building is pressurized along with a visual inspection of the air barrier. Any leaks noted shall be sealed where such sealing can be made without destruction of existing building components. An additional report identifying the corrective actions taken to seal leaks shall be submitted to the code official and the building owner, and shall be deemed to comply with satisfy the requirements of this section.

New Interlock

• **C402.5.10 Operable openings interlocking. (Mandatory).** **Where occupancies utilize operable openings to the outdoors that are larger than 40 square feet in area such openings shall be interlocked with the heating and cooling system so as to raise the cooling set point to 90 degrees and lower the heating set point to 55 degrees whenever the operable opening is open. The change in heating and cooling setpoints shall occur within 10 minute of opening the operable opening.**

• **Exceptions:**

- -
 - 1. Separately zoned areas associated with the preparation of food that contributes to the HVAC loads of a restaurant or similar type of.
 - 2. Warehouses that utilize overhead doors for the function of the occupancy, where approved by the code official.
 - 3. The first entrance doors where located in the exterior wall and are part of a vestibule system.

• **C402.5.10.1 Operable controls (Mandatory).** Controls shall comply with Section C403.13.

• **C403.6 Operable opening interlocking controls (Mandatory).** The heating and cooling systems shall have controls that will interlock these mechanical systems to the set temperatures of 90 degrees for cooling and 55 degrees for heating when the conditions of Section C402.5.9 exist. The controls shall configure to shut off the systems entirely when the outdoor temperatures are below 90 degrees or above 55 degrees.

Equipment Sizing

• C403.2.2 Equipment Sizing

The output capacity of heating and cooling equipment shall be not greater than the loads calculated in accordance with Section C403.2.1. A single piece of equipment providing both heating and cooling shall satisfy this provision for one function with the capacity for the other function as small as possible, within available equipment options.

Exceptions:

- 1. Required standby equipment and systems provided with controls and devices that allow such systems or equipment to operate automatically only when the primary equipment is not operating.
 - 2. Multiple units of the same equipment type with combined capacities exceeding the design load and provided with controls that have the capability to sequence the operation of each unit based on load.
 - 3. "Living Spaces" in Commercial Buildings shall be sized in accordance with R403.7.1.1 and its exceptions.

Piping Insulation

TABLE C403.2.10 MINIMUM PIPE INSULATION THICKNESS (in inches)^{a, c}

FLUID OPERATING TEMPERATURE RANGE AND USAGE (°F)	INSULATION CONDUCTIVITY		NOMINAL PIPE OR TUBE SIZE (inches)				
	Conductivity Btu · in./ (h · ft ² · °F) ^b	Mean Rating Temperature, °F	< 1	1 to < 1½	1½ to < 4	4 to < 8	≥ 8
> 350	0.32 – 0.34	250	4.5	5.0	5.0	5.0	5.0
251 – 350	0.29 – 0.32	200	3.0	4.0	4.5	4.5	4.5
201 – 250	0.27 – 0.30	150	2.5	2.5	2.5	3.0	3.0
141 – 200	0.25 – 0.29	125	1.5	1.5	2.0	2.0	2.0
105 – 140	0.21 – 0.28	100	1.0	1.0	1.5	1.5	1.5
40 – 60	0.21 – 0.27	75	0.5	0.5	1.0	1.0	1.0
< 40	0.20 – 0.26	50	0.5	1.0	1.0	1.0	1.5

Heat Pumps

- **C403.2.4.1.1 Heat pump supplementary heat (Mandatory).**

Heat pumps having supplementary electric resistance heat shall have controls that, ~~except during defrost, prevent supplementary heat operation where the heat pump can provide the heating load.~~ limit supplemental heat operation to only those times when:

- - 1. The vapor compression cycle cannot provide the necessary heating energy to satisfy the thermostat setting,
 - 2. The heat pump is operating in defrost mode,
 - 3. The vapor compression cycle malfunctions, or
 - 4. The thermostat malfunctions.

• **C403.2.4.8.1 Temperature setpoint controls.** Controls shall be provided on each HVAC system that are capable of and configured with three modes of temperature control.

- 1. When the guest room is rented but unoccupied, the controls shall ~~to~~ automatically raise the cooling setpoint and lower the heating setpoint by not less than 4°F (2°C) from the occupant setpoint within 30 minutes after the occupants have left the guestroom.
 2. When the guest room is unrented and unoccupied, the controls shall ~~The controls shall be capable of and configured to~~ automatically raise the cooling setpoint to not lower than 80°F (27°C) and lower the heating setpoint to not higher than 60°F (16°C) ~~when the guestroom is unrented or has not been continuously occupied for more than 16 hours or~~ . Unrented and unoccupied guest room mode shall be initiated within 16 hours of the guest room being continuously occupied or where a *networked guestroom control system* indicates that the guestroom is unrented and **the guestroom is unoccupied for more than 30 20 minutes**. A *networked guestroom control system* that is capable of returning the thermostat setpoints to default occupied setpoints 60 minutes prior to the time a guestroom is scheduled to be occupied is not precluded by this section. Cooling that is capable of limiting relative humidity with a setpoint not lower than 65-percent relative humidity during unoccupied periods is not precluded by this section.
 3. **When the guest room is occupied, HVAC set points shall return to their occupied set points once occupancy is sensed.**

Board of Appeals - Commercial

- **CA101.1 Scope.** A board of appeals shall be established within the jurisdiction for the purpose of hearing applications for modification of the requirements of this code pursuant to the provisions of Section C109 (Means of Appeals). The board shall be established and operated in accordance with this section, and shall be authorized to hear evidence from appellants and the code official pertaining to the application and intent of this code for the purpose of issuing orders pursuant to these provisions.
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- **CA101.2 Application for appeal.** Any person shall have the right to appeal a decision of the code official to the board. An application for appeal shall be based on a claim that the intent of this code or the rules legally adopted hereunder have been incorrectly interpreted, the provisions of this code do not fully apply or an equally good or better form of construction is proposed. **The application shall be filed on a form obtained from the code official within 20 days after the notice was served.**