

Office of Education and Data Management Fall 2016 Career Development Series

# 2016 State Building Code Administrative Review and Updates

Presented by Joe Cassidy, State Building Inspector and Dan Tierney, Deputy State Building Inspector

- Hierarchy of Law
  - 1. Federal
    - US Constitution
      - Basis of all law
    - Congressional statutes
      - Codified to the United States Code
    - Federal Regulations
      - Agency developed regulations , rules, procedure
      - Codified to The Code of Federal Regulations
  - 2. State
    - Statutes
      - Connecticut General Statutes
    - · State regulations
      - <u>Building Code</u>, Tent & Portable Shelter Code, Elevator Code
  - 3. Municipalities
    - Ordinance
      - Zoning, Fire lane designation, Building emergency access, etc.



#### **Connecticut Building Code**

- State Statutes
  - Chapter 541 Building / Fire Codes
  - Chapter 390 Architects
  - Chapter 391 Professional Engineers / Land Surveyors
  - Chapter 396a Interior Designers
  - Chapter 393 Trade Licenses

**State of Connecticut General Statutes** 

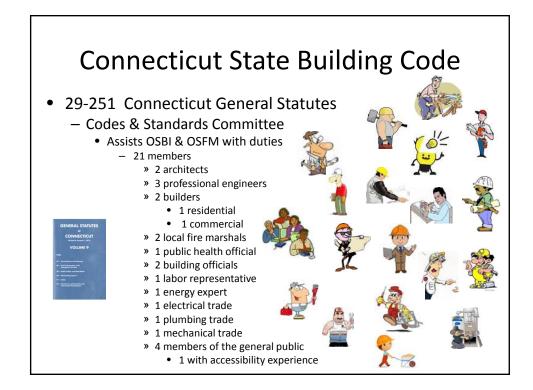
- Connecticut General Statutes Legislative Law
  - Title 29 Public Safety & State Police
    - Chapter 541, Part 1 through Part V
      - Part I State Fire Marshal & State Building Inspector
      - Part 1A State Building Code
      - Part II Fire Code / Fire Marshals
      - Part III Building Safety
      - Part IV State Demolition Code
      - Part V Fire Safe Cigarettes



- Connecticut General Statutes
  - 29- 250 State Fire Marshal & Building Inspector
    - Both offices report to the DAS Commissioner







- Connecticut General Statutes
  - 29-251b Building Code Training Council
    - Advise OSBI / Codes & Standards Committee
    - Multiple members of specific 'make-up'
      - Appointed by:
        - » State Building inspector
        - » Codes / Standards Committee
        - » Several other educational & trade groups



- This training program
- Continuing education program
- Related training issues



- Connecticut General Statutes
  - Training Program 29-251c[section(a)subparts (1) & (2)]
    - "Mechanics and application of the State Building Code"
      - Conducted for any municipal or State candidate for appointment
    - Continuing education programs for:
      - State & municipal Code officials
      - Architects
      - Engineers
      - Landscape architect
      - Interior designer
      - Builder Contractor
      - Construction supers
    - Funded through municipal building permit fee



- Connecticut General Statutes
  - 29- 252(b) Office of the State Building Inspector (OSBI)
    - State Building Inspector
      - Must be a CT licensed architect or engineer
      - Appointed by Governor
      - Responsible for interpretation of Code
        - » This is a very important function
      - Responsible for review of municipal BO decisions



- Connecticut General Statutes
  - 29-252 (a) State Building Code
    - OSBI & C&S Committee will adopt a State Building Code
    - Commissioner of Administrative Services shall approve
    - Shall be "recognized model code"
    - Authorization to make amendments
      - Administrative
      - Geotechnical
      - Weather related
      - As prompted by legislative actions
      - Other matters as required



- Connecticut General Statutes
  - 29-252 (a) State Building Code Purpose
    - Example of Legislative 'tweeks'
      - Buildings shall be constructed to conserve energy
      - Facilitate use of renewable energy
      - Support vehicle charging in residential garages





- 29-252 (a) CT Selected Model Building Codes
  - ICC 2012 International Building Code
  - ICC 2012 International Residential Code
  - ICC 2012 International Plumbing Code
  - ICC 2012 International Mechanical Code
  - ICC 2012 International Energy Conservation Code
  - ICC 2012 International Existing Building Code
  - NFPA 2014 edition 70 National Electrical Code















- Connecticut General Statutes
  - 29-253 Application of State Building Code
    - Applicable to all of Connecticut
      - No option all municipalities must use designated Code
    - May not be 'field' modified
      - No diminishment of Code
    - May be locally 'enhanced'
      - As specifically permitted by State Code
        - » Building demolition ordinance
      - Permitted for issues not covered by Code
        - » Land use and zoning
        - » Property maintenance ordinance
    - Again, Code may not be locally modified!
      - No reductions!

#### Connecticut State Building Code

- Connecticut General Statutes
  - 29-254(a) Fine for violation of SBC
    - \$200-\$1000

and/or

• 6 months of license plate fabrication duties



- Connecticut General Statutes
  - 29-254(b) Variations & Exemptions to State Code
    - OSBI holds the ability to modify Code for:
      - Practical difficulty situations
      - Unnecessary hardship
    - Procedure exists for requesting Code modification
    - Local Building Department
      - Accepts requests for modification
      - Forwards to OSBI
      - Makes recommendation
  - Municipal Building Officials are <u>NOT</u> empowered to make Code modifications!
    - Municipal BOs make determination regarding compliance with Code
    - Facilitate the modification request per CT State Building Code

- Connecticut General Statutes
  - Legislative Direction > Code
    - 29-256a Energy efficiency
      - Mandates use of IECC
    - 29-256b Use of ungraded lumber
      - Permits lower quality studs in garages
    - 29-256 (c) B & B
      - We will see this again!
    - 29-256d Path marking systems
      - Floor proximity exit marking
    - 29-259 Historic Structures & Urban Homesteading
      - Compromise between accessibility and existing building use
  - These items become CT Code amendments
    - · Source of much work for the OSBI



- Connecticut General Statutes
  - 29-260 Municipal Building Officials
    - (a)Licensed BO appointed by local official(s)
      - Municipalities select, hire, dismiss for cause
    - (a) Municipalities may 'split' a BO
      - Typical for smaller municipalities
    - (b)(c) limited job protection
      - Due process guarantee, prior to dismissal
      - Public hearing of dismissal
  - 29-262 paragraph e
    - Indemnification protection
      - Ties BO duties to appointing municipality



- **Connecticut General Statutes** 
  - 29-261 Municipal Building Officials
    - Qualifications
      - 5 years experience for BO
      - 3 years experience for ABO
    - Power & authority
      - Administer the Code
    - Proof of licensure
      - BO may check trade licenses
      - Specific remedy for non-licensed people
    - Right of entry
      - Time
      - Conditions











- Connecticut General Statutes
  - 29-262(a) Licensure of Building Officials
    - DAS directed to establish agency regulations
      - Classes of licensure
        - » BO, ABO, PRT, RBI, MI, EI, CI, PI, HCI
      - Continuing education requirements
      - Provisional appointments
      - Minimum qualifications for each classification
      - System for tracking continuing education

- Connecticut General Statutes
  - 29-262(b) Continuing Education requirement
    - 90 hours / 3 year
  - 29-262(c) No cost education
    - Initial training
      - PLTP Class
    - Continuing education programs
  - 29-262(b) License revocation for cause
    - Procedure
    - Remedy







- Connecticut General Statutes
  - 29-263(b) Education Fee Assessment
    - 26 cents per \$1000 validation
    - Forwarded to DAS
      - Portion held for administrative costs
    - Used to fund this program & career development



- Recent Legislative action
  - Public Act 16-45 concerning crumbling foundations
    - Two components
      - 1) Essentially a property tax relief effort
      - 2) Records retention component
        - » Imposes additional duty upon local BO
          - · Name of concrete supplier
          - Name of concrete installer
        - » 50 year record retention
        - » Effective 10/1/2016



- Connecticut General Statutes
  - 29-266 Appeals to Local BO Decisions
    - Step 1 Local board or Chief Municipal Officer
      - Specific procedure and time frame
    - Step 2 State Codes & Standards Committee
      - Specified procedure and timeframe
    - Step 3 Superior Court
      - District based on location of subject building



- Connecticut General Statutes
  - 29-269 Building Accessibility
    - Huge Code issue based on human rights
    - Source of many Connecticut amendments
    - Procedure for accessibility Code exemptions
      - Office of Advocacy for Persons with Disabilities
  - Several additional sections
    - 29-270a Automatic doors
    - 29-273 Residential sleeping room accessibility
    - 29-275a Obstructions to accessibility

- Connecticut General Statutes
  - 29-277 Foamed in place insulation
    - Specified permitted materials
    - \$500 fine
      - \$1000 for slow learners



- Connecticut General Statutes
  - 29-282 Public Utility Exemption
    - Specific to transmission & generation equipment / buildings
      - PURA jurisdiction







- Chapter 541, Connecticut General Statutes
  - Part II Fire Safety Code / Fire Marshals
    - Office of the State Fire Marshal
    - Local Fire Marshals
      - Requirements
      - Training
    - Adoption of Codes
      - ICC IFC code for 'new' buildings
      - NFPA 101 Code for existing buildings
      - NFPA 1 Code for scheduled periodic re-inspection



- Chapter 541, Connecticut General Statutes
  - Part IV State Demolition Code
    - State regulations
    - Local BO administration
    - Permit
    - Notification
    - Protection of property
    - Clean-up of debris



# Chapter 1

Connecticut State Building Code Scope & Administration

- 101.1 Title
  - 2016 State Building Code
    - ICC & NFPA Model Codes WITH
    - Connecticut amendments
      - (Amd) Amendments changes to model code language
      - (Add) Additions entire sections or a few words
      - (Del) Deletions sections, appendixes



- 101.1.1 Connecticut General Statutes
  - Application of State Building Code (CGS 29-253)
    - Applicable to all of Connecticut
    - May not be 'reduced' or 'relaxed'
      - No local modifications or exceptions

#### - 102.2 Local 'enhancements'

- Zoning regulations
  - Determines use of buildings based on location
  - May regulate building size
- Wetlands restrictions
  - May determine building location on property
- Municipal ordinance
  - May require additional features or impose restrictions

#### **Connecticut State Building Code**

• 101.2 Scope



- Construction, alteration, movement, enlargement, replacement, repair, equipment, use & occupancy, location, maintenance, removal, or demolition of every building or structure or any appurtenances attached to such building or structures.
  - Exceptions:
    - 1 & 2 family dwellings & multiple single dwellings covered by the Residential Portion of the State Building Code
    - Work to existing buildings conducted in compliance with the 2012 Existing Building Code portion of the State Building Code
      - » NOTE 'existing structures' definition, in context, to this exception, is found in (CT)102.6





- R101.2 Residential Portion Scope
  - Applicable to:



- Detected 1 & 2 family dwellings & Townhouse single family dwelling units
  - Maximum of 3 stories above grade plane
  - All dwellings must provide a separate MOE
- Structures accessory to above dwellings

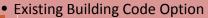
#### Connecticut State Building Code

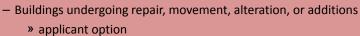
- R101.2 Residential Portion Scope
  - 'Exceptions' to applicability:



IEBC

- IBC Section 419 Live / work units
  - Automatic Fire Sprinkler system requirement
  - May require 'enhanced' fire alarm system









- 101.4 Fuel Gas
  - IFGC NOT adopted
    - Any mention of the IFGC goes to:
      - Fuel Gas = NFPA 54
      - Propane = NFPA 58
      - Hydrogen = NFPA 2





- Residential Portion
  - G2401.1 Fuel Gas
    - Chapter 24 Primary
  - R101.4.1 Fuel Gas
    - References go to:
      - Fuel Gas = NFPA 54
      - Propane = NFPA 58
      - Hydrogen = NFPA 2





- 101.4.4 Property Maintenance
  - State Fire Safety Code
  - State Fire PreventionCode



- R101.4.3 Residential
  - As specified in IRC
  - Local Codes
    - As properly adopted



- 101.3 Intent
  - Establish minimum requirements to:
    - Safeguard public safety
    - Ensure adequate structural strength
    - Provide egress
    - Provide for sanitation
    - Provide proper light, ventilation, comfort
    - Conserve energy
    - Protect from fire / other hazards
    - Provide reasonable safety to emergency responders
- R101.3 Residential portion
  - Identical

- Appendices Adopted
- State Building Code
  - 101.2.1 CT Adopted
    - C Agricultural Buildings
    - H Signs
    - I Patio Covers
    - N Design Parameters
- Residential Portion
  - R102.5 CT Adopted
    - E Manufactured Housing
    - F Passive Radon Gas Controls
    - G Swimming Pools
    - H Patio Covers
    - K Sound Transmission
    - O Automatic Vehicular gates
    - P Water pipe Sizing
    - R Wind, seismic, snow

- 102.4 Referenced Codes & Standards
  - Codes & standards referenced within the Code become part of the Code requirements
    - TO THE EXTENT OF THE REFERENCE
      - Go to references ONLY when sent
      - Take only what you're told to take & leave
- 102.4.1 Code 'trumps' standards
  - Referenced standard can't change Code
- 102.4.2 This Code 'trumps' subordinate Codes
  - This Code is 'boss' Code
- Residential Identical language

#### Connecticut State Building Code

- 101.4.7 Electrical
  - 2014 NEC
    - As Ct Amended
- Residential R101.4.5 Electrical
  - Applicant may choose:
    - IRC Part VIII

#### OR

- 2014 version of NFPA 70
- Choice at time of application
- NOTE: Some installations default to NEC
  - Solar photovoltaic systems
  - Standby generators
  - Wind & hydro power generation
  - Fire pumps
  - Fuel cells



- 102.5 'Savings' clause
  - One bad apple.....
    - A validity problem with one section of Code does not invalidate the remainder of Code
- Residential
  - R102.6 Agrees



- 102.6 Existing Structures
  - · Legally occupied structures
    - Not required to 'update' to this Code
      - » Except as specified within Code
        - Violations
        - Unsafe conditions
        - Section 116
    - Legacy Code requirements apply
    - Must comply with the CT State Fire Prevention Code
      - » Periodic inspections
- R102.7 Residential
  - Similar
    - Fire Code not mentioned

- Section 103 Enforcement Agency
  - 103.1 Each municipality will enforce this Code
    - CGS 29-253
  - 103.2 Each municipality will appoint a BO
    - Municipalities may 'share' appointee (CGS 29-260)
  - 103.3 Authorization to appoint
    - Qualified people per CGS 29-262
      - Assistants, technical people, inspectors, examiners
    - Based on local protocol & procedures
- Section R103 Residential
  - identical



- Section 103 Enforcement Agency
  - 103.4 Employee Restrictions Conflict of Interest
    - Can't perform trade work in jurisdictional area
    - Can't inspect your own work
    - Can't supply materials to buildings in your jurisdiction
    - Can't design or prepare plans for buildings in jurisdiction
    - Can't do anything that conflicts with duties
  - Municipalities will also impose specific employee restrictions
    - Ethical policy
  - The 'stink' test
    - If a good reporter can make it stink, it stinks.
- Residential
  - Identical



- 104 Duties & Powers of the Building Official
  - 104.1.1 State Rule making Authority (CGS 29-252)
    - State controls the Code
      - Selects, adopts, amends
    - State controls interpretation of Code
      - Formal process, review
    - State may review local official's interpretation
      - Generally upon request
- Residential
  - Identical





- 104 Duties & Powers of the Building Official
  - 104.2 Application for Permits
    - Receive application
    - Review documentation
    - Issue permits
    - Site inspect work
  - 104.3 Notices & orders
    - Communicate orders / notices
      - As specified herein
      - As determined by policy





- Section 103 Enforcement Agency
  - R103.4 Restriction Conflict of Interest
    - Can't inspect your own work
    - Can't supply materials to buildings in your jurisdiction
    - Can't design or prepare plans for buildings in jurisdiction
    - Can't do anything that conflicts with official duties
  - Your appointing authority will provide additional:
    - Written policy
    - Specific restrictions
  - Your 'moral compass' should also provide guidance
    - Judgment is never 'for sale'
    - The 'newspaper' test
      - If a reporter can make it look 'dirty', it is probably a bad idea
- Residential
  - Identical



- 104 Duties & Powers of the Building Official
  - -104.7 Department Records
    - Maintain official records
    - Required retention period
      - State requirements
      - Local requirements





- 104 Duties & Powers of the Building Official
  - 104.8 Liability
    - Personal liability protection
      - Defense cost borne by municipality
    - · Requirement to 'act in good faith'
      - Must 'discharge duties without malice'
    - · Limited protection
      - Based on 'acts or omissions' while executing duties 'in good faith'
  - Behavior not 'in good faith':
    - Nonfeasance intentionally not performing a duty
    - Misfeasance knowingly improper performance of duty
    - Malfeasance knowingly working outside authority
    - Fraud lying, incomplete or incorrect records
    - Discrimination of any type



- 104 Duties & Powers of the Building Official
  - 104.9 Approved materials & equipment
    - Properly installed
    - Items / equipment used for intended purpose
    - Listed and labeled items / equipment
    - Installed per manufacturer's instructions
  - 104.9.1 Used materials and equipment
    - · Concern for materials not meeting current standards
    - Building Official may approve





- 104.10 Code Modifications
  - 104.10.1 Modifications to State Building Code
    - State Building Inspector responsibility
      - Available appeal to Codes & Standards Committee
    - Based on:
      - Practical difficulty
      - Unnecessary hardship
      - Unwarranted
  - Municipal Building Officials are <u>NOT</u> empowered to make Code modifications!
    - Municipal BOs make determination regarding compliance with Code
    - Facilitate any modification request

- 104.10 Code Modifications
  - 104.10.1.1 Action on Application
    - Available through local BO
    - 15 day action limit
    - Local BO to comment
  - 104.10.1.2 Modification Records
    - Local BO responsible for related records
      - Required for future reference



- 104.10 Code Modifications
  - 104.10.2 Accessibility exemption from Code
    - Joint decision
      - OSBI
      - Office of Protection & Advocacy for Persons with Disabilities
- Absent from the Residential Portion of SBC

- 104.10 Code Modifications
  - 104.10.3 Historic Structures
    - Special handling
    - Residential R104.10.2
      - identical



- 104.10.4 Urban Homesteading
  - Special handling
  - Residential R 104.10.3
    - identical



- 104.10 Code Modifications
  - 104.10.5 Elevators
    - CGS Chapter 538
      - Some 'wiggle room' may be available



- 104.10.6 Limited Access Lifts
  - Special handling when part of 'accessible path'
- Absent from the Residential Portion of SBC

- 104.11 Alternative materials
  - Must satisfy:
    - Quality
    - Strength
    - Effectiveness
    - Fire Safety
    - Durability
- 104.11.1 Research Reports
  - Must be:
    - Valid
    - Approved source
      - ICC, UL, FM, ANSI etc.
- 104.11.2 Tests as required
  - Satisfaction of BO
  - No cost to municipality
  - Conducted by 'approved' agencies
  - Report sent to BO



- 105.1 & R105.1 Permits
  - Required for:
    - Construction
    - Enlargement
    - Alterations
    - Repairs
    - Movement of structures
    - · Move a lot line with impact on structure / building
    - Demolition
    - Change of occupancy
    - Repair, removal, conversion, replacement of:
      - Gas
      - Mechanical
      - Plumbing system
  - Essentially; any type of construction or addition, renovation, repair, alteration requires permit - unless specifically exempted

#### Connecticut State Building Code

#### 105.2 Work Exempt from Permit R105.2 Residential Exemptions

- Building
  - 14 items
- Electrical
  - 3 items
- Gas
  - 3 items
- Mechanical
  - 8 items
- Plumbing
  - 2 items

- Building
  - 11 items
- Electrical
  - 5 items
- Gas
  - 3 items
- Mechanical
  - 8 items
- Plumbing
  - 2 items



- 105.2 Work exempt from **PERMIT** 
  - Exemption from permit is <u>NOT</u> exemption from completing work in accordance with Code
    - Work must comply with Code
    - Must comply with local ordinances
- R105.2 Identical





- 105.1.1 Annual Permit
  - Specific to property owned or operated by applicant
  - Allows qualified employee(s) to make alterations
    - Existing, approved electrical, gas, mechanical, or plumbing
- 105.1.2 Annual Permit Records
  - Detailed record of alterations made under permit
  - Available for inspection by BO
- Not a residential portion issue



- 105.1.3 Connecticut State Fire Safety Code
  - Application to <u>existing</u> buildings under abatement orders by the local Fire Marshal
    - Conflicts resolved by using State Fire Code
      - Fire Code is rendered 'superior'
        - » for this specific application
    - Several exceptions
      - New fire protection systems installed per Building Code
      - New electrical work shall meet NEC
      - Structural work
      - Mechanical work
      - Plumbing work
- Not a Residential portion issue



- 105.2.1 Emergency Repairs
  - Equipment repair & replacement
    - Permit application on next working day





- 105.2.2 Ordinary Repairs Exempt from Permit
  - Permit or BO notification not required
    - Does not include
      - Cutting of wall or partition
      - Modification of any load bearing member
      - Any change to MOE arrangement
      - Any change to fire protection water supply
      - Any water supply, drain, or sewer changes
      - Gas pipe changes
      - Changes to electrical wiring
      - Mechanical system changes
      - Any work impacting public health or safety
        - » Passive fire protection features
        - » Active fire protection systems



- 105.2.4 State Agency Exemptions
  - CGS 29-252a(h) State exempt from local permit & CO
    - Not required to secure building permits per CGS 29-263
    - Not required to secure CO per CGS 29-265
    - OSBI takes jurisdiction for such activities
      - CGS 29-252a
  - EXCEPTION: State <u>shall</u> obtain demolition permits from local BO
    - CGS 29-401 through 29-415
      - State Demolition Code

- 105.2.5 Federal Agency Exemptions
  - Specific to federally owned or leased property
    - Specific to properties totally under US Government control
  - No local permit required for:
    - building / additions / repairs / demolition



US Government owned or wholly leased Building exempt from permit



PO in 'strip mall' leased common space not exempt

- 105.3 Application for permit
  - Permit application form requirements
    - Scope of work
    - Location of work
    - Use & occupancy of the property
    - Construction documents satisfactory to BO
    - Validation of work
    - Signature of owner or authorized agent
    - Additional data as required





- 105.3.1 Action on application
  - 30 day 'window' to:
    - Issue a permit or deny a permit
      - Rejection shall be in writing
        - » Reason for rejection stated
  - BO shall issue permit as soon as practicable
  - Plan review stage
    - Examination of submittal documents
      - To determine if additional information is required
      - To determine Code compliance of the plans
      - Additional documentation may requested
      - BO must be satisfied with compliance







- 105.3.1.1 Zoning Approval
  - Zoning Officer sign-off
    - For work subject to zoning regulations
  - R105.3.1.2 Residential Portion
    - Identical
- 107.2.5.2 Private Sewage Disposal
  - Local Health officer 'sign-off'
    - Written approval prior to permit issuance
      - As required by municipal protocol
  - R106.2.1 Residential Portion
    - Identical





- 105.3.1.2 Fire Marshal Approval
  - FMO sign-off for compliance to CSFSC & CSFPC
    - For structures subject to the State Fire Code
  - Residential Portion is silent on this issue



- 105.3.2 Time Limit of Permit Application
  - 180 days
    - Unless pursued in good faith or permit issued
  - 90 day extension(s)
    - Requested in writing
    - Justifiable cause demonstrated
    - BO approval
    - Several extensions possible



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- 105.3.3 By whom permit application is made (CGS 29-263)
  - 1) Owner in feeOR
  - 2) Authorized agent of owner in fee



- Special requirements for licensed contractors
  - CGS sec. 20-338b Contractor Permit Application
    - · Licensed contractor may sign application as authorized agent
      - May further delegate application signature
        - » Proper documentation
- Residential portion: R105.1.1
  - Repeat of the requirements



#### **Connecticut General Statutes**

#### CT Gen Stat § 20-338b (2012)

Any <u>licensed contractor</u> who seeks to obtain a permit from a building official may sign the building permit application <u>personally or delegate</u> the signing of the building permit application to an employee, subcontractor or other agent of the licensed contractor, provided, the licensed contractor's employee, subcontractor or other agent submits to the building official a <u>dated letter on the licensed</u> <u>contractor's letterhead</u>, signed by the licensed contractor, stating that the bearer of the letter is authorized to sign the building permit application as the agent of the licensed contractor. The letter shall not be a copy or a facsimile, but shall be an <u>original letter bearing the original signature</u> of the licensed contractor. The letter shall also include: (1) The name of the municipality where the work is to be performed; (2) the job name or a description of the job; (3) the starting date of the job; (4) the name of the licensed contractor; (5) the name of the licensed contractor's agent; and (6) the license numbers of all contractors to be involved in the work.

- 105.4 Validity of Permit
  - A permit to proceed with work
    - NOT a permit to violate Code
    - NOT a permit to violate other ordinance





- 105.5 Expiration of Permit
  - Invalid unless work has begun with 180 days
  - Invalid upon 180 days of inactivity or abandonment
  - 180 extension(s) may be granted
    - For demonstrated justifiable cause
    - Requested in writing
  - Exception
    - · Lesser time period
      - 30-180 days for section 116 work
        - » Required to correct unsafe conditions





- 105.6 Suspension or Revocation
  - A permit may be revoked / suspended for:
    - Issuance in error
    - Issuance based on misinformation
    - Issuance based on incomplete information
    - Violation of any applicable:
      - Code
      - Ordinance
      - Law
      - Regulation



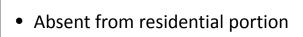
- 105.7 Placement of permit
  - Permit or copy
  - On-site of work
    - Posting not required
  - Duration of project







- Section 106
  - 106.1 Live load posting
    - For design load >50 psf
    - Conspicuous placement
  - 106.2 Signage requirements
    - Required prior to CO issuance
  - 106.3 Restrictions
    - Maximum floor loading based on design
      - Table 1607.1







#### Connecticut State Building Code

- 107.1 Construction Documents
  - 2 or more sets
    - Drawings
    - Supporting documentation
    - Special inspection statement
    - Geotechnical report
    - Other documentation as required by BO
      - Special inspection documentation
      - Engineering analysis as required
      - Professional opinion statements as required



- Identical





- 107.1 Construction Documents
  - Professionally prepared construction documents
    - Connecticut Requirements (CGS 20-293 & CGS 20-298)
      - Nearly all buildings & additions greater than 5000 ft<sup>2</sup>
        - Limited exceptions
          - 1 & 2 family
          - Agricultural buildings
          - US government
          - PURA regulated structures
      - Any size building containing:
        - » Use Groups A, E, I, H, R-1, R-2
- R106.6 Townhouses over 16 units or 24,000 ft<sup>2</sup>
  - Sealed plans required

- Section 107 Submittal Documents
  - 107.2.1 Drawings & details
    - Suitable material
    - Electronic OK with BO approval
    - Clarity & detail per BO requirements
- R106.1.1 Residential Portion
  - Identical



- Section 107 Submittal Documents
  - 107.2.2 Sprinkler system shop drawings
    - Sprinkler systems
      - » designed by licensed person
        - CGS 29-263a
    - Includes:
      - » System alterations
      - » System additions
      - » System changes
- Residential
  - Application to P2904 Systems

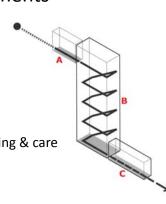


#### Connecticut State Building Code

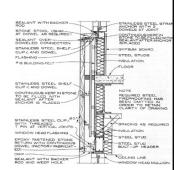
- Section 107 Submittal Documents
  - 107.2.3 Means of egress
    - -Sufficient detail
      - » Recall 105.3.1.2
        - Fire Marshal approval
      - » Building Code Chapter 10
    - Occupant Loading Data
      - » Required for transient sleeping & care



- Included in R106.1. Information



- Section 107 Submittal Documents
  - 107.2.4 Exterior wall envelope
    - Sufficient detail
      - » Weather resistance
        - Flashing
        - Control joints
        - Drainage
        - End details
      - » Energy Code compliance
        - Insulating value
- Residential Portion
  - Included in R106.1. Information



#### Connecticut State Building Code

- Section 107 Submittal Documents
  - 107.2.5 Site Plan
    - Detail as required
      - » Distance to lot lines
      - » Fire separation
      - » Zoning compliance
      - » Sewage disposal
      - » Accessibility



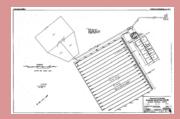
Lesser requirements



- Section 107 Submittal Documents
  - -107.2.5.1 Design Flood elevations
    - Determined per Section 1612
- Residential
  - R322.1.4 Design Flood Elevations



- 107.2.5.2 Private sewage disposal
  - -System details when applicable



- R106.2.1 Residential sewage disposal
  - System details

- Section 107.3 Examination of Documents
  - BO will examine OR cause to be examined
    - Compliance with Code?





- R106.3 Residential Document Exam
  - Identical



- 107.3.1 Approval of Documents
  - In writing or by stamp
    - "Reviewed for Code Compliance"
  - One set retained by BO
  - Other set returned to applicant
    - Maintained at site of work
       Available for inspection
- R106.3.1 Residential portion



- 107.3.2 Previous Approvals
  - Code edition based on date of permit application
    - Permit application date determines Code edition
      - CT Regulation Sec 29-252-1e
- R106.3.2 "Ditto"





- Section 107.3.3 Phased Approvals
  - OK at applicant's risk
  - No assurance of approval of later phases
  - Additional documentation
- R106.3.3 'Ditto'





- 107.4 Amended Construction Documents
  - Change in plans must be submitted for review







- -107.5 Retention of Documents
  - CGS Chapter 188 schedule
     Connecticut Record Disposition Schedule
    - » Life of the building
  - Exception
    - Specific to single family dwelling or outbuilding
      - » Plans returned to owner (of plans)
        - upon written request
- R106.5 Similar

- 107.6 Additional Requirements (CGS 29-276c)
  - Specific to structures of:
    - High hazard
    - Large scale
    - · High rise
    - High life hazard classification
- Required:
  - 1) Plans & Specifications
    - Architect or Engineer stamp required
  - 2) Professional observation of construction process
  - 3) Responsibility for fabricated structural components
    - Proper specification
    - Proper load bearing capability

- 107.7.1 'Threshold' Structures & Additions (29-276b)
  - Two Additional Requirements
    - 1) Independent (third party) professional structural design review
      - Fees paid by owner
    - 2) Statements of professional opinion
      - From: Engineers & general contractor
      - Stating: Building is in "substantial compliance' with Code
  - BO's Administrative responsibilities:
    - Credential verification of professionals
    - Collection of documentations
    - Maintenance of documents



- 107.7 <u>Definition</u> of 'Threshold Limits'
  - 4 stories
  - 60' in height
  - Clear spans of 150'
  - 150K gross floor area
  - Occupancy 1000 persons
  - Occupancy based specifics
    - Institutional 150 beds or people
    - Hotels / motels 200 rooms
    - Apartments 100 Dwelling Units
    - Storage 250K ft<sup>2</sup> or 1000 car garage



- CGS 20-293 & 20-298
  - In general: Building plans for new buildings, additions, & alterations must be sealed by an a design professional
    - Exceptions to the sealed requirement:
      - » Buildings less than 5000 ft<sup>2</sup>
        - Additions must be calculated in the building area
      - » Most buildings constructed under the IRC
        - Townhouses over 24K ft² or 16 dwelling units require seal per (CT)R106.6
      - » Agricultural buildings used for agricultural purposes
      - » PURA regulated structures
      - » US Government controlled building project
  - Recall that (CT)107.6 may add to the list
    - High hazard & high life hazard

#### CGS 20-293 & 20-298

Sec. 20-293. Seal. Each architect shall have a seal approved by the board, which shall contain the name of the architect and the words "Licensed Architect, State of Connecticut", and such other words or figures as the board deems necessary. The working drawings and specifications prepared for such buildings or structures, which by the terms of this chapter shall be prepared by a licensed architect, shall be stamped with his seal. No person shall designate or imply that he is the author of such working drawings or specifications unless he was in responsible charge of their preparation, whether made by him personally or by his employee or agent under his immediate supervision Working drawings and specifications prepared by an architectural firm shall be sealed by a principal member or officer of the firm. Except for plans for buildings or structures under the provisions of section 20-298, no official of this state or of any city, town or borough therein, charged with the enforcement of laws, ordinances or regulations relating to the construction or alteration of buildings or structures, shall accept or approve any plans or specifications that are not stamped with the seal of a licensed architect or a licensed professional engineer Sec. 20-298. Exempted activities. The following activities are exempted from the provisions of this chapter: (1) The practice of engineering by a professional engineer licensed under the provisions of chapter 391, and the performance by such professional engineer of architectural work for which such professional engineer is qualified by education and experience and which is incidental to such professional engineer's engineering work; (2) the construction or alteration of a residential building to provide dwelling space for not more than two families, or of a garage or other accessory building intended for use with such residential building, or of any farm building or structure for agricultural use; (3) the preparation of details and shop drawings by persons other than architects, for use in execution of the work of such persons, when buildings are designed in accordance with the requirements of this chapter; (4) the activities of employees of architects licensed in this state acting under the instructions, control or supervision of their employers; (5) the superintendence by builders, or properly qualified superintendents employed by such builders, of the construction or structural alteration of buildings or structures; (6) the activities of officers and employees of any public utility corporation whose operations are under the jurisdiction of the Public Utilities Regulatory Authority: (7) the activities of officers and employees of the government of the United States while engaged in this state in the practice of architecture for said government; and (8) the making of plans and specifications for or supervising the erection of any building, any building addition or any alteration to an existing building, where the building, including any addition, contains less than five thousand square feet total area, provided (A) this subdivision shall not be construed to exempt from the provisions of this chapter buildings of less than five thousand square feet total area of the use groups as defined in the State Building Code as follows: Assembly, educational, institutional, high hazard, transient residential, which includes hotels, motels, rooming or boarding houses, dormitories and similar buildings, and (B) the area specified in this subdivision is to be calculated from the exterior dimensions of the outside walls of the building and shall include all occupiable floors or level

- Section 107.8 Lift Slab Construction
  - Treated as a 'threshold limit' building
    - Regardless of size
  - 107.8.1 Additional requirements
    - OSHA 29CFR1926
    - CT DOL Standards





- Section 108 Temporary Structures & Uses
  - 108.1 General
    - 180 day temporary use permit
      - Single additional 180 days for cause
    - Short-term tents referred to Chapter 31



- 108.2 Conformance
  - Safety, strength, sanitation must be adequate



- Section 108 Temporary Structures & Uses
  - -R108.3 Temporary Power
    - OK with BO approval
    - NEC compliant
      - Powered portion



- R107.3 Residential
  - NEC or IRC Electrical compliant



- Section 108 Temporary Structures & Uses
  - -R108.4 Termination of approval
    - Permit may be terminated for cause
      - Health
      - Safety
      - Exiting
      - Hazard to public







#### Connecticut State Building Code

- Section 109 Fees
  - 109.1 Payment
    - Permits are not valid until fees are paid
  - 109.2 Schedule
    - Posted fee schedule
      - Document review
      - Permit
      - CO or CA



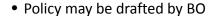
• Residential Section 108

- Section 109 Fees
  - 109.3 Permit Validations
    - Based on estimated value of work
      - Materials + labor
    - Final validation by BO

#### (DEL) - 109.4 Work commencing before permit issuance

- 109.5 Related fees
  - All related fees must be paid
    - ZBA, Sewer assessment, etc.







- Section 110 Inspections
  - -110.1 General
    - Work must remain available for inspection
      - Duty of permit holder
    - BO not responsible for expense to expose work
      - Cost borne by permit holder
    - Approval of inspection is a OK to proceed
      - An 'OK' to work is not an 'OK' to violate Code
- Residential section 109
  - Similar



- Section 110 Inspections
  - -110.1.1 Posting of Required Inspections
    - Required inspections posted for viewing
  - -110.2 Preliminary Inspection
    - BO may inspect site before permit issuance

• R109 Same





- 110.3 Required Inspections
  - 110.3.1 Footing & foundation
  - 110.3.2 Concrete slab & under-floor
  - 110.3.3 Flood elevation certification
  - 110.3.4 Frame
  - 110.3.5 Lath & gypsum
  - 110.3.6 Fire / smoke penetrations
  - 110.3.7 Energy efficiency
  - 110.3.8 Other
    - 110.3.8.1 Electrical
      - Temporary services
      - Underground conductors
      - Rough wire
      - Final
  - 110.3.9 Special
  - 110.3.10 Final

- Section R109.1
  - R109.1.1 Foundation Inspection
  - R109.1.2 Plumbing, mechanical, gas, electrical
  - 109.1.3 Floodplain inspections
  - R109.1.4 Frame & masonry inspections
  - R109.1.4.1 Insulation inspection / blower door test
  - R109.1.5 Other inspections
  - R109.1.5.1 Fire resistance construction inspection
  - R109.1.5.2 Temporary service & electrical trench
  - R109.1.6 Final inspection
  - R109.1.6.1 Elevation documentation

- 110.4 Inspection Agencies
  - -BO "approved' agencies



• R109.2 Inspection Agencies

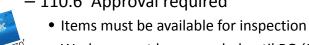




- Section 110 Inspections
  - 110.5 Inspection requests



- Duty of the permit holder or designee
- Must allow access for inspection
- Must provide 'means' for inspection



- 110.6 Approval required
  - Work may not be concealed until BO 'OK' of work
- 110.6.1 Notification



- BO will make written notice of inspection results
  - On site or delivered to permit holder

- Section 111 Certificate of Occupancy
  - -111.1 Certificate of Occupancy (CO)
    - Required for use of a building
      - Erected / altered after October 1970
    - Issued by BO
      - "substantially complies" with SBC
- Section R110 Certificate of Occupancy
  - R110.1 Use & Occupancy Certificate
    - Indication of <u>"substantial conformance</u>" to Code
    - The six year rule applies to single family dwellings
- Residential Section 110



- 111.6 Certificate of Approval
  - Used for work where CO is not required
- Examples:
  - Fences
  - Retaining walls
  - Electrical upgrade & repairs
  - Plumbing alterations & repairs
  - Mechanical repairs & alterations
  - Pools
  - Area conversions to habitable space
  - Garage addition or expansion
- R110.9 Residential
  - Certificate of Approval
    - For other than:
      - New building
      - Addition
      - Change of use



- Section 111 Certificate of Occupancy
  - 111.1.1 State agency
    - Exempt from municipal CO requirements
- Language is absent in the residential portion



- Section 111 Certificate of Occupancy
  - 111.1.3 Fire Marshal
    - Sign-off required for CO
      - "substantial compliance' with CSFSC & CSFPC
  - Language is absent in the residential portion



- 111.1.2 Zoning Approval prior to CO Issuance
  - Two 'options'
    - Conforming use
    - Valid non-conforming use
      - » Formal process
- R110.1.1 Zoning Approval Required

- Section 111 Certificate of Occupancy
  - 111.1.4 Professional Opinion Statement
    - Specific to:
      - high life hazard occupancies
      - Large commercial buildings as specified
      - Larger townhouses
    - "sign-off" by professional engineer or architect
      - "substantial compliance" with approved plans



- 111.2 Certificate of Occupancy
  - CO shall include the following:
    - 1. Building permit number
    - 2. Address of structure
    - 3. Name & address of owner
    - 4. Description of work covered
    - 5. Code compliance statement for declared use & occupancy
    - 6. Name of local B.O.
    - 7. Edition of Code under which permit was issued
    - 8. Use and occupancy
    - 9. Type of construction
    - 10. Design occupant load
    - 11. Automatic sprinkler requirement, if installed
    - 12. Any special stipulations / conditions
- R110.3 Residential
  - Less specifics

#### Connecticut State Building Code

- Section 111 Certificate of Occupancy
  - 111.3 Temporary Occupancy
    - An OK to use building prior to work completion
    - No time limit for TCO
      - Terminates 30 days after completion of work
    - Life safety must be maintained within occupied space
      - Exiting
      - Accessibility
      - Fire protection
      - Health
  - R110.4 Temporary Occupancy CO
    - Same



Certificate of Occupancy

Address of Structure Statement of Compliance for Occupancy

Special stipulation and conditions Sprinkler system required?

- Certificate of Occupancy
  - 111.5 Partial occupancy
    - An OK to use part of a building
      - Occupied portion is complete



- R110.6 Partial Occupancy CO
  - · Permit to use specific portions of a building
    - Example: First floor of a 'Cape Cod' is occupied while second floor work continues

- Section 111 Certificate of Occupancy
  - 111.4 CO Revocation
    - Issued in error
    - Based on incorrect information
    - When building is in violation of Code, ordinances
  - R110.5 CO Revocation
    - Procedure and cause for cancellation



- Section R110 Certificate of Occupancy
  - R110.2 Change in Use of Building or part of building
    - Using a residential structure for any other purpose will require a new CO
      - EG: Single family becomes a law office



#### Connecticut State Building Code

- Section 111 Certificate of Occupancy
  - 111.7 Prefab Assemblies
    - Certificate of approval required
      - Approved agency certification of compliance
      - BO will inspect placement, attachment, connection, etc.
      - 110.3.10 'Final' inspection required





• R110.8 Manufactured housing

- Section 112 Service utilities
  - 112.1 Connection
    - Requires BO approval
  - 112.2 Temporary Connection to Utilities
    - May be approved by BO
  - 112.3 BO Authority to disconnect utilities
    - To eliminate a serious hazard
    - Improper or illegal connections
    - Owner must be notified prior
      - Written notification ASAP if not possible

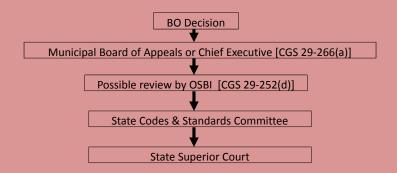


APPEAL

- Residential Section 111
  - Same 'stuff'

- Section 113 Means of Appeal
  - 113.1 BO Decision Appeal
  - 113.1.1 Absence of board
  - 113.1.2 OSBI Review
  - 113.2 Appointment of Municipal Board of Appeals
  - 113.2.1 Qualifications
  - 113.2.2 Chairman
  - 113.3 Notice of meeting
  - 113.4 Determination of Aggreivement
  - 113.5 Appointment of a Panel
  - 113.6 Rendering of Decisions
  - 113.7 Appeals to Codes & Standards Committee
  - 113.8 Court Review
- Residential Section 112

Section 113 Means of Appeal Process



Section R112 Means of Appeal - BO Decisions

- Section 114 (Residential 113) Violations of the SBC
  - 114.1 Unlawful acts
    - Code is law not voluntary
  - 114.2 Notice of violation
    - BO is the 'cop'
  - 114.2.1 Written notice
    - Violations must be in writing
      - Properly served to owner or agent
  - 114.3 Prosecution of violation
    - Legal system use
  - 114.4 Violation penalties
    - Doing time or paying dimes Per CGS 29-254a



- Section 115 (Residential 114) Stop Work Order
  - 115.1 Authority to stop work for:
    - Non-Code compliant work
    - Unsafe or dangerous condition
    - Work outside confines of permit
    - Working without a permit
  - 115.2 Notice to Owner
    - Written notice to:
      - Property owner, agent, person doing work
  - 115.3 Unlawful continence
    - Loss of dollars & orange jumpsuit
    - Work to correct the safety issue may be ordered

- Section 116 Unsafe Structures & Equipment
  - · Specific safety concerns
    - Unsafe
    - Unsanitary
    - MOE problems
    - Light and ventilation problems
    - Fire hazard
  - Specific powers
    - Prohibit use
      - » Post
    - Make safe
      - » Fence
    - Demolish
      - » Be careful!





- Section 116 Unsafe Structures & Equipment
  - 116.2 Record
    - Documentation is very important
  - 116.3 Notice
    - Written notice to owner, agent, or person in control
      - 1. Condition found
      - 2. Corrections required or demolition order
      - 3. Demand for immediate acknowledgement



- 116.4 Method of Service
  - Personal delivery
  - · Certified Mail with physical posting if returned
  - Local law
  - KEY: Good faith effort!



- Section 116 Unsafe Structures & Equipment
  - 116.5 Restoration
    - Permit as required by 105.2.2
    - Chapter 34 requirements apply
      - Repairs
      - Alterations
      - Additions
      - Building Movement



- Section 116 Unsafe Structures & Equipment
  - 116.6 Unsafe equipment
    - Authority to order discontinuance of use
      - -116.6.1 Sealing equipment
        - » Authority to seal equipment
      - -116.6.2 Unlawful to remove seal
        - » Only BO or designee may remove seal
  - 116.7 Penalty
    - CGS 29-394



- Section 116
  - Unsafe Structures & Equipment
    - Dangerous conditions
    - Unsafe situations

- Section 117
  - Emergency Measures
    - Immediate threats to human life
    - Imminent failure or collapse



- Section 117 <u>Emergency Measures</u>
  - 117.2 Temporary Safeguards
    - Imminent danger negates Section 116 requirements
  - 117.3 Temporary closings
    - Public safety concerns
  - 117.4 Emergency Work
    - Unable to locate owner
    - Uncooperative owner
  - 117.5 Costs of work
    - Paid by municipality
    - Cost recovery procedure



- Section 118 Vacant Buildings
  - 118.1 Temporarily unoccupied buildings
    - Buildings awaiting future reuse must be maintained
  - 118.1.1 Abandoned premises
    - Owner cannot be located
    - Unprotected
    - Unsecured
    - Occupied by unauthorized persons
    - Present danger of collapse
    - · Fire hazard to adjacent properties



- Section 118 Vacant Buildings
  - 118.2 Safeguarding vacant premises
    - Temporarily unoccupied
  - 118.2.1 Security
    - Boarded, locked, or fenced to prevent entry
  - 118.2.2 Fire Protection
    - Maintained operable
      - Exceptions
        - » buildings free of combustibles
        - » Building which do not pose a hazard
          - FMO opinion
        - » Fire protection rendered 'dry'



- Section 118 Vacant Buildings
  - 118.2.3 Fire Separation
    - Separation of vacant spaces by construction
  - 118.3 Removal of combustibles
    - Trash & hazmat must leave vacant areas
    - Exceptions
      - Alterations, repairs, change of occupancy
      - Seasonal closings
  - 118.4 Removal of HazMats
    - To be removed



- Residetanl Portion of Code
  - Section R115 Unsafe Structures & Equipment
    - Reference to SBC 116
    - BO permitted to render property safe
  - Section R116 Emergency Measures
    - Reference to SBC 117
    - 'Imminent Danger' standard
  - Section R117 Vacant Buildings
    - Reference to SBC 118
    - Vacant & abandoned buildings





Office of Education and Data Management Fall 2016 Career Development Series

# 2016 State Building Code Administrative Review and Updates

Presented by
Joe Cassidy, State Building Inspector and
Dan Tierney, Deputy State Building Inspector