

Administration of the Existing Building Code

The Problem

- When can you use the Existing Building Code?
- Who chooses the compliance method?
- What compliance method works best for what types of projects?

Rules of Engagement

The intent of the EBC is the following:

This code is intended to provide minimum requirements to safeguard public safety, health and general welfare in so far as they are affected by the repair, alteration, change of occupancy, addition and relocation of existing buildings.

The Existing Building Code does not apply to all buildings!
Only those undergoing rehabilitation work.

Rules if Engagement

The scope of the EBC is the following:

The provisions of this code shall apply to the repair, alteration, change of occupancy, addition and relocation of existing buildings.

Rules of Engagement

Definition: EXISTING BUILDING

Any building or structure that has been issued a certificate of occupancy or has been legally occupied.

Buildings that were illegally constructed or rehabilitated cannot use the Existing Building Code

Rules of Engagement

- A building or a portion of a building that has not been previously occupied or used for its intended purpose shall comply with the provisions of the *Building Code of New York State* for new construction.
- Repairs, alterations, change of occupancy, existing buildings to which additions are made, historic buildings and relocated buildings complying with the provisions of the *Building Code of New York State*, *Fire Code of New York State*, *Mechanical Code of New York State*, *Plumbing Code of New York State*, *Fuel Gas Code of New York State* or the *Residential Code of New York State* as applicable shall be considered in compliance with the provisions of this code.

Rules of Engagement: Discussion Points

- Question #1: A two-story building has a valid certificate of occupancy to be used as a two-family dwelling (side-by-side duplex). The building owner applies for a permit to rearrange the floor area within one unit. The site inspection reveals both dwelling units have had the basements reconfigured into studio apartments.

Can the Existing Building Code be used for the proposed work?

Rules of Engagement: Discussion Points

- An architect prepares a set of plans for the reconfiguration of a tenant space in a office building. Upon plan review, you note that the architect utilized the Building Code and Plumbing Code as their basis for design of new restrooms, missing some exemptions permitted by the Existing Building Code.

Whereas the plan reviewer noted a more restrictive code path, the scope of the Existing Building Code recognizes the use of the construction codes as acceptable.

Rules of Engagement: Additional Exceptions

1. Detached one- and two-family dwellings and multiple single-family dwellings (townhouses) not more than three stories in height with separate means of egress and their accessory structures or changes in occupancy thereto shall comply with the *Residential Code of New York State*.
2. Agricultural buildings, including barns, sheds, poultry houses and other buildings and equipment on the premises used directly and solely for agricultural purposes.
3. Existing buildings built before January 1, 2003, shall not be required to comply with the seismic requirements of this code with the exception of the requirement for parapet bracing as described in Section 707.8 of this code.
4. Energy conservation measures in existing buildings shall be in conformance with Section 101.4.2 through 101.4.4 of the *Energy Conservation Construction Code of New York State*.

Rules of Engagement: Discussion Points

- You receive a building permit application for the conversion of a one-family dwelling into a two-family dwelling. The layout includes the construction of a small vestibule that is the shared access for both units.

Since the main entrance is shared, should the Residential Code or the Existing Building Code be used?

Rules of Engagement: Discussion Points

- A building owner has decided to take an existing cattle barn and convert it into a wedding reception hall.

Since the building was an agricultural use- does the Existing Building Code apply to the conversion?

Book Layout

- Chapter 1- Administration
- Chapter 2- Definitions
- Chapter 3- Prescriptive compliance method
- Chapter 4- Classification of Work
- Chapter 5- Repairs
- Chapter 6- Alterations Level 1
- Chapter 7- Alterations Level 2
- Chapter 8- Alterations Level 3
- Chapter 9- Chance of Occupancy
- Chapter 10- Additions
- Chapter 11- Historic Buildings
- Chapter 12- Relocated Buildings
- Chapter 13- Performance Compliance Method
- Chapter 14- Construction Safeguards
- Chapter 15- Referenced Standards

Methods of the Existing Building Code

- **Method A – “Prescriptive Approach”**
 - Chapter 3- Prescriptive compliance method
- **Method B – “Work Area Method or Stepped Approach”**
 - Chapter 4- Classification of Work
 - Chapter 5- Repairs
 - Chapter 6- Alterations Level 1
 - Chapter 7- Alterations Level 2
 - Chapter 8- Alterations Level 3
 - Chapter 9- Chance of Occupancy
- **Method C – “Point Method”**
 - Chapter 13- Performance Compliance Method
- **Method D – “Historic Buildings”**
 - Chapter 11- Historic Buildings

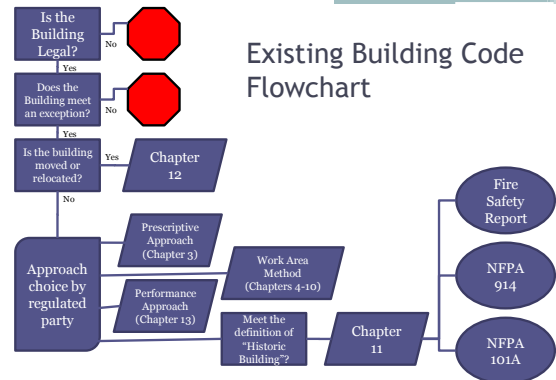
Sources of Code Requirements

- **Method A –**
 - Chapter 34 of IBC; originally sourced to BOCAI NBC
- **Method B –**
 - Origin sourced to Maryland “Smart Code” and New Jersey Rehab Sub-code
 - Refined and first published in its current form in the 2003 IEBC
- **Method C –**
 - Developed as an alternative within the BOCAI NBC
 - Based on case studies in the midwest

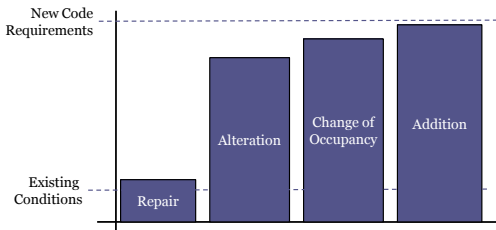
Levels of Work

- **REPAIR.** The restoration to good or sound condition of any part of an existing building for the purpose of its maintenance.
- **ALTERATION.** Any construction or renovation to an existing structure other than a repair or addition.
- **CHANGE OF OCCUPANCY.** A change in the purpose or level of activity within a building that involves a change in application of the requirements of this code.
- **ADDITION.** An extension or increase in floor area, number of stories, or height of a building or structure.

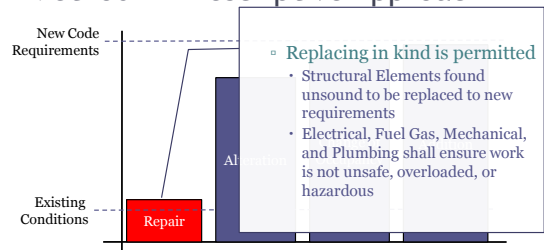
Existing Building Code Flowchart



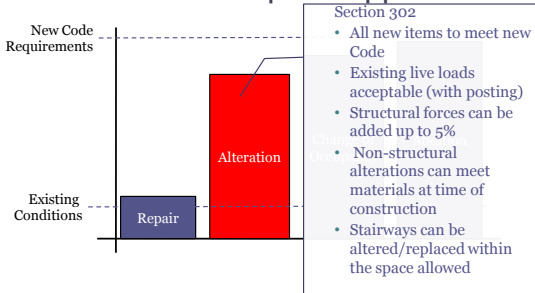
Method A- Prescriptive Approach



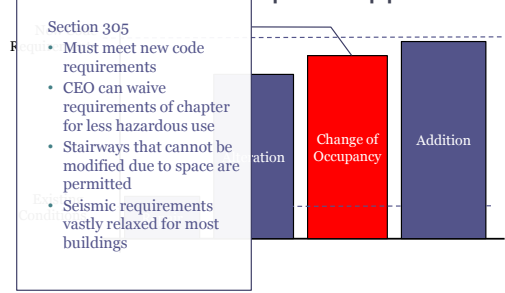
Method A- Prescriptive Approach



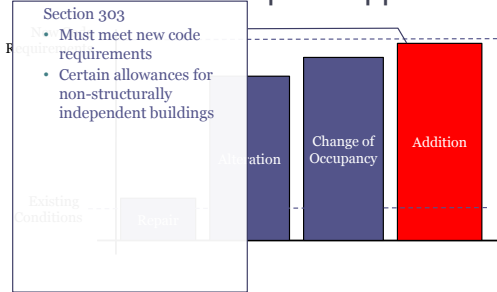
Method A- Prescriptive Approach



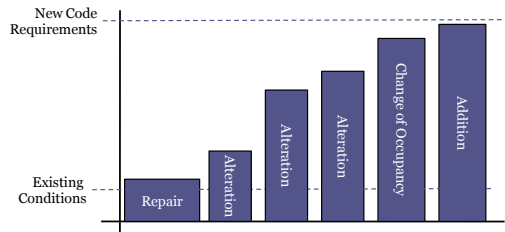
Method A- Prescriptive Approach



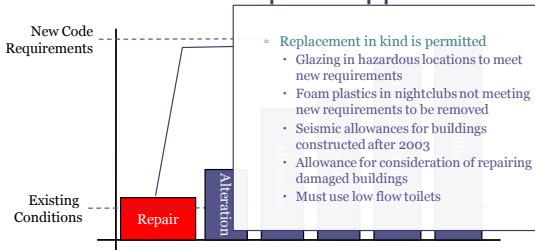
Method A- Prescriptive Approach



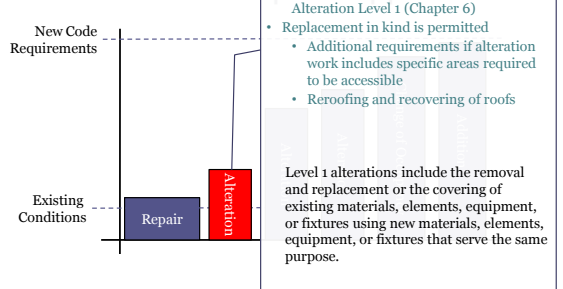
Method B- Prescriptive Approach



Method B- Prescriptive Approach



Method B- Prescriptive Approach



Method B- Prescriptive

Alteration Level 2 (Chapter 7)

- New items are to meet the Building Code, except:
 - Additional windows do not need to meet light/vent requirements
 - Ceiling height can be 6'-8"
 - Options for existing vertical openings, interior finish, and guards
 - Triggers for fire protection systems
 - Relaxed egress requirements
 - Modified requirements for MEP and structural

Level 2 alterations include the reconfiguration of space, the addition or elimination of any door or window, the reconfiguration or extension of any system, or the installation of any additional equipment.

Alteration Level 3 (Chapter 8)

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- Compliance needs to be from the level of work to the level of exit discharge
- Sprinklers in high-rises need to be provided when water is available to the site
- Fire alarm systems need to be provided throughout the building
- Options and lower thresholds for accessibility

Level 3 alterations apply where the work area exceeds 50 percent of the aggregate area of the building.

Change of Occupancy (Chapter 9)

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- Fire sprinkler, fire alarms, and interior finish to meet Building Code requirements
- Means of egress, Height and Area, and exterior wall ratings, and vertical openings have additional requirements based on the relative fire hazard of the existing occupancy type
- Prescriptive accessibility requirements

Additions (Chapter 10)

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- Must meet new code requirements
- Cannot make the existing building any less conforming
- Certain allowances for height and area increases without the construction of a fire wall
- Fire protection systems can be limited into the existing building by a fire barrier or horizontal assembly
- Certain allowances for structural design as it effects the existing building
- Must maintain accessibility within the existing building to the requirements of Section 605

If you want to do a repair?

- Method A –**
 - Replacing in kind is permitted
 - Structural Elements found unsound to be replaced to new requirements
 - Electrical, Fuel Gas, Mechanical, and Plumbing shall ensure work is not unsafe, overloaded, or hazardous
- Method B –**
 - Replacement in kind is permitted
 - Glazing in hazardous locations to meet new requirements
 - Foam plastics in nightclubs not meeting new requirements to be removed
 - Seismic allowances for buildings constructed after 2003
 - Allowance for consideration of repairing damaged buildings
 - Must use low flow toilets
- Method C –**
 - Replacement in kind is permitted
 - Can't be used for H and I occupancies
 - New construction requirements for methods and materials other than that being replaced

If you want to do a repair?

- Use Method B –**
 - Most options
 - Deals with damaged buildings as well as 'broken' things
 - Easiest code path

Dealing with Alterations

- Alterations is a broad brush of rehabilitation work that is treated based on the amount and type of work being done
- This includes:
 - Refinishing surfaces
 - Changing tenant space sizes
 - Altering means of egress
 - Complete rehabilitation of existing buildings (gut-rehab)
 - Any work within the confines of an existing building where the use will be the same

Dealing with Alterations

- Method B offers the most choices since it is based on the amount of work and gives many allowances
 - Only that relaxes accessibility
- Method A is easier to navigate is new Code compliance is not an issue

Change of Occupancy

- Method A- Never
- Method B- Most beneficial if:
 - Fire hazard of new use is lower than existing
 - Fire sprinkler and alarm isn't an issue
 - Space constraints of accessible objects
- Method C- Most beneficial if:
 - The building has attributes that are greater than the current Code
 - Accessibility design is not an issue
 - YOU ARE TRYING TO DO SOMETHING PROHIBITED BY THE BUILDING CODE