



2022 CONSTRUCTION CODES OVERVIEW

November 17, 2021

NYCTM
Buildings

presented by
JOSEPH ACKROYD, PE
ROBERT HOLUB, RA
CHARLES SHELHAMER

COPYRIGHT

This presentation is protected by United States and International Copyright laws. Reproduction, distribution, display and use of the presentation without written permission of the speaker is prohibited.

© 2021 New York City Department of Buildings

DISCLAIMER

The information in this document is only a summary and overview and is not intended to substitute for the full text and meaning of any law, rule or regulation. The City disclaims any liability for errors that may be contained in this document and shall not be responsible for any damages, consequential or actual, arising out of or in connection with the use of this document and/or the information contained herein. The City reserves the right to take action at variance with this document. This document shall not be construed to create a substantive or procedural right or benefit enforceable by any person. The information contained in this document is current only as of the publication date of this document.

© 2021 New York City Department of Buildings

PRESENTATION OVERVIEW

On October 7, 2021, the New York City Council voted to adopt a local law to bring the New York City Mechanical, Fuel Gas, and Building Codes up to date with 2015 editions of the International Code Council's I-Codes as Introduction No. 2261. This comprehensive revision to the Code incorporates the latest building technologies and contains major updates and changes intended to improve safety and further protect the health and welfare for New Yorkers.

PRESENTATION OVERVIEW

The 2022 Construction Codes will consist of enhancements to emergency response, fire protection, elevator safety, vertical transportation and accessibility, construction site safety, tenant protection, building system construction and inspection, sustainability, and resiliency. In this course, participants will get an overview of the code revision process and learn about several significant changes to the 2014 Construction Codes.

TAKEAWAYS

1. Participants will discuss changes to the 2014 Construction Codes related to exterior finish systems and materials, including foam plastic insulation, metal composite systems, high-pressure laminates, and fiber-reinforced polymers.
2. Participants will be able to describe the new section 1705 of the NYC Building Code. These new provisions include requirements for special inspection of Type IV construction utilizing cross-laminated timber (CLT) or structural composite lumber elements, a new special inspection to verify compliance with tenant protection plans, and a new special inspection to verify existing chimney linings and breaching.

TAKEAWAYS

3. Participants will be able to describe the new allowance for cross-laminated timber (CLT) within exterior walls. These new provisions promote the use of sustainable materials by enabling the use of structural wood components without the destruction of old-growth forests.
4. Participants will discuss several significant changes made to the requirements for sidewalk sheds that improve pedestrian experience around construction sites.

AGENDA

- NYC Construction Codes Revision Overview
- Effective Date of the Code
- Select Highlights
 - Combustible Exterior Wall Provisions
 - Cross-Laminated Timber Provisions
 - Special Inspections
 - Elevators
 - Alarm Systems
 - Sidewalk Sheds



NYC CONSTRUCTION CODES REVISION OVERVIEW

build safe | live safe

NYC
Buildings

GOALS OF THE CONSTRUCTION CODES REVISION

- Update to 2015 I-Codes
 - Referenced standards
 - Re-organized BC definitions
 - Include most recent errata
- Correct errors, typos, and inconsistencies
- Previously mediated items may not be re-mediated (*see handbook for details*)
- Definitions: Comprehensive Look
 - List of Admin definitions in all tech Codes
 - Check of inconsistencies across Codes

HISTORY OF NYC CONSTRUCTION CODES REVISION

- Local Law 99/2005 mandated the periodic revision of the Construction Codes to the latest International Code Council codes
- Periodic revisions keep the Construction Codes up to date with the latest technologies and standards
- DOB's Code revision process uses consensus-building technical committees as recommended by the post-World Trade Center Commission

STAKEHOLDERS

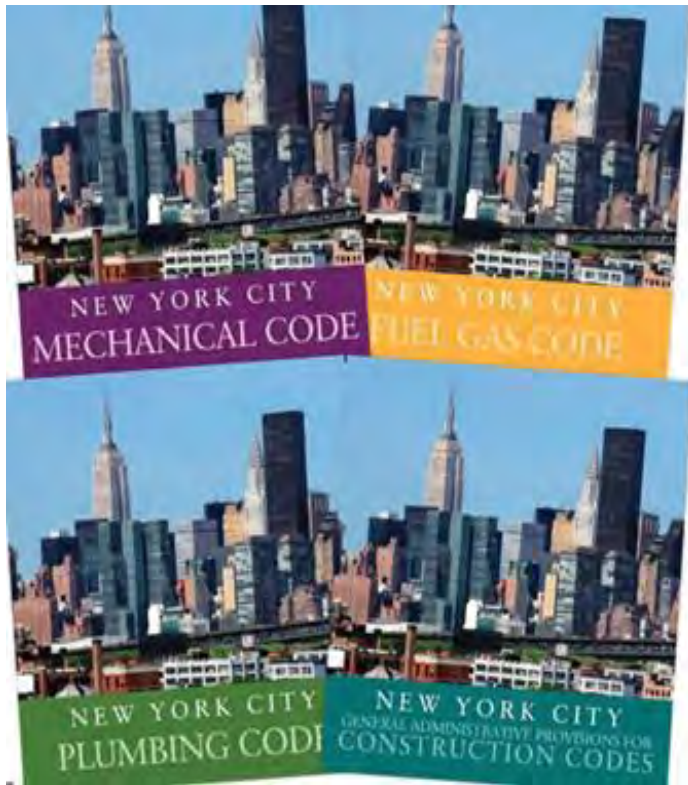
- Participation by 400+ stakeholders
- Committee Members
 - Engineers and Architects
 - Attorneys, Planners, and Tradesmen
 - Industry Organizations (including representatives of the construction labor, and real estate industries)
- NYC Department of Buildings Staff
 - Commissioner's Office
 - Technical Units
 - Legislative and Regulatory Units
 - Operational Units
 - Information Technology Units

STAKEHOLDERS

- Utilities
 - Con Edison
 - National Grid
- Government Agencies and Authorities



CONSTRUCTION CODES REVISION PROCESS TIMELINE



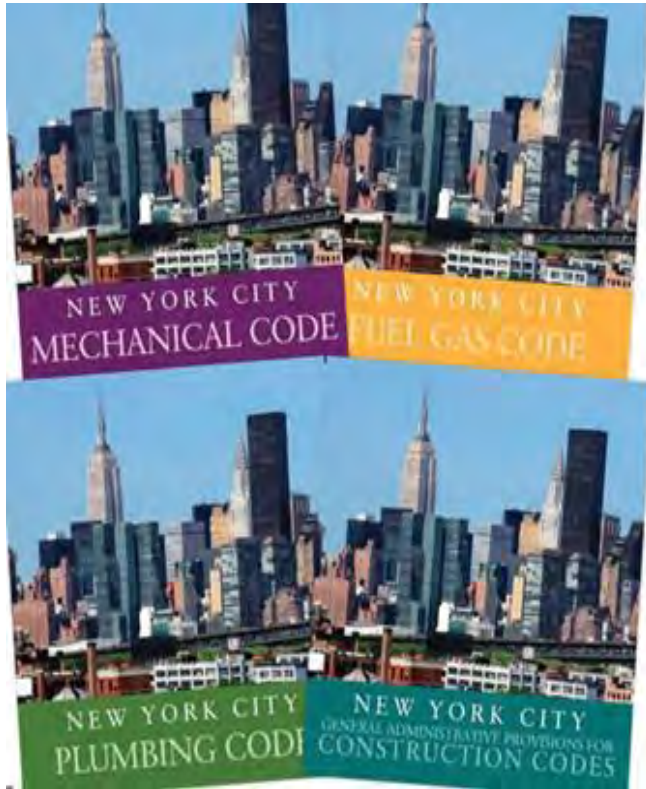
DOB Document Preparation Period

- August 2015 – June 2017

Plumbing Code ([Local Law 14/2020](#))

- July 2017 Committee Work Began
- December 2018 Committee Work Completed
- December 2018 Managing Committee Review Completed
- March 2019 Submission to City Council
- December 2019 Approved by City Council

CONSTRUCTION CODES REVISION PROCESS TIMELINE



Building, Fuel Gas, Mechanical and Administrative Codes

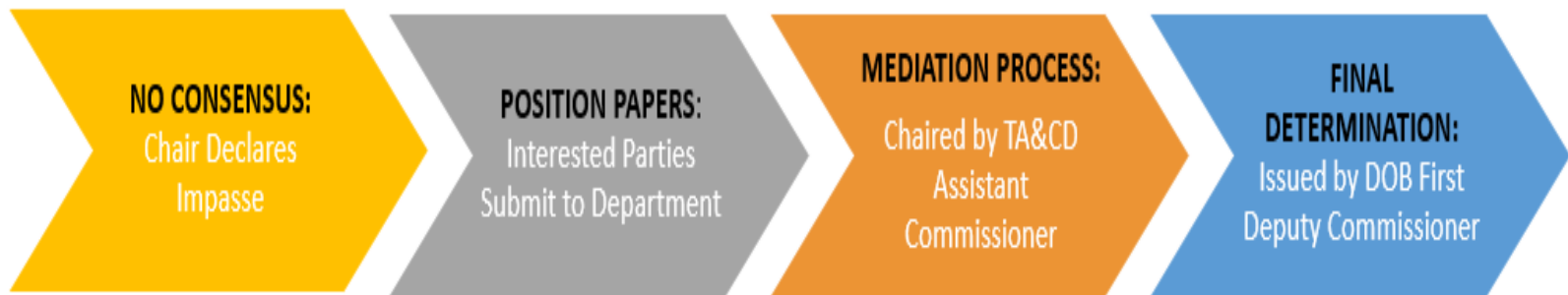
- October 2017 Committee Work began
- December 2020 Committee Work completed
- December 2020 Managing Committee Review completed
- April 2021 Revision Bill Introduced ([Introduction No. 2261](#))
- June 2021 Aging of Introduction Bill
- October 2021 Introduction Approved by Committee
- November 7, 2021 Enactment Date ([Local Law 126/2021](#))

REVIEW PROCESS



MEDIATION PROCESS

- Mediation: When a technical or managing committee cannot come to a consensus on an item, the Chair declares an impasse and requests mediation from the Department.
- Mediated Item: A mediated item is any code provision or issue that has reached an impasse during a technical or managing committee's review.
- Process:



POST-ENACTMENT OF REVISION BILLS

Implementation Actions to Occur After Bill Passage

- Operational Changes
- Forms, Service Notices, Technical Bulletins
- Rules
- Staff Training
- Industry Outreach
- Internet/Intranet Publication



EFFECTIVE DATE OF THE CODE

build safe | live safe

NYC
Buildings

EFFECTIVE DATE


Local Law 126/2021 is effective [November 7, 2022](#) for applications for construction document approval filed on or after November 7, 2022, *except*:

- Amendments to the following sections or articles in the General Administrative Provisions would take effect on January 1, 2022:
 - Section 28-401.11 Term of License
 - Article 421 Elevator Agency Director License
 - Article 422 Elevator Agency Inspector License
 - Article 425 Elevator Agency Technician License
 - Article 303 Periodic Boiler Inspections
 - Article 304 Elevators and Conveying Systems; and
 - Article 323 Periodic Inspection of Parking Structures

EFFECTIVE DATE

Local Law 126/2021 is effective [November 7, 2022](#) for applications for construction document approval filed on or after November 7, 2022, *except*:

- Amendments to 28-110.1 (Site Safety Plan) and Chapter 33 of the New York City Building Code shall apply to:
 - All work on major buildings for which a site safety plan is approved on or after November 7, 2022
 - All temporary construction equipment permits and all crane and derrick permits where the application for approval for such permit is filed on or after November 7, 2022



SELECT HIGHLIGHTS
Combustible Exterior Wall Provisions

COMBUSTIBLE EXTERIOR WALL PROVISIONS



SOURCE: <https://wallsystems.master-builders-solutions.com/en/news-and-updates/nfpa-285-fire-test>



SOURCE: <https://wallsystems.master-builders-solutions.com/en/news-and-updates/nfpa-285-fire-test>

- All exterior walls made from combustible materials required to undergo testing to industry standards (NFPA 285) regardless of the size of the construction or the location on the building where such walls are installed.
- Ensure that the built construction matches approved and tested designs through increased filing details and special inspection review for all buildings using exterior walls made from combustible materials.

COMBUSTIBLE EXTERIOR WALL PROVISIONS



SOURCE: <http://www.amazon.com>

- All exterior walls made from combustible materials would require internal sections of non-combustible fire blocking to be installed periodically to prevent and contain flame spread.

COMBUSTIBLE EXTERIOR WALL PROVISIONS

- Where exterior walls made from combustible materials are used the thermal barrier which prevents heat transfer and flame spread between the interior of a building and the exterior wall assembly is required to be 33% more effective (test duration increase from 15 to 20 minutes using ASTM E119 or UL 263 criteria).
- Where a building has balconies or other accessible outdoor spaces exterior walls are not permitted to use combustible materials in the immediate vicinity of such accessible areas.

COMBUSTIBLE EXTERIOR WALL PROVISIONS

- Where an existing building without modern fire safety mechanisms (full building sprinkler systems) desires to retrofit the exterior using combustible materials, a 3-foot horizontal band made of non-combustible material (brick) must be installed to separate each floor of combustible material in order to contain fire to a single floor.
- Prohibit using exterior walls made from combustible materials in combination with new wood construction types (mass timber, SCL, CLT).



SELECT HIGHLIGHTS

Cross-Laminated Timber Provisions

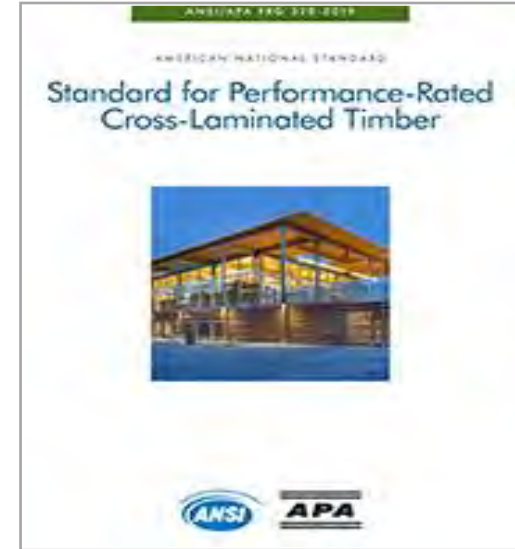
build safe | live safe

NYC
Buildings

CROSS-LAMINATED TIMBER (CLT)



SOURCE: <https://www.naturallywood.com/products/cross-laminated-timber/>



SOURCE: <https://www.apawood.org/ansi-apa-prg-320>

Current Code Revision Recognizes CLT: *General Requirements*

- CLT used as Type IV construction
- Buildings must be sprinklered with NFPA 13 systems
- Building heights up to 85' or 7 stories
- Manufactured per ANSI/APA PRG 320

CROSS-LAMINATED TIMBER (CLT)

Specific Requirements for Building Elements

- Exterior Walls
 - Must be at least 6", 2-hour fire-resistance rating, and exterior surface protected by approved means (gypsum, noncombustible material, etc.)
 - Not permitted where load bearing inside fire districts
 - Not permitted in buildings with occupancy groups I-1, R-1, R-2 or F
- Interior Wall or Partition – must be at least 4", 1-hour fire-resistance rating
- Floors – must be at least 4", and continuous from support to support
- Roof Decks – must be at least 3", and continuous from support to support
- Columns & Beams – not permitted with CLT
- Prohibit concealed spaces in floors(existing requirement in Chapter 6)



SELECT HIGHLIGHTS

Special Inspections

build safe | live safe

NYC
Buildings

SPECIAL INSPECTIONS

- Added a new section and a new table to provide requirements for special inspection of Type IV construction utilizing cross laminated timber or structural composite lumber elements. (1705.5.6, Table 1705.5.6)
- Expanded the section for EIFS special inspection was expanded to require MCM, HPL and other exterior wall coverings containing combustible materials to have special inspection as well. Alterations to existing installations would also have to comply with this section. A new requirement was added to verify that the installation complies with the information on the submitted documents and matches the NFPA 285 tested assembly. The special inspector is now required to confirm the installation of thermal barriers and fireblocking. (1705.16)

SPECIAL INSPECTIONS

- Added a new special inspection to verify compliance with tenant protection plan requirements. Compliance with tenant protection plans ensures safety of occupants and ensures that contractors are complying with requirements to protect tenants during construction operations (1705.26)
- Added language to clarify special inspection requirements for verification of the structural system of a structure during construction. The means and methods of implementing the structural stability measures must be prepared by a registered design professional and filed with the department. (1705.25)
- Added a new special inspection to verify the condition of an existing chimney lining and breaching when a new heating system appliance is installed. (1705.32.1)



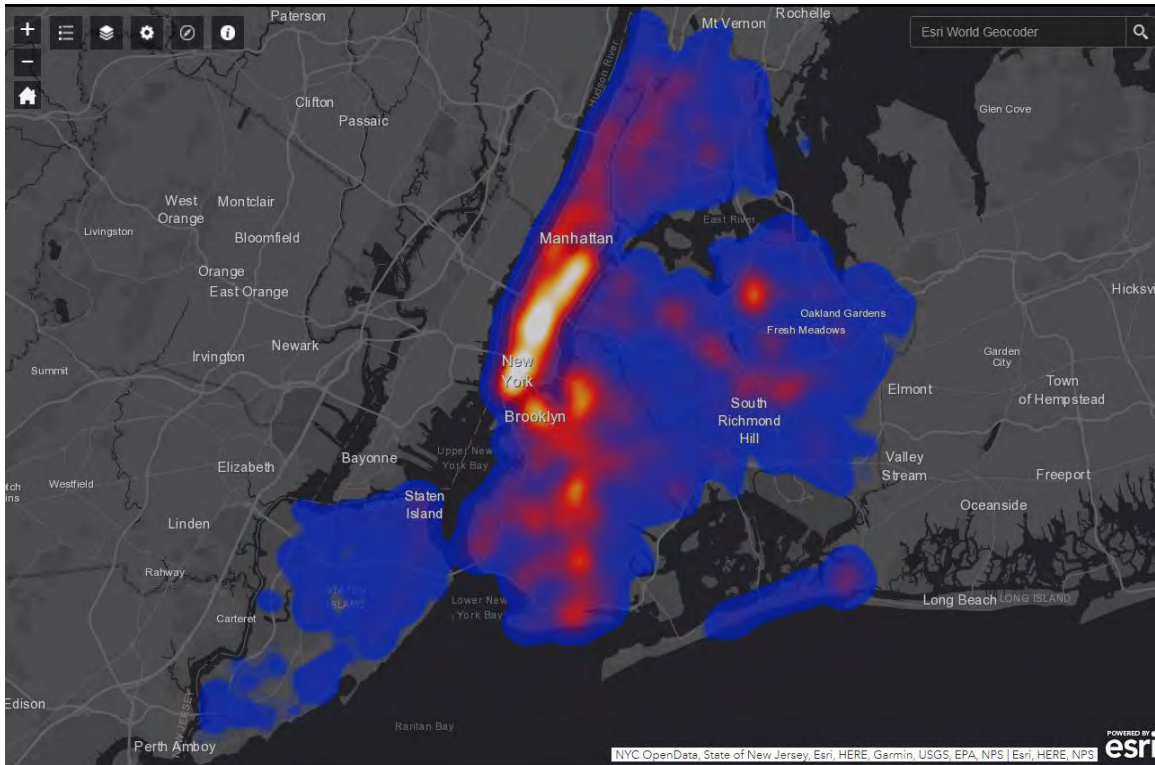
SELECT HIGHLIGHTS

Elevators

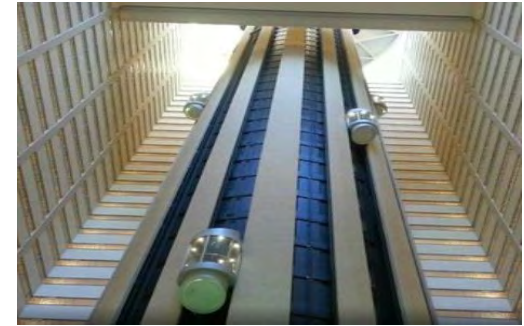
build safe | live safe

NYC
Buildings

ELEVATORS



SOURCE: https://www1.nyc.gov/assets/buildings/html/elevator_report_2017.html



SOURCE: https://www.tripadvisor.com/LocationPhotoDirectLink-g60763-d93507-i59872430-New_York_Marriott_Marquis-New_York_City_New_York.html



SOURCE: <https://www.libertyelevator.com/work/our-work/portfolio/vessel-hudson-yards/>

- More than 80,000 elevator devices are located in NYC
- Devices are primarily governed by Building Code Chapter 30 and Appendix K modifications to ASME A17.1, B20.1, A17.3, and A17.1S

ELEVATORS: EFFECTIVE JANUARY 1, 2022

- Local Law 126/2021 is effective November 7, 2022 for applications for construction document approval filed on or after November 7, 2022, *except*:
 - Amendments to the following sections or articles in the General Administrative Provisions would take effect on January 1, 2022:
 - Section 28-401.11 Term of License
 - Article 421 Elevator Agency Director License
 - Article 422 Elevator Agency Inspector License
 - Article 425 Elevator Agency Technician License
 - Article 303 Periodic Boiler Inspections
 - Article 304 Elevators and Conveying Systems; and
 - Article 323 Periodic Inspection of Parking Structures

ELEVATORS: EFFECTIVE JANUARY 1, 2022

- Section 28-401.11 Term of License
 - Two year license term for elevator agency technicians
- Article 421 Elevator Agency Director License
 - Private elevator inspection agency director may associate their license with one other private elevator inspection agency, located at the same place of business
- Article 425 Elevator Agency Technician License
 - Two-year license terms for elevator agency technicians and restricted elevator agency technicians

ELEVATORS: EFFECTIVE JANUARY 1, 2022

- Article 304 Elevators and Conveying Systems
 - *Periodic Inspections*
 - must be performed by an approved agency hired by owner, *not* DOB
 - must be 3 months, minimum from the date of any Category 1 testing or previous periodic inspection
 - test reports must be filed within 14 days after inspection
 - Category test reports must be filed within 21 days after inspection
 - All defects shall be corrected within 90 days after inspection
 - DOB may grant an extension of 45 days, based on application by the owner demonstrating a practical difficulty
 - In no case will more than 2 extensions be granted for a specific defect
 - An affirmation of correction must be filed within 14 days after correction

ELEVATORS: REFERENCE STANDARDS UPDATES

Reference Standard	NYC Building Code Edition	
	2014	2022
ASME A17.1	2000	2013
ASME B20.1 (K2)	2006	2015
ASME A47.3 (K3)	2002	2015
ASME A17.1S (K4)	2005	N/A



SOURCE: <https://patch.com/new-york/new-york-city/hundreds-nyc-elevators-need-new-inspections-audit-says>

ELEVATORS: SAFETY



SOURCE: <https://brooklyneagle.com/articles/2017/01/19/20-people-trapped-in-court-street-r-train-elevator-for-second-time-in-months/>

- Increase the minimum required dimensions of the elevator emergency hatch
 - This increase recognizes the increased average size of the person being rescued and need for increased maneuverability for a fully equipped first responder.

ELEVATORS: SAFETY



SOURCE: <https://brooklyneagle.com/articles/2017/01/19/20-people-trapped-in-court-street-r-train-elevator-for-second-time-in-months/>

- K1 - 2.14.1.5.1
 - (a) Top emergency exit opening shall be not less than $400''^2$ and not less than 20'' on any side.
 - (b) not less than $576''^2$ and not less than 24'' on any side, where the distance between the platform and the top of hatch is 9ft or greater.
 - During an alteration involving installation of a new car enclosure, the top emergency exit opening shall have an area of not less than $400''^2$ and not less than 16'' on any one side

ELEVATORS: SAFETY



SOURCE: https://rescueair.com/newsletter_archive/FARS%20vs.%20Elevators_%20No%20Contest.htm

- Reduce the evacuation time of buildings in emergency conditions by requiring the same elevator-in-readiness to serve all floors.
 - This requirement will prevent building occupants from needing to switch from one elevator to another in order to exit the building in an emergency.

ELEVATORS: SAFETY



SOURCE: https://rescueair.com/newsletter_archive/FARS%20vs.%20Elevators_%20No%20Contest.htm

- BC 3003.3.1 Elevator in readiness for Fire Department emergency access.
 - ...in buildings five stories in height or more, underground buildings as described in Section 405.1, and high-rise buildings, [~~all floors shall be served by at least one elevator that~~] at least one elevator shall be kept available for immediate use by the Fire Department during all hours of the night and day, including holidays, Saturdays and Sundays. The elevator in readiness shall serve all floors of the building. For buildings where a Fire Service Access Elevator (FSAE) is provided, the FSAE shall serve all floors of the building...

ELEVATORS: ACCESSIBILITY



SOURCE: https://elevation.fandom.com/wiki/Kone_Destination?file=Kone_Destination_Floor_Select.jpeg

- Establish clear compliance criteria for destination-oriented elevator systems.
 - Prompted by the increasing number of buildings that utilize this type of elevator, the new code sections leverage the efficiency benefits of destination-oriented elevators to ensure greater accessibility and usability for building occupants with diverse physical and cognitive abilities.

ELEVATORS: ACCESSIBILITY



SOURCE: https://elevation.fandom.com/wiki/Kone_Destination?file=Kone_Destination_Floor_Select.jpeg

- BC 1109.7.2 Destination-oriented Elevators
- 1109.7.2.1 Hall call console number and location
 - 1109.7.2.1.1 Transfer floors, sky lobbies and floors containing building entrances
 - 1109.7.2.1.2 Other floors
- 1109.7.2.2 Required features
 - 1109.7.2.2.1 Accessibility function button
 - 1109.7.2.2.2 Audio output
 - 1109.7.2.2.3 Visible display screen
 - 1109.7.2.2.4 Floor selection controls
 - 1109.7.2.2.5 Tactile discernibility

ELEVATORS: ACCESSIBILITY



SOURCE: https://elevation.fandom.com/wiki/Kone_Destination?file=Kone_Destination_Floor_Select.jpeg

- 1109.7.2.3 Hall call console arrangement
 - 1109.7.2.3.1 Accessibility function button
 - 1109.7.2.3.2 Floor selection controls
 - 1109.7.2.3.3 Display screens
- 1109.7.2.4 Instructions
- 1109.7.2.5 Responding car

ELEVATORS: ACCESSIBILITY



SOURCE: https://elevation.fandom.com/wiki/Kone_Destination?file=Kone_Destination_Floor_Select.jpeg

- BC 1109.7.2.2.4.2 Step scanner. Step scanners shall consist of three horizontally arranged buttons. The center button shall serve as the “select” button and may also serve as the accessibility function button. The button to the right of the center button shall be the “up” button and the button to the left of the center button shall be the “down” button...

Exception: Step scanners may consist of one button, where the application for construction document approval is submitted within six months after the date of enactment of this section. The button shall serve as the “select” button and may also serve as the accessibility function button.

Local Law 126 of 2021: November 2022 + 6 months = May 2023

ELEVATORS: SAFETY



SOURCE: <https://lula-elevators.com/i-how-is-a-lula-elevator-different-from-a-traditional-elevator.php>

- Require Limited Use/Limited Application lifts (LULA), a hybrid commercial elevator and wheelchair lift, to be provided with door locking monitoring to minimize the risk of people and objects getting caught in the moving device.

ELEVATORS: SAFETY



SOURCE: <https://lula-elevators.com/i-how-is-a-lula-elevator-different-from-a-traditional-elevator.php>

- BC K1 5.2.1.13 Power operation of hoistway doors and car doors. When provided, power operation, power opening, and power closing of hoistway doors and car doors shall conform to Section 2.13, except as modified by Section 5.2.1.13.
 - (a) Requirement Section 2.13.1 does not apply. Both car and hoistway doors shall be of the horizontally sliding type with a power-operated horizontally sliding car door. Power operation of accordion or bifold type car doors shall be permitted.
 - (b) Vertically sliding doors and power operated swing doors shall not be permitted.

ELEVATORS: COST-SAVING



- Remove the need for a separate machine room for elevators. This amendment would free up useable space by allowing machine room-less elevators (MRLs) to be located within the elevator hoistway.

SOURCE: <http://www.schumacherelevator.com/elevators/traction-elevators/machine-roomless-mrl-traction-elevators.aspx>

ELEVATORS: COST-SAVING



SOURCE: <http://www.schumacherelevator.com/elevators/traction-elevators/machine-roomless-mrl-traction-elevators.aspx>

- BC SECTION [~~3006~~] 3005 MACHINERY SPACES, MACHINE ROOMS, CONTROL SPACES AND CONTROL ROOMS
 - [~~3006.1~~] 3005.1 Access. An approved means of access shall be provided to elevator machine rooms [~~and overhead machinery~~], control rooms, control spaces and machinery spaces...

ELEVATORS: COST-SAVING



SOURCE: <https://www.mansonglobal.com/articles/luxury-buildings-bring-elevator-privacy-to-the-next-level-206492>

- Allow an increase in allowable height for elevators serving a single dwelling unit, from 50-foot to 75-foot in rise, permitting private residence elevators to be installed where a previously standard passenger elevator was required.

ELEVATORS: COST-SAVING



SOURCE: <https://www.mansionglobal.com/articles/luxury-buildings-bring-elevator-privacy-to-the-next-level-206492>

- BC 3002.4.3 Elevator serving individual dwelling unit.
- 3002.4.3.1 Maximum rise of 60 feet (18 288 mm). A private residence elevator with 60 feet (18 288 mm) of maximum rise shall be permitted to serve within an individual dwelling unit provided the elevator car is in compliance with ASME A17.1/CSA B44, and Section 3001.3 of this code.
- 3002.4.3.2 Rise of over 60 feet (18 288 mm) but not more than 75 feet (22 860 mm). An elevator with 60 feet (18 288 mm) but not more than 75 feet (22 860 mm) of maximum rise shall be permitted to serve within an individual dwelling unit provided the elevator car is in compliance with Parts 2 or 3 of ASME A17.1/CSA B44 and Section 3001.3 of this code even if it does not serve on an accessible route within the dwelling unit.

ELEVATORS: FACILITATE MAINTENANCE



SOURCE: <https://www.prorealtysa.com/2021/08/15/new-york-city-elevator-maintenance-and-testing-requirements/>

- Deleted the reference that the required periodic inspections in Table N1 shall be made by the department. Clarified that all required category tests and periodic inspection of elevators must be done in accordance with the provisions of Table N1 of ASME A17.1 as modified by chapter K1 of appendix K of the NYC Building Code. Clarified that required inspections must be performed by an approved elevator agency not affiliated with agency performing the maintenance to the elevator. Provided clarification when periodic inspections must be performed.

ELEVATORS: FACILITATE MAINTENANCE

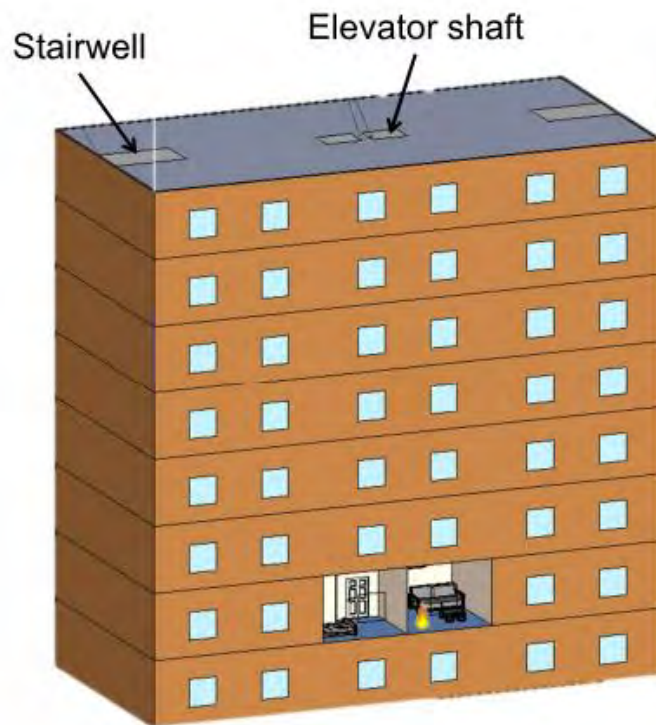


- §28-304.6.1 Inspection and testing entities. [~~The required periodic inspections in Table N1 shall be made by the department.~~] The [~~other~~] required category tests and periodic inspections in Table N1 of ASME A17.1 as modified by chapter K1 of appendix K of the New York City building code shall be performed on behalf of the owner by an approved elevator agency in accordance with this code and department rules...

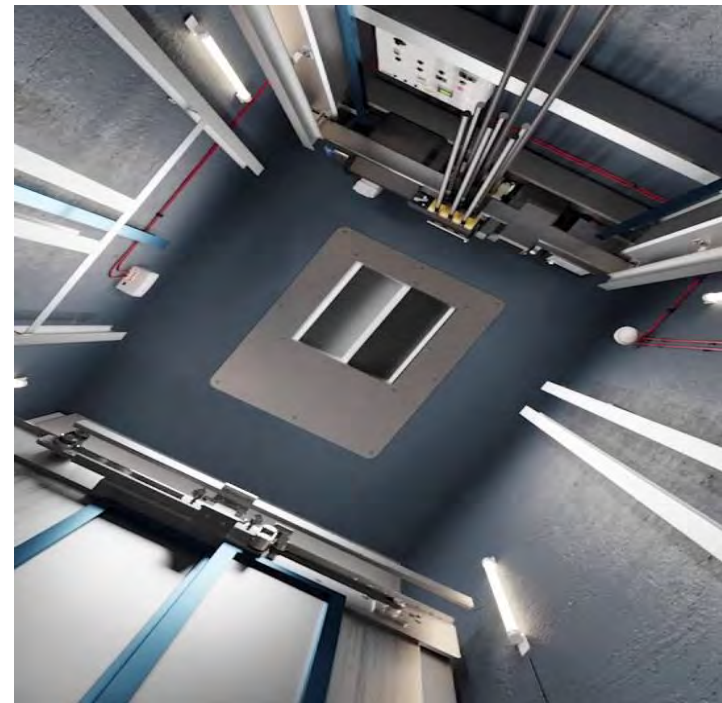
SOURCE: <https://www.prorealtysa.com/2021/08/15/new-york-city-elevator-maintenance-and-testing-requirements/>

ELEVATORS: SAFETY/ENERGY

- Omitted the requirement for smoke venting of elevator and dumbwaiter shafts.



SOURCE: Arup/Urban Green Fire Study



SOURCE: <https://www.youtube.com/watch?v=tNJU5aworX4>

ELEVATORS: SAFETY/ENERGY



SOURCE: <https://www.youtube.com/watch?v=tNJU5aworX4>

- 713.12.1 Smoke venting of stair and other closed shafts. All closed shafts, including vertical exit enclosures, having a floor area exceeding 4 square feet (0.37 m²) shall be provided with a smoke vent in accordance with Sections 713.12.1.1 through 713.12.1.3. Interior vertical exit shaft enclosures shall also comply with Chapter 10.

Exceptions:

1. Elevator and dumbwaiter shafts in accordance with Chapter 30.
2. Interior exit stairways and ramps constructed as smokeproof enclosures in accordance with Section 1023.11.



SELECT HIGHLIGHTS

Alarm Systems

build safe | live safe

NYC
Buildings

ALARM SYSTEMS: SAFETY



SOURCE: <https://www.csemag.com/articles/fire-alarm-and-ecs-voice-amplifiers/>

- Expand the universe of buildings that require emergency voice communication systems by lowering the height trigger for such systems in Group R-2 occupancies (residential buildings with more than two dwelling units) from 125 feet to 75 feet in height.
- Addition of an allowance for Group R-2 occupancies in buildings 125 feet or less in height to use batteries as the secondary power supply for emergency voice communications systems and Fire Department in-building Auxiliary Radio Communication systems (ARCs). This change requires the coordinated changes made to the provisions of BC 907.5.2.2, BC 916.3 and Section 760.41(B) of the NYC Electrical Code. (403.4.8.4)

ALARM SYSTEMS: SAFETY



SOURCE: <https://www.csemag.com/articles/fire-alarm-and-ecs-voice-amplifiers/>

- BC 907.5.2.2 Emergency voice/alarm communication systems. Emergency voice/alarm communication systems required by this code shall be designed and installed in accordance with NFPA 72. ...

Exceptions:

1. Group I-1 and I-2 occupancies.

~~[3.]~~ 2. Group R-2 occupancies greater than ~~[125 feet]~~ 75 feet (22 860 mm) in height. In Group R-2 occupied buildings greater than ~~[125 feet (33 100 mm)]~~ 75 feet (22 860 mm) in height above the lowest level of Fire Department vehicle access, ...An emergency voice/alarm communication system shall not be required. However, a one-way voice communication shall be provided between the fire command center for use by Fire Department personnel and the following terminal areas:

~~[3.1.]~~ 2.1. Within dwelling units...

~~[3.2.]~~ 2.2. Within required exit stairs...

ALARM SYSTEMS: SAFETY



SOURCE: <https://asmintegrators.com/arcs-system-nyc/>

- Increase safety by promoting the use of the Fire Department endorsed Auxiliary Radio Communication System (ARCS). ARCS is a wireless, two-way building communication system for Fire Department use only. This system only receives and transmits Fire Department radio frequencies within buildings where it is installed.

ALARM SYSTEMS: SAFETY/COST



SOURCE: <https://asmintegrators.com/arcs-system-nyc/>

- 916.1 General. This section covers the design, installation and performance criteria of Fire Department In-Building Auxiliary Radio Communication System (ARCS)...

- 916.1.1 Construction documents.

- 916.2 Instructions.

- 916.3 Where required. ARCS, which shall be in accordance with this section, shall be required in the following:

1. High-rise buildings constructed in accordance with Section 403.
2. Underground buildings constructed in accordance with Section 405.
3. Buildings having a total gross area exceeding 250,000 square feet (23 225.8 m²).

Exceptions:

1. Group R-2 buildings
 - a. The highest occupied floor is less than 125 feet (38 100 mm); The building has no more than 1 story below grade; and area of the building does not exceed 250,000 square feet (23 225.8 m²).

ALARM SYSTEMS: SAFETY/COST



SOURCE: <https://www.vectorsolutions.com/course-details/basic-emergency-power-systems/aca1f0b9-7c6d-ea11-a9e3-edf83207be0f/>

- Addition of an allowance for buildings 125 feet or less in height to use batteries as the secondary power supply for emergency voice communications systems and Fire Department in-building Auxiliary Radio Communication systems (ARCs).

ALARM SYSTEMS: SAFETY/COST



SOURCE: <https://www.vectorsolutions.com/course-details/basic-emergency-power-systems/aca1f0b9-7c6d-ee11-a9e3-edf83207be0f/>

- BC 403.4.8.4.3 Emergency power loads in Group R-2 occupancies 125 feet or less in height. Group R-2 occupancies in buildings 125 feet (38 100 mm) or less in height shall be required to provide an emergency power system to support the following loads:
 1. Emergency voice communications systems in buildings containing Group R-2 occupancies in accordance with Section 907.5.2.2 of this code, or where otherwise provided. Batteries in accordance with the New York City Electrical Code are permitted to serve as the secondary power supply for such systems.
 2. Fire Department in-building Auxiliary Radio Communication systems (ARCs) in buildings containing Group R-2 occupancies in accordance with Section 916.3 of this code, or where otherwise provided. Batteries in accordance with the New York City Electrical Code are permitted to serve as the secondary power supply for such systems.



SELECT HIGHLIGHTS

Sidewalk Sheds

build safe | live safe

NYC
Buildings

SIDEWALK SHED

- Parapets
- Open shed
- Cantilevered platforms

MESH PARAPET



Mesh parapet for required for sheds installed under 2022 Code:

- Solid backing allowed for required signage
- Sheds installed for demolition projects will continue to require a solid parapet

ANGLED PARAPET ELIMINATED



OPEN SHED

- Open shed to be required for major new building construction projects
- Optional to use for other projects (alterations, facades, etc.)

OPEN SHED



FOR DISCUSSION PURPOSES ONLY: follow Building Code requirements to ensure Code-complaint shed

OPEN SHED



FOR DISCUSSION PURPOSES ONLY: follow Building Code requirements to ensure Code-complaint shed

OPEN SHED



FOR DISCUSSION PURPOSES ONLY: follow Building Code requirements to ensure Code-complaint shed

OPEN SHED

Key Features

- Horizontal span of at least 10 feet between vertical members
 - Shorter span allowed where needed to avoid obstructions
 - Mast sections, box towers, or similar elements used as vertical members shall be considered as one vertical member, provided its base does not exceed 24 inches by 24 inches
- All cross bracing, struts, and similar lateral support between vertical members shall be placed a minimum of 8 feet above the level of the sidewalk
 - Shorter span allowed where needed to avoid obstructions
 - Can be placed lower to protect against tripping hazard (e.g. dunnage on subway grates)

OPEN SHED

- Open shed designs must comply with all other code requirements (e.g. light duty or heavy-duty decking requirements, code design loads for wind, strength of materials, etc.)
- DO NOT simply repurpose existing shed material to meet increased spans, heights, without an engineering analysis to verify adequacy of design

CANTILEVERED PLATFORMS



FOR DISCUSSION PURPOSES ONLY: follow Building Code requirements to ensure Code-complaint shed

CANTILEVERED PLATFORMS

- Cantilevered platform must be approved by the Department.
- The cantilevered platform must provide overhead protection equivalent to a sidewalk shed.
- The cantilevered platform must be installed below the level of work to be performed, excluding work performed at the first story.

ADDITIONAL INFORMATION

For further technical questions, please send queries to ConstructionCodes@buildings.nyc.gov.