

NORTH CAROLINA BUILDING CODE

*Adopted by the North Carolina Building Code
Council and approved by the Insurance
Commissioner in accordance with
Act of the General Assembly
of 1933, Chapter 392*

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FOREWORD

Credit for a North Carolina Building Code should be given to the pioneers who saw the need for a set of minimum standards to apply to the entire State and secured the necessary legislation to prepare a Building Code and keep it up to date. Early forerunners in this task were Mr. Sherwood Brockwell, who was North Carolina's only State Fire Marshal, serving until his death June 2, 1953, and Mr. W. G. Gelle, Professor at North Carolina State College.

A meeting was held on November 28, 1931, at North Carolina State College at the instigation of Mr. W. G. Gelle, Chairman of the Building Code Committee of the North Carolina Society of Engineers. All officials of State organizations interested in the construction industry and all Fire Chiefs of the State were invited to this meeting. A constitution was adopted and the following officers elected: Mr. Sherwood Brockwell, Chairman; Mr. Harry Barton, Vice Chairman; Mr. W. G. Gelle, Secretary-Treasurer.

During the next two years a proposed Code was formulated and endorsed by the following organizations: North Carolina Society of Engineers; North Carolina Chapter of the American Institute of Architects; North Carolina Branch of the American General Contractors of America; State Board of Health; North Carolina Chapter of the Society of Civil Engineers; and the North Carolina Association of Plumbing and Heating Contractors.

Before the General Assembly of 1933 a bill was introduced entitled: "An Act to Create a Building Code Council for North Carolina." This bill was passed without any opposition. In substance, it created a State Building Code Council and authorized the Council, in cooperation with the Commissioner of Insurance, to prepare and adopt a Building Code.

The Governor appointed the first official members of the Building Code Council provided for by the bill on July 24, 1934. They were as follows: George W. Kane, Durham; W. W. Hook, Charlotte; W. R. Doshier, Wilmington; R. R. Lawrence, Winston-Salem; Harry Tucker, Raleigh.

Mr. George W. Kane was elected Chairman and Mr. W. W. Hook, Acting Secretary. On August 9, 1934, W. W. Hook was elected permanent Chairman and Harry Tucker, Secretary and Treasurer.

The newly appointed Building Code Council made a thorough study of the Code and it received its full approval in 1935. The Commissioner of Insurance then gave his formal approval and the Code was printed.

A few modifications of this printed Code were made from time to time by the Building Code Council and accepted by the Commissioner of Insurance. By legislation establishing the Code, changes could be made by recommendations from the Building Code Council and the acceptance of such changes by the Commissioner of Insurance.

A general revision to bring the Code up to date was considered in order at meeting held on November 12, 1952, attended by representatives from several State organizations interested in the construction industry. At the suggestions of Albert L. Haskins, Jr., A. I. A., then Chairman of the Building

Code Council, a preliminary draft was prepared by the staff of the Department of Insurance and copies were mailed to the various organizations interested in the construction industry, including the North Carolina Society of Engineers; North Carolina Chapter of the American Institute of Architects; North Carolina Branch of the American General Contractors of America; State Board of Health; North Carolina Chapter of the Society of Civil Engineers; the North Carolina Association of Plumbing and Heating Contractors; North Carolina League of Municipalities; Division of Schoolhouse Planning; Budget Bureau and the North Carolina Fire Insurance Rating Bureau. Comments and criticisms were received from several of these organizations and open meetings were held in the office of the Commissioner of Insurance together with representatives of these organizations.

By a unanimous vote on June 19, 1953, the Building Code Council adopted the draft as revised and recommended its acceptance by the Commissioner of Insurance. On the same date the Commissioner of Insurance accepted the recommendations of the Council and ordered the final draft printed.

Acknowledgement is made of the valuable suggestions and information which have been contributed by the technical staffs of many national and State organizations including the National Fire Protection Association; National Board of Fire Underwriters; National Lumber Manufacturers Association; American Institute of Steel Construction; Brick and Tile Service, Inc., North Carolina Concrete Masonry Association and the North Carolina Fire Insurance Rating Bureau. Comments and criticisms from the North Carolina Chapter of American Institute of Architects, the North Carolina Society of Engineers and various State agencies have also been very helpful.

The present Code has been prepared by the North Carolina Building Code Council with the cooperation of the staff of the North Carolina Department of Insurance, using the framework of the National Building Code, 1949 edition, recommended by the National Board of Fire Underwriters.

The Code is presented with the hope that its adoption and use will protect the public from dangerous and unsanitary buildings and will provide architects and engineers a set of minimum standards to follow in designing buildings. The Building Code Council has authority, with the cooperation of the Department of Insurance, to make such changes in the Code as are warranted by the wider use of new materials and methods. From time to time, therefore, it will be necessary to modify or change certain requirements in the Code.

Members of the Building Code Council are as follows:

- Mr. Bernard Crocker, Jr., Structural Engineer, Raleigh, N. C., Acting Chairman
- Mr. Eccles D. Everhart, Architect, High Point, N. C.
- Mr. W. Price Hand, General Contractor, Belmont, N. C.
- Mr. George Robb, Plumbing and Heating Contractor, High Point, N. C.
- Mr. L. H. Rouse, Representative of Organized Labor, Wilmington, N. C.

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GENERAL STATUTES

ART. 9. BUILDING CODE.

§ 143-136. N. C. building code.—This article shall be known and may be cited as the North Carolina building code. (1933, c. 392, s. 1.)

§ 143-137. Purpose of article.—It is the purpose of this article to protect life, health, and property and all its provisions shall be construed liberally to that end. (1933, c. 392, s. 2.)

§ 143-138. Administration by insurance commissioner; duties of state board of health.—It shall be the duty of the insurance commissioner or his deputy or deputies in coöperation with local officials in accordance with §: 160-115 to 160-123, inclusive, to enforce the building code hereinafter ratified and adopted, and all rules and regulations which the building code council is authorized to promulgate in modification or addition to said building code under the authority of this article, and further, in coöperation with local authorities, to enforce ordinances of municipal corporations relating to a building code or building rules and regulations: Provided, however, it shall be the duty of the state board of health, instead of the duty of the insurance commissioner, to enforce all provisions of the building code hereinafter designated and all other rules and regulations duly promulgated by the building code council relating to plumbing where such plumbing regulations are not otherwise prescribed by local ordinance or rules and regulations of county health boards. (1933, c. 392, s. 3; 1941, c. 280, s. 1.)

§ 143-139. Building code council created; powers and duties; application of building code.—There is hereby created a building code council which shall consist of the following members registered in accordance with the laws of North Carolina where registration laws apply: One architect, one general contractor, one structural engineer, one plumbing and heating contractor, and one representative of organized labor. Members of the building code council shall be appointed or removed by the governor. The terms of office shall be as follows: One architect, five years; one general contractor four years, one structural engineer three years, one plumbing and heating contractor two years and one representative of organized labor one year. Vacancies caused by expiration of term of office shall be filled by the governor and appointments made for a period of five years. Vacancies caused by resignation or otherwise shall be filled by the governor for the unexpired term of the person leaving office.

Within thirty days after the passage and publication of this article, the building code council shall meet and organize and shall

General Statutes, Section 143-140

have power to elect its own officers, to fix the times and places for its meetings, to adopt necessary rules of procedure, and to adopt all other rules and regulations not inconsistent herewith which may be necessary for the proper discharge of its duties and it shall keep an accurate record of all its proceedings. Subject to the limitations hereinafter set forth, the said building code council is authorized and empowered to establish reasonable and suitable classifications of buildings, both as to use and occupancy; to determine general building restrictions as to location, height and floor areas; to promulgate rules for the lighting and ventilation of buildings; means of egress therefrom; construction thereof and precautions to be taken during such construction; materials, loads and stresses of construction; chimneys and heating appliances and elevators; plumbing, heating, electrical control and protection; and to adopt such other rules and regulations as may be reasonably necessary to effectuate the purposes of this article: Provided, however, the said building code council shall not establish any standard or adopt or promulgate any rule, regulation, classification, limitation or restriction more rigid, exacting or stringent in its requirements than is authorized in the "North Carolina Building Code" adopted and promulgated by said council in the year one thousand nine hundred and thirty-six and published in full in August of that year in a printed volume as an official publication of the North Carolina State College of Agriculture and Engineering of the University of North Carolina, the said volume being known and designated as "The North Carolina Building Code, prepared by the North Carolina Building Code Council" and also known and identified as "Bulletin number ten, Engineering Experiment Station, State College Station, Raleigh." The provisions of said "North Carolina Building Code" so published are hereby in all respects ratified and adopted and shall continue in full force and effect unless and until they may be modified as hereinafter authorized: Provided, further, the said building code council may, subject to the approval of the insurance commissioner, promulgate rules and regulations which shall have the effect of establishing requirements less rigid and less stringent than those set forth in said "North Carolina Building Code"; Provided, further, any municipal corporation may adopt a building code or building rules and regulations which are more rigid, stringent and exacting than the "North Carolina Building Code" referred to above as the same is now adopted or as it may be hereafter modified pursuant to the provisions of this article. (1933, c. 392, s. 4; 1941, c. 280, s 2.)

§ 143-140. Appeals to council.—An appeal from the decision of the insurance commissioner upon any matter affecting the building code may be taken to the building code council as hereinafter provided (1933, c. 392, s. 5.)

General Statutes, Sections 143-141—143-142

§ 143-141. Compensation; appeals to council and to courts; buildings to meet code standards.—The members of the building code council may each receive five dollars per day as compensation for the time given in the performance of his duty and may be reimbursed for compensation and actual traveling expenses from funds of the organization which he represents.

When the insurance commissioner shall reject or refuse to approve the mode or manner of construction proposed to be followed, or materials to be used in the erection or alteration of any building or structure, or when it is claimed that the provisions of this code do not apply, or that an equally good or more desirable form of construction can be employed in any specific case, the owner of such building or structure, or his duly authorized agent, may demand that the decision of the insurance commissioner be reviewed by the chairman and two or more members of the building code council who are qualified to render a fair and impartial decision where the amount in question shall exceed the sum of \$1,000.00. The members best qualified in the opinion of the chairman shall be selected to review the decision of the insurance commissioner.

After a review of the decision of the insurance commissioner the chairman shall forward the findings and recommendations to the insurance commissioner immediately. It is understood that the building code council shall serve in an advisory capacity only and that the final decision and responsibility for such decision shall rest upon the insurance commissioner: Provided, nothing in this article shall prohibit the owner his right of appeal to the superior courts.

It shall be the duty of the council not only to make recommendations to the insurance commissioner relative to the proper construction of the pertinent provisions of the building code but it shall also recommend that he shall allow materials and methods of construction other than those required by the building code to be used, when in its opinion such other material and methods of construction are as good as those required by the code, and for this purpose the requirements of the building code as to such matters shall be considered simply as a standard to which construction shall conform. (1933, c. 392, s. 6.)

§ 143-142. Hearings before insurance commissioner as to questions under law or building code, etc.—Any person desiring to raise any question under this article or under the "North Carolina Building Code" or any rule or regulation promulgated by the building code council shall be entitled to a full hearing before the insurance commissioner, and upon request in writing by any such person, the insurance commissioner shall appoint a time for the hearing, giving such person reasonable notice thereof. The insurance commissioner shall conduct a full and complete hearing

General Statutes, Sections 143-143—160-115—160-116

of the matters in controversy and make a determination thereof. Any person affected by any decision of the insurance commissioner upon such matters may, either before or after appeal to the building council as provided for in § 143-141, proceed against the insurance commissioner in the superior court of Wake county, to enjoin the enforcement of the ruling or decision. In any such injunction proceeding the trial of all matters which may have been involved in the hearing before the insurance commissioner shall be de novo but the decision and ruling of the commissioner shall be prima facie correct and valid and the burden of proof shall be on the party attacking such decision. The provisions of this section shall not deprive any person of any other right of action or appeal which he may have and shall not limit any party to the assertion of said right by injunction as herein permitted: Provided, however, that where the question raised relates to any provision, regulation, ruling or decision regarding plumbing, the hearings shall be held before the state board of health instead of the insurance commissioner; but otherwise the procedure, rights and remedies in such cases shall be as outlined in this section. (1941, c. 280, s. 3.)

§ 143-143. Violation of act subjects offender to fine.—If any employer, owner or other person shall violate any of the provisions of this article, or shall do any act prohibited herein, or shall fail to perform any duty lawfully enjoined within the time prescribed by the insurance commissioner or his deputy or shall fail, neglect, or refuse, to obey any lawful order given or made by the insurance commissioner, for each such violation, failure, or refusal, such employer, owner or other person upon conviction thereof shall be fined in any sum not less than ten dollars (\$10.00), nor more than fifty dollars (\$50.00) for each offense. Each seven days neglect shall constitute a separate and distinct offense. (1933, c. 392, s. 7.)

NOTE: See Chapter 463 Session Laws 1945 as to Durham County.

ART. 11. REGULATION OF BUILDINGS

§ 160-115. Chief of fire department.—There is hereby created in the incorporated cities and towns of the state, where not already established by their charters, the office of chief of fire department. (Rev., s. 4815; 1901, c. 677, s. 1; C. S. 2738.)

§ 160-116. Election and compensation.—The governing body of every incorporated city and town, when no provision is made in their charters for such office, shall elect a chief of fire department, fix his term of office, prescribe his duties and obligations, and see that he is reasonably remunerated by the city or town for the services required of him by law. They may change his

General Statutes, Sections 160-117—160-118—160-119—160-120

duties and compensation from time to time, not inconsistent with the duties prescribed in this article. Where the governing body fails or neglects to perform such duty, the insurance commissioner shall call it to their attention and if necessary bring the matter before the proper court. Nothing herein may prevent any person elected hereunder from holding some other position in the government of the city or town. (Rev., ss. 2981, 4816; 1901, c. 677, s. 2; 1905, c. 506, s. 4; 1915, c. 192, s. 1; C. S. 2739.)

§ 160-117. Duties of chief of fire department.—The chief of the fire department shall perform the duties required of him by this article; where such duties are not prescribed by the charters or governing body of incorporated cities and towns, it shall be his duty to preserve and care for the fire apparatus, have charge of the fighting and putting out of all fires, make annual reports to the city municipal governments, seek out and have corrected all places and conditions dangerous to the safety of the municipality from fire, look after buildings being erected with a view to their safety from fires, and do and perform the other duties prescribed by the governing boards of the several municipalities. (Rev., ss. 4815, 4817; 1901, c. 677, ss. 1, 3; C. S. 2740.)

§ 160-118. Local inspector of buildings.—The chiefs of fire departments hereinbefore provided for shall also be local inspectors of buildings for the cities or towns for which they are appointed and shall perform the duties required herein and shall make all reports required by the Insurance Commissioner, and shall make all inspections and perform such duties as may be required by the state law or city or town ordinance or by the said Insurance Commissioner: Provided, however, that any city or town may appoint and reasonably remunerate a local inspector of buildings, in which case the chief of fire department shall be relieved of the duties herein imposed. (Rev., s. 2982; 1905, c. 506, s. 6; 1915, c. 192, s. 2; C. S. 2741.)

§ 160-119. Town aldermen failing to appoint inspectors.—If the aldermen or commissioners of any city or town shall fail or refuse to appoint a chief of fire department, or shall fail or refuse to reasonably remunerate him, they shall be guilty of a misdemeanor. This section shall not apply to the aldermen or commissioners of any city or town, where such city or town is by law exempt from the law regulating and controlling the erection and inspection of buildings. (Rev., s. 3607; 1905, c. 506, s. 4; C. S. 2742.)

§ 160-120. Town officers; inspection of buildings.—If any chief of any fire department or local inspector of buildings shall fail to perform the duties required of him by law or shall give a certificate of inspection without first making the inspection required by law, or shall improperly give a certificate of inspection, he

General Statutes, Sections 160-121—160-122—160-123

shall be guilty of a misdemeanor. (Rev., s. 3610; 1905, c. 506, s. 5; 1915, c. 192, s. 17; C. S. 2743.)

§ 160-121. **Electrical inspectors.**—The governing body of any incorporated city or town may in their discretion appoint an electrical inspector in addition to the building inspector, and when said electrical inspector is so appointed he shall do and perform all things herein set out for the building inspector to do and perform in regard to electrical wiring and certificates for same, and in such cases the building inspector shall be relieved of such duties. (Rev., s. 2983; 1905, c. 506, s. 33; C. S. 2744.)

§ 160-122. **County electrical inspectors.**—The county commissioners of each county may in their discretion designate and appoint one or more electrical inspectors whose duty it shall be to inspect the installation of all wiring and other electrical installations in buildings located in any town of one thousand population or less and/or those buildings located outside of the corporate limits of all cities and towns not otherwise included in this article, and to issue a certificate of inspection where such installations fully meet the requirements for such installations as set forth in this article, or such additional requirements as the board of county commissioners may prescribe. Nothing contained in this article shall be construed as prohibiting said board of county commissioners designating as county inspector any person who also has or may be designated as electrical inspector in any city or town located within said county, or from prohibiting two or more counties from designating the same inspector to perform the duties herein mentioned for such two or more counties. The county commissioners shall also fix the fees to be charged by such county inspector, which fees shall be paid by the owner of the properties so inspected. (1937, c. 57; 1941, c. 105.)

§ 160-123. **Deputy inspectors.**—All duties imposed by this article upon the building inspector may be performed by a deputy appointed by such inspector. (Rev., s. 2984; 1905, c. 506, s. 32; C. S. 2745.)

NORTH CAROLINA BUILDING CODE

ARTICLE I

ADMINISTRATION

SECTION 100. TITLE. These rules and regulations shall be known as the 1953 Edition of the North Carolina State Building Code, may be cited as such and will be referred to hereafter as "this code".

SECTION 101. Purpose. The purpose of the code is to provide certain minimum standards, provisions and requirements for safe and stable design, methods of construction and uses of materials in buildings and/or structures hereafter erected, constructed, enlarged, altered, repaired, moved, converted to other uses or demolished and to regulate the equipment, maintenance, use and occupancy of all buildings and/or structures.

SECTION 102. SCOPE.

1. New Buildings and Additions—Exemptions. This code shall apply to all new buildings, structures and additions thereto except:

- (a). Dwellings and outbuildings in connection therewith, such as barns and private garages.
- (b). Apartment buildings used exclusively as the residence of not more than two families.
- (c). Buildings used for agricultural purposes other than schools or assembly halls which are not within the limits of a city or an incorporated village.
- (d). Temporary buildings or sheds used exclusively for construction purposes, not exceeding twenty feet in any direction, and not used for living quarters.

2. Alterations. This code shall apply to all alterations which affect the structural strength, fire hazards, exits, lighting or sanitary conditions of any building except those exempted in Section 102-1. Within the fire limits of cities and towns where this article applies, as established and defined, no frame or wooden building shall be hereafter erected, altered, repaired, or removed except upon the permit of the building inspector, approved by the Insurance Commissioner.

3. Change of Use. This code shall apply to all buildings which are to be devoted to a new use for which the requirements of this code are in any way more stringent than the requirements covering the previous use of the building.

4. Local Regulations. This code shall not be understood to limit the powers of cities, villages and towns to make or enforce

Section 103

additional or more stringent requirements and regulations, provided the same do not conflict with this code or any revision of this code.

Note: Every municipality is authorized to adopt, for its own benefit:

- (a) Regulations covering the construction of private residences.
- (b) Other fire-preventive and sanitary regulations which cannot be reasonably included in this code.

SECTION 103. GENERAL PROVISIONS.

1. Design and Supervision of Buildings. For every building classified as Public or Institutional or as a Hotel or designed to accommodate one hundred or more people, plans shall be prepared and copies thereof furnished the Insurance Commissioner for his approval before work is begun on such building.

For every other building costing \$10,000 or more and/or designed to accommodate one hundred or more persons, except those exempted in Section 102-1, plans may be required to be furnished the Insurance Commissioner in order that the provisions of this article may be adhered to.

The plans and specifications so prepared shall be complete in every detail so that the work will comply with the provisions as set forth in this code and shall be constructed under the supervision of a competent superintendent or inspector, in accordance with the plans and specifications.

2. Plans to be Kept at Building. When permit has been issued for the construction of any building, the owner or contractor shall keep at the building a set of plans and specifications that have been approved, in order that any building inspector, whether state or city, may ascertain when he visits a building under construction, whether the construction is in accordance with the plans.

3. Plans Approved by Building Department. Section 103-1 of this code shall not be construed to repeal any existing provisions of law requiring plans and specifications for building construction and work connected therewith to be filed with any state or local board or department, and to be previously approved by said state or local board or department.

4. Building Permits. Before a building is begun the owner of the property shall apply to the inspector for a permit to build. This permit shall be given in writing and shall contain a provision that the building shall be constructed according to the requirements of this code and any other local ordinance pertaining to the con-

Section 103

struction. As the building progresses the inspector shall make as many inspections as may be necessary to satisfy him that the building is being constructed according to the provisions of this law. As soon as the building is completed the owner shall notify the inspector, who shall proceed at once to inspect the said building and determine whether or not the flues and the building are properly constructed in accordance with the building law. If the building meets the requirements of the building law the inspector shall then issue to the owner of the building a certificate which shall state that he has complied with the requirements of the building law as to that particular building, giving description and locality and street number if numbered. The inspector shall keep his record so that it will show readily by reference all such buildings as are approved. The inspector shall report to the Insurance Commissioner every person neglecting to secure such permit and certificate, and so bring the matter before the mayor, recorder, or municipal court for their attention and action.

5. Unsafe Buildings Condemned. Every building which shall appear to the inspector to be especially dangerous because of its liability to fire or in case of fire by reason of bad condition of walls, overloaded floors, defective construction, decay or other causes shall be held to be unsafe, and the inspector shall affix a notice of the dangerous character of the structure to a conspicuous place on the exterior wall of said building. No building now or hereafter built shall be altered, repaired or moved, until it has been examined and approved by the inspector as being in a good and safe condition to be altered as proposed, and the alteration, repair or change so made shall conform to the provisions of the law.

6. Punishment for Allowing Unsafe Building to Stand.

(a). If the owner of any building which has been condemned as unsafe and dangerous by any local inspector, after being notified by the inspector in writing of the unsafe and dangerous character of such building, shall permit the same to stand or continue in that condition, he shall forfeit and pay a fine of not less than ten nor more than fifty dollars for each day such building continues after such notice.

(b). If after ninety days from legal notice from the inspector, the owner or owners of a building which has been condemned fails to answer such notice of condemnation, the Chief of the Fire Department or the local Building Inspector may, with and by a two-thirds vote of the City Council, order such building removed, with reasonable expense incurred by such removal charged against the property.

Section 200

ARTICLE II

SECTION 200. DEFINITIONS.

(a). Unless otherwise expressly stated, the following terms shall, for the purpose of this code, have the meaning indicated in this section.

(b). Words used in the present tense include the future; words in the masculine gender include the feminine and neuter; the singular number includes the plural and the plural the singular.

(c). Where terms are not defined in this section, they shall have their ordinarily accepted meanings or such as the context may imply.

Alley means any public space or thoroughfare less than 20 feet in width which has been dedicated or deeded for public use.

Alteration, as applied to a building or structure, means a change or rearrangement in the structural parts or in the exit facilities; or an enlargement, whether by extending on a side or by increasing in height; or the moving from one location or position to another; the term "alter" in its various moods and tenses and its participial forms, refers to the making of an alteration.

Amusement device means a mechanically operated device which is used to convey persons in any direction as a form of amusement.

Apartment means a room, or a suite of two or more rooms, in a residence building occupied as the home or residence of an individual, family or household.

Approved, as applied to a material, device or mode of construction, means approved by the city building inspector under the provisions of this code, or by other authority designated by law to give approval in the matter in question.

Area, as applied to a form of construction, means an uncovered subsurface space adjacent to a building.

Area, as applied to the dimensions of a building, means the maximum horizontal projected area of the building at grade.

ACI means American Concrete Institute.

ASA means the American Standards Association.

ASTM means the American Society for Testing Materials.

Automatic, as applied to a fire door or other opening protective, means normally held in an open position and automatically closed.

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by a releasing device that is actuated by abnormal high temperature or by a predetermined rate of rise in temperature.

Automatic fire alarm system means a system which automatically detects a fire condition and actuates a fire alarm signal device.

Basement means a story with 40 per cent or more of its cubical contents below finished grade.

Brick means a solid masonry unit having a shape approximating a rectangular prism, not larger than 12 by 4 by 4 inches. A brick may be made of burned clay or shale, of lime and sand, of cement and suitable aggregates, or of fire clay or other approved materials.

Building means a combination of materials to form a construction that is safe and stable, and adapted to permanent or continuous occupancy for public, institutional, residence, business or storage purposes; the term "building" shall be construed as if followed by the words "or part thereof." For the purposes of this code, each portion of a building separated from other portions by a fire wall shall be considered as a separate building.

Building line means the line, established by law, beyond which a building shall not extend, except as specifically provided by law.

Building official means the officer or other designated authority charged with the administration and enforcement of this code, or his duly authorized representative.

Concrete means a mixture of portland cement, aggregate and water, of such materials, proportions, and manipulation as to give specified results;

average concrete means a mixture of one part of portland cement and not more than 6 parts of aggregate proportioned by volume, with the necessary water;

controlled concrete means concrete where the materials are scientifically selected, graded and proportioned to give specified results;

reinforced concrete means a portland cement concrete in which steel is embedded in such a manner that the two materials act together in resisting forces.

Court means an open, uncovered and unoccupied space within the lot lines of a lot, and includes a yard.

Curb level means the elevation of the street grade as established in accordance with law;

referring to a building, it means the elevation at that point of the street grade that is opposite the center of the wall nearest to and facing the street line;

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referring to an excavation, it means the elevation at that point of the street grade which is nearest to the point of the excavation under consideration.

Dead load means the weight of walls, partitions, floors, roofs and all other permanent construction of a building.

Display sign means a structure that is arranged, intended, designed or used as an advertisement, announcement or direction; and includes a sign, sign screen, billboard and advertising devices of every kind.

Dwelling means a building occupied exclusively for residence purposes and having not more than two apartments, or as a boarding or rooming house serving not more than 5 persons with meals or sleeping accommodations or both.

Elevator means a device within or in connection with a building used for carrying persons or things upward or downward; and includes dumbwaiter and similar devices;

freight elevator means an elevator designed and used for the carrying of freight and such persons only as are necessary for its safe operation or the handling of freight carried by it;

passenger elevator means an elevator designed and used for carrying persons.

Fire door means a door and its assembly, so constructed and assembled in place as to give protection against the passage of fire.

Fire partition—see "Walls."

Fire resistance rating means the time in hours that the material or construction will withstand the standard fire exposure as determined by a fire test made in conformity with the "Standard Methods of Fire Tests of Building Construction and Materials," ASTM E 119-47.

Fire retardant ceiling means a ceiling construction which has been proved by test as satisfactory for use as ceiling protection for a floor or roof construction which has a fire resistance rating of not less than one hour.

Fire retardant treated lumber means lumber which has been treated by a pressure impregnation process to give a flame spread classification of 50 or less according to the method for the "Fire Hazard Classification of Building Materials" of Underwriters' Laboratories, Inc., and which is shown to be so classified by a certificate or label issued by Underwriters' Laboratories, Inc.

Fire walls—see "Walls."

Freight elevator—see "Elevator."

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Garage means a building, shed or enclosure, or a part thereof, in which a motor vehicle containing a flammable fluid in its fuel storage tank, is stored, housed, kept or repaired.

Gasoline service station means a structure, building, or premise or any portion thereof where a flammable fluid for retail supply to motor vehicles is stored, housed, or sold.

Grade, with reference to a building, means, when the curb level has been established, the mean elevation of the curb level opposite those walls that are located on, or parallel with and within 15 feet of, street lines; or, when the curb level has not been established, or all the walls of the building are more than 15 feet from street lines; "grade" means the mean elevation of the ground adjoining the building on all sides.

Gypsum mortar when used in the laying of unit construction means a mixture of one part neat gypsum and not more than three parts of clean, sharp, well-graded sand by weight.

Habitable room means a room occupied by one or more persons for living, eating or sleeping; and includes kitchens serving apartments or individual households, but does not include bathrooms, toilet compartments, laundries, serving and storage pantries, corridors, basement and other spaces that are not used frequently or during extended periods.

Height as applied to a building, means the vertical distance from grade to the highest finished roof surface in the case of flat roofs, or to a point at the average height of roofs having a pitch of more than one foot in 4½ feet; "height" of a building in stories does not include basements, except that in school buildings of ordinary, noncombustible or wood frame construction, the basement shall be deemed a story when used for purposes other than storage or heating.

height, as applied to a court, means the vertical distance from the level of the floor of the lowest story served by that court to the level under consideration;

height, as applied to a story means the vertical distance from top to top of two successive tiers of floor beams or finished floor surfaces;

height, as applied to a wall, means the vertical distance to the top measured from the foundation wall, or from a girder or other immediate support of such wall.

Hereafter means after the time that this code becomes effective.

Heretofore means before the time that this code becomes effective.

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Hollow masonry unit means a masonry unit whose net cross-sectional area in any plane parallel to the bearing surface is less than 75 per cent of its gross cross-sectional area measured in the same plane.

Live load means all loads except dead load.

Lot means a portion or parcel of land considered as a unit, devoted to a certain use or occupied by a building or a group of buildings that are united by a common interest or use, and the customary accessories and open spaces belonging to the same.

Lot line means a line dividing one lot from another, or from a street or other public space.

Masonry means brick, stone, plain concrete, hollow block, solid block or other similar building units or materials, or combinations of them, bonded together with mortar. Reinforced concrete is not classed as masonry.

Multifamily house means a building occupied as the home or residence of individuals, families or households living independently of each other, of which three or more are doing cooking within their apartments; including tenement house, apartment house, flat.

Municipality means the governmental unit which has adopted this code under due legislative authority.

Noncombustible as applied to a building construction material means a material which, in the form in which it is used, falls in one of the following groups (a) through (d). No material shall be classed as noncombustible which is subject to increase in combustibility or flame spread rating beyond the limits herein established, through the effects of age, moisture or other atmospheric conditions as, for example, various types of treated wood. Flame spread rating as used herein refers to rating obtained according to the method for fire hazard classification of Underwriters Laboratories, Inc. For data on such ratings see Underwriters' Laboratories Fire Protection Equipment List under the List under the heading Building Materials—Hazard Classification (Fire) (40 U8).

- (a) Materials no part of which will ignite and burn when subjected to fire. Examples asbestos fiber, brick, clay tile, concrete, glass, gypsum, iron, portland cement, slate, steel, stone.
- (b) Materials having a structural base of noncombustible material, as defined in (a), with a surfacing not over 1/8-inch thick which has a flame spread rating not higher than 50. Examples: certain types of protected steel sheets, gypsum wall board.

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- (c) Materials made up of noncombustible material as defined in (a) together with combustible components in such form that cross-sections of the material in any plane present a similar composition, and having a surface flame spread rating not higher than 25 without evidence of continued progressive combustion. Examples: certain insulation materials as, blocks of cellular glass, boards of glass fiber, slabs of wood excelsior impregnated with portland cement.
- (d) Materials, other than as described in (b), made up of layers with no layer having a surface flame spread rating higher than 25 without evidence of continued progressive combustion. Examples: certain sandwich type materials.

Occupied, as applied to a building, shall be construed as though followed by the words "or intended, arranged or designed to be occupied."

Owner includes his duly authorized agent or attorney, a purchaser, devisee, fiduciary, and a person having a vested or contingent interest in the property in question.

Passenger elevator—see "Elevator."

Pent house means an enclosed structure other than a roof structure, located on the roof, extending not more than twelve feet above a roof and used primarily for living or recreational accommodations.

Person includes corporation and copartnership as well as individual.

Place of assembly means a room or space in which provision is made for the seating of one hundred or more persons for religious, recreational, educational, political, social or amusement purposes or for the consumption of food or drink. Such room or space shall include any occupied connecting room or space in the same story, or in a story or stories above or below, where entrance is common to the rooms or spaces.

Prefabricated means composed of sections or panels fabricated prior to erection on the building foundation.

Repair means the replacement of existing work with the same kind of material used in the existing work not including additional work that would affect the structural safety of the building, or that would affect or change required exit facilities, or that would affect a vital element of an elevator, plumbing, gas piping, wiring or heating installation, or that would be in violation of a provision of law or ordinance.

Required means required by some provision of this code.

Roof means the roof slab or deck with its supporting members.

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Roofing means the covering applied to the roof for weather resistance, fire resistance, or appearance.

Roof structure means a structure above the roof of any part of a building enclosing a stairway, tank, elevator machinery or ventilating apparatus, or such part of a shaft as extends above the roof and not housing living or recreational accommodations.

Self closing, as applied to a fire door or other opening protective, means normally closed and equipped with an approved device which will insure closing after having been opened for use.

Shaft means a vertical opening or passage through two or more floors of a building or through floors and roof.

Solid masonry means masonry consisting of solid masonry units laid contiguously with the joints between the units filled with mortar, or consisting of plain concrete.

Solid masonry unit means a masonry unit whose net cross-sectional area in every plane parallel to the bearing surface is 75 per cent or more of its gross cross-sectional area measured in the same plane.

Sprinklered means equipped with an approved automatic sprinkler system properly maintained.

Stairway means one or more flights of stairs and the necessary landings and platforms connecting them, to form a continuous and uninterrupted passage from one story to another in a building or structure.

Story means that part of a building comprised between a floor and the floor or roof next above. A mezzanine shall be considered a story if it exceeds 25 per cent of the area of the floor immediately below.

Street means any public thoroughfare, street, avenue, boulevard, park, lane, terrace, concourse or space 20 feet or more in width which has been dedicated or deeded to the public for public use.

Street line means a lot line dividing a lot from a street.

Structural clay tile means a hollow masonry unit composed of burned clay, shale, fireclay or mixtures thereof and having parallel cells.

Structure means a combination of materials to form a construction that is safe and stable; including among others, buildings, stadiums, gospel and circus tents, reviewing stands, platforms, stagings, observation towers, radio towers, water tanks and towers, trestles, piers, wharves, sheds, coal bins, fences and display

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signs; the term structure shall be construed as if followed by the words "or part thereof."

Walls:

bearing wall means a wall which supports any vertical load in addition to its own weight;

cavity wall means a wall built of masonry units or of plain concrete, or a combination of these materials, so arranged as to provide an air space within the wall, and in which the inner and outer parts of the wall are tied together with metal ties;

curtain wall means a non-bearing wall between columns or piers and which is not supported by girders or beams;

faced wall means a wall in which the masonry facing and backing are so bonded as to exert common action under load;

fire partition means a partition constructed in accordance with section 918, for the purpose of restricting the spread of fire or to provide an area of refuge, but not necessarily continuous through all stories nor extended through the roof;

fire wall means a wall constructed in accordance with section 909 for the purpose of subdividing a building or separating buildings to restrict the spread of fire and which starts at the foundation and extends continuously through all stories to and above the roof, except where the roof is fireproof or semifireproof and the wall is carried up tightly against the under side of the roof slab;

foundation wall means a wall below the first floor extending below the adjacent ground level and serving as support for a wall, pier, column or other structural part of a building;

hollow wall of masonry means a wall built of masonry units so arranged as to provide an air space within the wall, and in which the inner and outer parts of the wall are bonded together with masonry units;

non-bearing wall means a wall which supports no load other than its own weight;

panel wall means a non-bearing wall built between columns or piers and wholly supported at each story;

party wall means a wall used or adapted for joint service between two buildings;

veneered wall means a wall having a facing which is not attached and bonded to the backing so as to form an integral part of the wall for purposes of load bearing and stability.

Writing includes printing and typewriting.

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Written notice shall be considered to have been served if delivered in person to the individual or to the parties intended, or if delivered at or sent by registered mail to the last business address known to the party giving the notice.

Yard means a court that extends along the entire length of a lot line.

Zoning means the reservation of certain specified areas within a community or city for buildings and structures for certain purposes with other limitations such as height, lot coverage and other stipulated requirements.

ARTICLE III

CLASSIFICATION OF OCCUPANCIES AND CONSTRUCTION.

SECTION 300. CLASSIFICATION OF OCCUPANCIES.

1. **Classes designated.** For the purposes of this code, buildings are classified, with respect to occupancy and use, as public buildings, institutional buildings, residence buildings, business buildings, storage buildings, industrial and hazardous buildings.

(a). **Public building** means a building in which persons congregate for civic, political, educational, religious, social or recreational purposes; including among others,

armories	court houses	museums
assembly halls	dance halls	passenger stations
auditoriums	exhibition buildings	recreation piers
bath houses	grandstands	restaurants
bowling alleys	gymnasiums	schools
churches	lecture halls	skating rinks
city halls	libraries	stadiums
club rooms	lodge rooms	theatres
colleges	motion picture theaters	

(b). **Institutional building** means a building in which persons are harbored to receive medical, charitable or other care or treatment, or in which persons are held or detained by reason of public or civic duty, or for correctional purposes; including among others,

asylums	infirmaries	penal institutions
homes for the aged	jails	reformatories
hospitals	nurseries	sanitariums
houses of correction	orphanages	

(c). **Residence building**, except when classed as an institutional building, means a building in which sleeping accommodations are provided; including among others,

apartments	dormitories	multifamily houses
club houses	lodging houses	studios
convents		tenements

(d). **Business building** means a building occupied for the transaction of business, for the rendering of professional services, for the display or sale of goods, wares, or merchandise, or for the performance of work or labor; including among others,

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bakeries	gasoline service	open air stores
barber shops	stations	power plants
banks	hotels	radio stations
chemical labora-	ice plants	smoke houses
tories	laundries	stores
creameries	markets	telephone exchanges
electric substations	office buildings	television stations
		work shops

(e). **Storage building** means a building for the housing, except for purely display purposes, of airplanes, automobiles, railway cars or other vehicles of transportation, for the sheltering of horses, live stock or other animals, or exclusively for the storage of goods, wares or merchandise, not excluding in any case offices incidental to such uses; including among others,

barns	garages	grain elevators
cold storage	gasoline bulk	hangars
freight depots	stations	storage warehouses

(f). **Industrial** means a building or parts thereof, in which 5 or more persons are engaged in the fabrication, assembly, manufacturing, or processing of products or materials, except that where such products, materials, or those involved in their manufacture are highly combustible, or explosive, the occupancy shall comply with the requirements for hazardous occupancies when the latter are more restrictive than the corresponding requirements for the industrial classification. Where less than 5 persons are engaged in work as described herein, the occupancy shall be in the business classification.

The industrial classification includes among others the occupancies listed below:

factories	assembly plants	mills
manufacturing	loft buildings	laboratories
plants	processing plants	

(g). **Hazardous** means a building or parts thereof, used for purposes that involve highly combustible, highly flammable or explosive products or materials which are likely to burn with extreme rapidity or which may produce poisonous fumes or gases, including uses that cause division of material into fine particles or dust subject to explosion or spontaneous combustion, and uses that constitute a high fire hazard because of the form, character or volume of the materials used.

2. Mixed Occupancy. Where a minor portion of a building is used for office, study, studio or other similar purpose, the building shall be classified as to occupancy on the basis of the major use. In other cases where a building is occupied for two or more purposes not included in one class, the provisions of this code ap-

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plying to each class of occupancy shall apply to such parts of the building as come within that class; and if there should be conflicting provisions, the requirements securing the greater safety shall apply.

3. Doubtful classification. In case a building is not specifically provided for, or where there is any uncertainty as to its classification, its status shall be fixed by a duly promulgated rule giving due regard to safety.

SECTION 301. CLASSIFICATION OF CONSTRUCTION.

1. Types designated. For the purposes of this code, construction as used in buildings shall be classified as follows:

- (a). Fireproof Construction.
- (b). Semifireproof Construction.
- (c). Heavy Timber Construction.
- (d). Ordinary Construction.
- (e). Noncombustible Construction.
- (f). Wood Frame Construction.
- (g). Unprotected Metal Construction.

**ARTICLE IV
GENERAL RESTRICTIONS**

SECTION 400. ZONING RESTRICTIONS.

The restrictions of the zoning ordinance, if there is such an ordinance, shall not be deemed to be modified by any provisions of this code; and such restrictions shall be controlling except in so far as this code imposes greater restrictions by reason of the type of construction used, in which case the provisions of this code shall control.

SECTION 401. RESTRICTIONS ON CONSTRUCTION WITHIN THE FIRE LIMITS.

1. **General restrictions.** Except as otherwise provided in subsection 5 of this section, no building or structure of wood frame construction or of unprotected metal construction shall be erected within the limits established by law as the Fire Limits.

2. **Alterations.**

(a). Within the fire limits no building or structure of wood frame construction or of unprotected metal construction shall be hereafter increased in height.

(b). Within the fire limits no building or structure of wood frame construction or of unprotected metal construction shall be hereafter extended on any side.

(c). Within the fire limits no other building or structure shall be hereafter extended on any side by wood frame construction or unprotected metal construction.

(d). Nothing in this section shall prohibit other alterations within the fire limits; provided there is no change of occupancy to a class of occupancy otherwise prohibited. (See Section 102.2.)

3. **Moving buildings.** No building of wood frame construction or unprotected metal construction shall hereafter be moved from without to within the fire limits or within the fire limits.

4. **Doubtful location.** A building or structure shall be deemed to be within the fire limits if one-third or more of the area of such building or structure is located therein.

5. **Exceptions.** Nothing in this section shall prohibit within the fire limits and subject to the specified limitations, the erection of new buildings or structures, nor the extension or enlargement of heretofore erected buildings or structures, of wood frame construction or unprotected metal construction, as follows:

(a). Parking lot offices, real estate offices or similar business structures, of unprotected metal construction, not exceeding 250 square feet in area, nor more than one story in height, and located at least 10 feet from lot lines.

(b). A building of wood frame construction or of unprotected metal construction occupied exclusively as a private garage or stable, not more than one story in height nor more than 750 square feet in area, located on the same lot with a dwelling; provided that such building shall be placed at least 10 feet from the lot lines of adjoining property.

(c). Outhouses not more than 8 feet in height nor more than 100 square feet in area when located 10 feet from lot line.

(d). Greenhouses not more than 15 feet in height erected on the same lot with and accessory to a dwelling or a store.

(e). Sheds open on the long sides, not more than 15 feet in height nor more than 500 square feet in area, located at least 10 feet from buildings and from adjoining lot lines.

(f). Builders' shanties for use only in connection with a duly authorized building operation and located on the same lot with such building operation, on a lot immediately adjoining, on an upper floor of the building under construction, or on a sidewalk shed.

(g). Coal tipples, ice houses, material bins, trestles and water tanks, when built of planking and timbers of the dimensions specified for heavy timber construction.

(h). Fences not exceeding 10 feet in height.

(i). Display signs as provided in section 403-8a, and Article XVIII.

(j). Cooling towers as provided in section 923-7.

(k). Roofs over parking lots, of unprotected metal construction, where roof is at least 10 feet above the floor, and every 40 feet there is an open ventilation area 6 feet wide extending either the full length or the full width of the roof.

SECTION 402. SPECIAL OCCUPANCY REQUIREMENTS.

1. Institutional buildings.

(a). Institutional buildings for occupants involuntarily detained shall be of fireproof construction or semi-fireproof construction.

(b). Institutional buildings for occupants which are not involuntarily detained, when of other than fireproof construction or semi-fireproof construction, shall not exceed two stories in height and shall have floors and partitions with fire resistance

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ratings of not less than one hour and with fire retardant ceilings under roofs, and if of wood frame construction shall not exceed one story in height nor 2500 square feet in area.

2. Theatres and motion picture theatres.

(a). Theatres and motion picture theatres shall be of fireproof construction or semi-fireproof construction, except that portions of such buildings not over 1 story or over 45 feet in height may have combustible roof construction if protected by fire retardant ceilings.

(b). No theatre or motion picture theatre shall be located within or attached to a building of other occupancy unless it is separated from such other occupancies by walls and floors of non-combustible construction having fire resistance ratings of not less than 3 hours.

3. Schools, churches, colleges, assembly halls, dance halls, bowling alleys, and auditoriums over one story in height, shall have floors and structural members of not less than one-hour fire resistance.

4. Wall and ceiling finish. In the exit ways from public buildings and institutional buildings, and all places of assembly, no combustible material shall be used as interior wall or ceiling finish which is of such a nature that the flame spread over its surface is more than 50 according to the "Fire Hazard Classification of Building Materials" of Underwriters' Laboratories, Inc., or which has a classification of fire retardent or better according to the test method of Federal specifications, S S-A-118.

5. Business and residence separation. In buildings of other than fireproof or semi-fireproof construction portions classified as of business occupancy shall be separated from portions classified as of residence occupancy by partitions having a fire resistance rating of not less than one hour and by fire retardant ceilings, unless the business portion is sprinklered.

6. Separation of dwellings. Walls or partitions separating 2 or more dwellings of other than fireproof or semi-fireproof construction shall consist of a form of construction having a fire resistance rating of not less than 1 hour.

7. Partitions in multifamily houses. In multifamily houses partitions separating apartments or apartments from hallways or apartments from other occupancies and partitions separating stores from hallways or other occupancies shall have a fire resistance rating of not less than one hour, with openings equipped with approved fire doors or with substantial metal or metal covered doors or solid wooden doors of the flush type of nominal thickness not less than 1 $\frac{3}{4}$ -inch.

SECTION 403. HEIGHT RESTRICTIONS.

1. **New buildings.** Except as may be otherwise provided in subsection 3 of this section, no building hereafter erected shall exceed in height the limits fixed by table 403.

2. **Alterations.** No building shall hereafter be altered so as to exceed the limits of height fixed by table 403.

3. Exceptions.

(a). For the purpose of this section, the following appurtenances shall not be deemed parts of buildings: church spires, tanks and their supports, roof structures, chimneys, signs attached to the building, radio masts, water cooling towers for air conditioning or other apparatus, and parapets that do not extend more than 4 feet above the roof surface at their point of contact.

(b). Outside the fire limits, public buildings, business buildings, or storage buildings may, in the discretion of the Commissioner of Insurance, be erected to greater heights than fixed by this section.

SECTION 404. AREA RESTRICTIONS.

1. **New Buildings.** Except as otherwise provided in subsection 4 of this section, the building area permitted without suitable subdivisions by fire walls shall be limited as indicated in Table 404.

2. **Street.** Under this section a street shall be deemed to include any avenue, boulevard, street, alley or lane, 20 feet or greater in width, or any court, parking space or yard, with direct connection to a street, and not less than 20 feet wide. Such court, parking space or yard shall be the property of the owner of the building and shall not be enclosed or roofed over.

3. **Alteration.** No building shall be hereafter altered so as to exceed in area in any story the limits fixed in this section.

4. Area Modification.

(a) Area Increase for Sprinklers

The allowable floor areas for business, industrial and storage buildings specified in Section 404 and in Table 404 may be increased by 100 per cent if the building is equipped throughout with automatic sprinklers, except that such increase shall not be permitted in buildings where, because of occupancy or conditions, sprinkler equipment is a requirement of the Code, or where in the opinion of the Insurance Commissioner the nature of the hazard involved is such that sprinkler equipment does not substantially reduce the fire hazard or where application of water may cause an explosion.

TABLE 403—BUILDING HEIGHT LIMITS

See section 401 for height limits on wood frame construction and unprotected metal construction within the fire limits.
 See section 402 for height limits for certain special occupancies.
 See section 1702 for sprinkler requirements based on occupancy.
 See section 403-8 (b).

CLASSIFICATION OF OCCUPANCY	FIRE-PROOF	SEMI-FIREPROOF	NONCOM-BUSTIBLE ²	NONCOM-BUSTIBLE ¹	HEAVY TIMBER	ORDINARY	WOOD FRAME	UNPROTECTED METAL
Public	No Limit	75 Feet (Note A)	3 Stories 40 Feet (Note B)	3 Stories 40 Feet (Note B)	3 Stories 40 Feet	3 Stories 40 Feet (Note B)	1 Story 25 Feet	1 Story 25 Feet
Institutional	No Limit	75 Feet	2 Stories 35 Feet	2 Stories 35 Feet	2 Stories 35 Feet	2 Stories 35 Feet	1 Story 35 Feet	1 Story 35 Feet
See section 402 for special occupancy requirements.								
Residence	No Limit	No Limit	3 Stories 45 Feet (Note C)	3 Stories 45 Feet (Note C)	75 Feet	3 Stories 45 Feet (Note C)	2 Stories 35 Feet (Note H)	2 Stories 35 Feet (Note H)
Business	No Limit	75 Feet (Note D)	4 Stories 50 Feet	4 Stories 50 Feet	75 Feet	4 Stories 50 Feet	2 Stories 35 Feet	2 Stories 35 Feet
Storage	No Limit (Note E)	6 Stories 75 Feet (Note F)	2 Stories 35 Feet	2 Stories 35 Feet	3 Stories 35 Feet (Note G)	2 Stories 35 Feet (Note G)	1 Story 25 Feet	1 Story 25 Feet

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Industrial	No Limit	8 Stories 100 Feet (Note F)	3 Stories 35 Feet	3 Stories 35 Feet	2 Stories 35 Feet	1 Story 25 Feet	1 Story 25 Feet
See section 403-8-(b) and Section 404-(d)							
Hazardous	Heights cannot be established due to various types of hazardous uses. Hazardous locations must be protected in accordance with good practice as recommended in Section 1504. (See section 403-8-(b) and section 404-(d).)						

- Note A. No limit if less than 100 persons above 75 feet
- Note B. Churches: 2 Stories, 45 feet
Schools: 2 Stories
- Note C. With 2 hour non-combustible first floor, height may be increased to 4 stories or 55 feet; in multi-family building with 2 hour non-combustible first floor and other floors of one hour fire resistance and with fire partitions sub-dividing floors into areas not exceeding 3500 square feet the height may be 5 stories or 65 feet.
- Note D. Office buildings not limited.
- Note E. Automatic sprinklers required when height exceeds 6 stories.
- Note F. Automatic sprinklers required when height exceeds 4 stories.
- Note G. Automatic sprinkler installation will allow height increase to 50 feet.
- Note H. Dormitories: 1 story.

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TABLE 404—AREA LIMITS PER FLOOR OF BUILDINGS IN SQUARE FEET

OCCUPANCY CLASSIFICATION	FIRE-PROOF	SEMI-FIREPROOF	NONCOM-RUSTIBLE ²	NONCOM-RUSTIBLE ¹	HEAVY TIMBER	ORDINARY	WOOD FRAME	UNPROTECTED METAL
Public	No Limit	No Limit	(3) 6,500 (2) 8,000 (1) 10,000	(3) 7,500 (2) 10,000 (1) 15,000	(3) 7,500 (2) 10,000 (1) 15,000	(3) 6,500 (2) 8,000 (1) 10,000	(1) 4,000	(1) 4,000
Institutional	No Limit	No Limit	(2) 5,000 (1) 7,500	(2) 10,000 (1) 15,000	(2) 10,000 (1) 15,000	(2) 5,000 (1) 7,500	(1) 3,000	(1) 3,000
Residence	No Limit	No Limit	(3) 6,500 (2) 8,000 (1) 10,000	(3) 6,500 (2) 8,000 (1) 10,000	(3) 6,500 (2) 8,000 (1) 10,000	(3) 6,500 (2) 8,000 (1) 10,000	(2) 3,000 (1) 4,000	(2) 3,000 (1) 4,000
Business	No Limit	No Limit	(4) 6,000 (3) 7,500 (2) 10,000 *(1) 15,000	(4) 10,000 (3) 10,000 (2) 10,000 *(1) 15,000	(5) 10,000 (4) 10,000 (3) 15,000 (2) 15,000 *(1) 20,000	(4) 6,000 (3) 7,500 (2) 7,500 *(1) 10,000	(2) 3,000 *(1) 5,000	(2) 3,000 *(1) 5,000
Storage	No Limit	(6) 18,000 (5) 19,000 (4) 20,000 (3) 22,000 (2) 24,000 (1) 25,000	(2) 5,000 (1) 10,000	(3) 5,000 (2) 10,000 (1) 15,000	(3) 5,000 (2) 10,000 (1) 20,000	(2) 5,000 (1) 10,000	(1) 5,000	(1) 5,000

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Industrial	No Limit	(8)21,000 (7)22,500 (6)24,000 (5)25,500 (4)27,000 (3)28,500 (2)30,000 (1) No Limit	(2) 7,500 (1)10,000	(3)10,000 (2)15,000 (1)20,000	(3)10,000 (2)15,000 (1)20,000	(2) 7,500 (1)10,000	(1) 6,500	(1) 6,500
	See section 404-(d)							
Hazardous	Areas cannot be established due to various types of hazardous uses. Hazardous locations must be protected in accordance with good practice as recommended in Section 1504. See section 404-(d)							

*The limiting areas of this section for business, storage and industrial occupancies may be increased by 50 per cent when the building has frontage on two streets and by 100 percent when it has frontage on three or more streets. The same allowances may be made when the building is not located on a street line, but is directly accessible to fire apparatus on two or more sides.

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(b) Area Increase for One-Hour Fire Resistance

Where the interior of a building, including roof, floors over all usable spaces, and their supports, also walls and partitions, is provided with 1-hour fire protection that is not required by this code, the area limit specified in Sec. 404 and Table 404 may be increased by 33 $\frac{1}{3}$ per cent if the building is of ordinary or wood frame or unprotected metal construction and by 50 per cent if the building is of non-combustible construction.

(c) Area Increase for Tobacco Warehouses

Outside the fire limits the area between fire walls of one story tobacco storage and sales warehouses of non-combustible, ordinary, frame and unprotected metal construction may be increased as per the following table when separated on all sides by the following distances from the lot line or an existing building on the same lot and further provided the building is located at least one hundred feet from any fire district.

Distance	Area
75 Feet.....	25,000 Square Feet
100 Feet.....	100,000 Square Feet

All property in the required distance must be owned or controlled by the owner of the proposed building or in the form of established streets or alleys.

(d) Area Increase for Buildings Remotely Located

Outside the congested areas of the city, when a hazardous condition is not created thereby, the area of a one-story building used for business, storage or industrial occupancy, may be increased in excess of the areas fixed by this section in the discretion of the Commissioner of Insurance provided the following conditions are met:

1. Proper safeguards must be taken in connection with hazardous materials and processes (see Section 1504).
2. The building must be equipped with approved automatic sprinklers throughout.
3. The distance of travel to an exit or protected exitway passage from any part of the building cannot exceed that specified in Article VI. In such buildings, sufficient exitways to accommodate all the occupants shall lead to the outside of the building on each of two sides or more.
4. Curtain boards or draft stops must be installed as required by enforcing authority.
5. Building must be surrounded on all sides by streets or public places of width not less than specified in the following table.

WIDTH OF SEPARATION

<i>Type of Building</i>	<i>Minimum Width of Separation</i>
Fireproof Construction	50 feet
Semi-Fireproof Construction	60 feet
Non-Combustible Construction	90 feet
Heavy Timber Construction	90 feet
Ordinary Construction	100 feet

SECTION 405. STREET ENCROACHMENTS.

1. **General.** Except as otherwise provided in this section, no part of a building hereafter erected or of an enlargement of a building heretofore erected shall project beyond a street line or a building line.

2. **Projections removable.** A part of a building permitted by subsection 4 of this section to project beyond a street line or building line shall be so constructed that its removal may be made without causing the building to become structurally unsafe.

3. **Structural support.** No part of a building hereafter erected or of an enlargement of a building heretofore erected, that is necessary for structural safety, shall project beyond a street line or building line, but this shall not be deemed to prohibit the projection beyond the street line or beyond the building line within the street line, to the extent of not more than 12 inches, of the footings of street walls; provided such projecting parts of footings are not less than 8 feet below curb level.

4. **Permissible projections.** Under the conditions prescribed in this section and within the limitations specified herein, the following projections shall be permissible, it being understood that when a building line has not been established the street line shall control.

(a). The main cornice, meaning thereby a moulded projection at or near the top of a wall that faces on a street, may project beyond the building line not more than 3 feet; provided such main cornice is not less than 12 feet above curb level at all points.

(b). Cornices of show windows and porches, including metal awning covers, may project beyond the building line not more than 15 inches.

(c). Mouldings, belt courses, lintels, sills, architraves, pediments and similar projections of a decorative character, may extend beyond the building line not more than 4 inches when they are less than 10 feet above curb level, and not more than 10 inches when they are 10 feet or more above curb level.

(d). Columns, pilasters and other similar ornamental projections, including their mouldings and bases, erected for esthetic

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reasons, may project beyond the building line not more than 12 inches.

(e). Rustications and quoins may project beyond the building line not more than 4 inches.

(f). Base courses may project beyond the building line not more than $1\frac{1}{4}$ per cent of the width of the street but not more than 10 inches in any case; provided they do not extend more than 5 feet above curb level.

(g). No door shall be hung hereafter so as to project, when fully open, more than 12 inches beyond the building line.

(h). Marquises at entrances to buildings may extend beyond the street line and across the sidewalk to the curb line; provided they are not less than 10 feet above the curb level at all points, and, within the fire limits, are constructed of iron and glass or other noncombustible materials. They shall be securely supported from the building, and shall be properly drained.

(i). Drop awnings, attached to buildings, may extend beyond the street line but not nearer than 18 inches to the curb line; provided that, when let down to their full extent, they are not less than 8 feet above the sidewalk at all points.

(j). Fire escapes and balconies to fire towers or other required exits, constructed of steel or other noncombustible material, may project beyond the building line not more than 6 feet; but no part of such fire escapes or balconies shall be less than 12 feet above the sidewalk; provided that nothing in this section shall prevent the use, in connection with permissible fire escapes, of movable stairs to the sidewalk, so arranged that they are more than 12 feet above the sidewalk when not in actual use.

(k). Areas may project beyond the building line not more than 4 feet; provided that every such area shall be covered over at the street level by an approved grating of metal or other noncombustible material.

(l). Vaults, entirely below the sidewalk level, may extend beyond the street line but not beyond the curb line; provided that every such vault shall be roofed over at the street level by approved masonry, reinforced concrete or steel beams with masonry arches.

(m). Openings in the roofs of vaults under street surfaces shall be provided with substantial covers of noncombustible materials, flush with the top surface and constructed to prevent persons from slipping thereon. Covers shall be maintained normally closed, and when open for use shall be fully guarded to prevent accidents.

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(n). Glass used in vault lights shall not exceed 16 square inches for one light and shall be of such design and shape as will meet the approval of the city building inspector.

(o). Exterior hose connections for fire extinguishing equipments, and fresh air inlets, hereafter installed, shall be set inside the building line; or in recesses in the street walls when such walls are on the building line; or they may project not more than 12 inches beyond the building line through the street wall at least 2 feet above the street level; or they may be placed in the angle made by the street wall with a pilaster or other permissible projection outside the building line.

5. **Limitation.** Nothing in this section shall be deemed to authorize a projection beyond the street line or building line that is prohibited by the zoning ordinance or by other law or ordinance.

6. **Permits revocable.** Permission, expressed or implied in the provisions of this section, to construct a building so as to project beyond the street line or building line is revocable by the municipality at will.

7. **Alterations.** No change or enlargement shall be made to a part of a building projecting beyond the street line or building line, except in conformity with the provisions of this code for new construction.

8. **Existing encroachments.** Heretofore erected parts of buildings which project beyond the street line or building line may be maintained as constructed until their removal is directed by the municipality.

**ARTICLE V
LIGHT AND VENTILATION**

SECTION 500. GENERAL

1. **New buildings.** For the purpose of providing adequate light and ventilation, every building hereafter erected, shall be constructed, arranged and equipped to conform to the provisions of this article.

2. **Alterations**

(a) No building shall hereafter be altered nor rearranged so as to reduce the size of a room or the amount of window space to less than that required for buildings hereafter erected, or so as to create an additional room, unless such additional room is made to conform to the requirements for rooms in buildings hereafter erected, except that such rooms may be of the same height as existing rooms in the same story.

(b). No building shall hereafter be enlarged, nor shall the lot on which it is located be diminished so that the dimensions of a required court shall be less than prescribed for buildings hereafter erected.

3. **Limitation.** Nothing in this article shall be construed to modify the provisions of any other ordinance, or of any rule authorized by law or ordinance, regulating yards, courts or other open spaces; but whenever the provisions of this article require greater yards, courts, or open spaces than prescribed in such ordinance or rule the provisions of this article shall control.

4. **Streets.** For purposes of this article, the term "street" shall be deemed to include railroad rights-of-way, parks, or waterways, 20 feet or more in width.

SECTION 501. ROOMS.

1. **Habitable rooms.**

(a). Every habitable room shall be provided with natural light and ventilation by one or more windows, opening directly on a street or on a court conforming to section 506.

(b). Such rooms shall be not less than 7 feet wide in any part, and shall contain not less than 70 square feet of gross floor area. Such rooms shall have a clear height of not less than 7 feet 6 inches for at least 60 square feet of floor area.

(c). When kitchens serving dwelling units are completely enclosed, the gross floor area shall be not less than 60 square feet and not less than 90 square feet when dining space is in-

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cluded, except that in dwellings having no bedrooms the gross area of the kitchen shall be not less than 50 square feet. Kitchens not completely enclosed shall conform to the requirements for alcoves unless separately lighted and ventilated as required for habitable rooms.

2. Other rooms.

(a). Every room, other than a habitable room, used or occupied by persons, except storage rooms with infrequent occupancy, shall be provided with one or more windows or ventilating skylights opening directly on a street or on a court conforming to the requirements of this article; or such rooms shall be provided with an approved means of mechanical ventilation as prescribed in this article.

(b). In mezzanine spaces, which are open to and form a part of another room, the area of such mezzanine space shall be added to the floor area of the room in which it is located in computing the window area required for both spaces.

3. Public buildings. Every room used as an auditorium or for public assembly, and every other room, except a habitable room, that is not provided with windows opening directly on a street or on a court as prescribed in this section for business and workrooms, shall be provided with an approved system of mechanical ventilation as prescribed in this article, unless the space within such rooms exceeds 100 cubic feet for each occupant and windows having an aggregate area of not less than 10 per cent of the floor surface, one-half of which is openable, and opening on a street or court, are provided on at least 2 sides of the room.

4. Rooms in institutional buildings. In institutional buildings every room shall be provided with natural light by one or more windows opening on a street or on a court conforming to the requirements of this article, and with air by windows as required for habitable rooms or by an approved system of mechanical ventilation as prescribed in this article; provided that in jails and other detention buildings the opening on such street or court of the windows of cells or similar rooms may be indirect.

5. Bathrooms and toilet compartments. Every bathroom and every room containing one or more waterclosets or urinals, shall be provided with ventilation by one or more windows opening on a street or on a court conforming to the requirements of this article; or on a vent shaft which extends to and through the roof or into a court conforming to the requirements of this article; or by a separate duct of noncombustible and corrosion resistant material, not less than 72 square inches in cross-section, extending independently of any duct used for other purposes to and above the roof; or by a ventilating skylight; or by an approved means of mechanical ventilation as prescribed in this article.

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6. **Service pantries.** Service pantries except in dwellings and in apartments, shall be ventilated as prescribed in this section for bathrooms.

7. **Alcoves.** Any alcove opening off a habitable room, unless separately lighted and ventilated, shall be included as part of that room in computing the amount of window area required. The alcove shall have an unobstructed opening between it and the main room of at least 80 per cent of the wall area of the common wall, measured on the alcove side, unless it is separately lighted and ventilated as prescribed for habitable rooms.

8. **Stairways and corridors.**

(a). Every stairway, public hall or corridor in multifamily houses and in institutional buildings shall be ventilated either by one or more windows opening directly on a street or on a court conforming to the requirements of this article or ventilated by mechanical means approved by the building official or provided with natural ventilation to the outer air by means of a system of vent flues not less than 12 by 12 inches in size approved by the building official. All public halls and vestibules mechanically ventilated shall be equipped for artificial lighting and shall be kept properly lighted at all times.

(b). If windows are used to provide such light and ventilation, there shall be at least one window or ventilating skylight for every 20 feet of length or fraction thereof, unless a window is placed at the end of such hall or corridor so that it will adequately light the public hall or corridor for its entire length.

(c). Every recess or return, the depth or length of which exceeds twice the width of the hall or corridor, that is shut off from any other part by a door or doors, shall be deemed a separate hall or corridor within the meaning of this section.

9. **Rooms having special hazards.** Unless otherwise provided for by law or duly authorized rules, rooms in which, by reason of use or occupancy, dust, fumes, gases, vapors or other noxious or deleterious impurities tending to injure the health of occupants or to create a fire hazard, exist or develop, shall be provided with an approved system of ventilation to remove effectually such impurities during occupancy.

10. **Rooms below grade.** Every room, other than a habitable room, the ceiling of which is below grade or is less than 4 feet above grade and which is frequented by the public or in which 5 or more persons are regularly employed or congregate, shall, unless provided with windows as required for habitable rooms, be provided with approved means of mechanical ventilation as prescribed in this article.

11. Access to rooms and waterclosets.

(a). In multifamily houses hereafter erected or altered access shall be had to living rooms, kitchens and bedrooms without passing through a bedroom.

(b). Access without passing through a bedroom shall also be provided to at least one water closet, unless every bedroom has direct connection with a water closet or a bathroom having water closet accommodation.

SECTION 502. WINDOWS.

1. **Glass area.** The aggregate glass area of windows required by this article shall be not less than 1/10 of the floor area of the room served by them; provided that in habitable rooms such glass area shall be not less than 10 square feet, and in bathrooms it shall be not less than 3 square feet.

2. **Openings.** Windows or other openings required for ventilation shall have an aggregate openable area of at least 50 percent of the glass area required for lighting.

SECTION 503. VENT SHAFTS.

1. **Size.** Vent shafts required by this article, shall have a cross-sectional area of not less than 1/5 of a square foot for every foot of height of shaft, but not less than 9 square feet in any case. No such shaft shall be less than 2 feet in its least dimension.

2. **Skylights.** Unless open to the outer air at the top for its full area, such shaft shall be covered by a skylight glazed with plain glass not to exceed 1/8 inch in thickness and protected with a wire screen as specified in section 923-4 and having a net area of fixed louvre openings equal to the maximum required shaft area.

3. Air Intakes.

(a). Such shafts shall be connected with a street, alley or court conforming to the requirements of this article by a horizontal intake at a point below the lowest window opening on such shaft.

(b). Such intake shall have a minimum unobstructed cross-sectional area of not less than 3 square feet with a minimum dimension of 12 inches.

(c). The openings to the intake shall be not less than one foot above the bottom of the shaft and the street surface or bottom of court, at the respective ends of the duct or intake and shall be protected by substantial screens of corrosion resistant material having a mesh not larger than 3/4 inch.

(d). Such intake shall be constructed of noncombustible, corrosion resistant material.

SECTION 504. VENTILATING SKYLIGHTS.

Skylights installed to meet the requirements of this article shall be glazed with plain glass not to exceed $\frac{1}{8}$ inch in thickness and shall have glass area not less than required for the windows they replace and protected with wire screens as specified in section 923-4. They shall be equipped with movable sashes or louvres of an aggregate net area not less than required for openable parts in the windows they replace, or with approved ventilation of equal efficiency.

SECTION 505. MECHANICAL VENTILATION.

When mechanical ventilation is required, or is permitted as an alternative, the system shall be designed and constructed in accordance with generally accepted good practice, to provide the necessary changes of air. Such systems shall be capable of supplying outside air at a rate of not less than 10 cubic feet per minute per person, based on number of occupants determined in accordance with section 602.

SECTION 506. COURTS.

1. Width.

(a). Every court or yard if light and ventilation are dependent on such, required by this article to serve habitable rooms shall have a width, at any given level, of not less than $\frac{1}{3}$ of the height of such court, but not less than 6 feet.

(b). Every other required court shall have a width at any given level, of not less than $\frac{1}{4}$ of the height of such court, but not less than 6 feet.

2. Area. The cross-sectional area of a required court shall be not less than $1\frac{1}{2}$ times the square of its required least dimension.

3. Street Widths. For the purpose of this article a street shall be deemed a court. In case such street is of less width than required for a court, the building or that part dependent thereon shall be set back from such street sufficiently to provide the required width, considering the street as part of the court.

4. Intakes. Every court of less than 300 square feet area serving one or more habitable rooms, that does not open for its full height on one or more sides on a street, alley or yard shall be connected at or near the bottom with a street, alley or yard by a horizontal intake or passage. Such intake or passage shall be constructed with walls, floors and ceilings having a fire resistance rating of not less than one hour, and shall have a cross-sectional area of not less than 10 square feet.

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5. **Unobstructed.** Every court shall remain unobstructed for its required width and full height, except that ordinary window sills or belt courses, projecting not more than 4 inches from a wall, and drop awnings shall not be deemed obstructions. But this shall not prohibit in the open spaces at the ground level, in the case of dwellings only, permissible garages.

6. **Drainage.** The bottom of every court shall be properly graded and drained, and when required by the building official in the interest of public health, shall be paved with concrete or other suitable material and connected with a public sewer.

7. **Accessibility.** Every court that is not otherwise accessible at the bottom, shall be made accessible by a door or other means to enable it to be properly cleaned.