

BUILDING CODE—ORDINANCE NO. 104 (Continued)



VISIT TO ZOO

"I must tell you about my visit to the zoo," said Billie Brownie to Willy Witch.

"Then, too, she liked that name because she said it was the kind of a name which would perhaps tell people that she meant an animal creature at all, but some one who loved fun and jokes."

"And she wanted people to know that she liked children and animals, too, and wouldn't hurt anyone—ever."

"Yes, Billie Brownie," said Willy Witch, "I want to hear about your trip."

"I saw so many creatures," said Billie Brownie, "that it is hard to know where to begin telling you about them all, but I'll try."

"There were some lovely birds," she began. "Yes, there were beautiful birds."

"You should have seen the gorgeous Birds of Paradise, but what funny sounds did they make!"

"There were magnificent parrots and parakeets, and some with short tails."



"Nice New Dingo Dog."

ders and necks which looked as though they were wild and precious jewels, so long as the birds and animals had been brought many, many miles and how they had traveled, by camel, by horseback, by motor cars, trains and boats."

"Oh, yes, some of those birds and animals have traveled. They have come from faroff places, and what strange and curious and other customs and ways!"

"I saw my old friend the Cassowary. He took that story you told me so well of his grandfather, or his father, I've forgotten which. I didn't stop to ask him, who swallowed a door knob and a baseball and felt just as well as ever."

"I had so much to do and see that I let him tell the story as quickly as he could, for I wanted to hurry on."

"Sometimes, Willy Witch, I like to take hours and hours looking at a zoo animal or a few animals. They like to take a hurried look at a good many of them—just to say a polite good-bay to them all."

"The way I like to do best, of course, is to stop for a chat with one or two of them for a long time, but now and again I want to have a glimpse of as many as I can."

"I saw the Kangaroo from Australia and was told that the Opposum is about our only animal that is like so many of the Australian animals, who carry their babies in their pouches."

"As I was there a great many nice kangaroos and wallabies, two koalas and a wombat, and a nice new Dingo dog."

"That old Dingo dog is a fine, friendly animal. But the keeper said to some one that Dingo was in a forest now, but that he was tame so long as he was kept among people."

"He had been taught as a puppy, and so was tame and had never had a chance to learn the wild ways of the Dingo dogs, for the Dingo dogs are wild dogs from Australia."

"The Dingo dog was a dear, too. I think, Willy Witch, that I am quite fond of Dingo dogs."

"You seem to be," said Willy Witch, "such a handsome fellow who has that lovely dog look which is always attractive to me."

"Oh, the keeper said all the new animals and cats so much on the trip to the zoo. They had not been ill, no, but they had eaten and eaten."

"And there was a list of some of the things the many new animals had eaten."

"Apples and hay and bananas and raisins and crackers and quantities of other goodies had been eaten by them—some, in such quantity."

"Well, all the new animals and all the old animals looked very well, and I can tell you, Willy Witch, the more I see of animals the more wonderful I think they are!"

"I agree with you," said Willy Witch, "and I am glad to hear that you had a good time on your trip to the zoo."

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Section 5.—SOIL PRESSURE.

(a) Soil pressure may be figured at any reasonable value for the soil in question, but shall not exceed six thousand (6,000) pounds per square foot.

Section 6.—THICKNESS OF MASONRY WALLS.

(a) Bearing walls shall be proportioned according to following table: (1) Bearing walls for one (1) and two (2) story frame residences may be eight (8) inches thick.

Table with 5 columns: Height, First, Second, Third, Fourth, Fifth. Rows show wall thickness requirements for different heights.

(b) Walls shall be faced with minimum pier of solid masonry, with four (4) inch projection from the wall thickness in length, at least every thirty-six (36) inches.

(c) Wall footings shall be at least twelve (12) inches wider than the walls directly supported thereon and shall not be less than eight (8) inches deep.

(d) Light (8) inch walls shall not have a clear height of more than thirteen (13) feet-twelve (12) inch walls not more than sixteen (16) feet—sixteen (16) inch walls not more than eighteen (18) feet—and twenty (20) inch walls not more than twenty (20) feet.

(e) Wall footings shall be at least twelve (12) inches wider than the walls directly supported thereon and shall not be less than eight (8) inches deep.

Section 7.—LIFTING TO THE DEAD LEVEL TO BE CARRIED, BUILDINGS SHALL BE DESIGNED FOR NOT LESS THAN THE FOLLOWING LIVE LOADS PER SQUARE FOOT:

Table with 2 columns: Residences, Public Buildings, Churches, etc. Lists live load requirements for various building types.

Section 8.—RESIDENCE CONSTRUCTION.

(a) Wood posts shall be set at eight (8) inch x eight (8) inch solid-timber. Wood Posts shall be set at least eight (8) inches off, or above, basement floor.

(b) First floor joists, if of wood, shall not be less than two (2) inches x eight (8) inches in depth, including corrugated (14) feet spans and two (2) inches x twelve (12) inches in depth, including twenty-four (24) feet spans.

(c) Roof rafters shall be spaced at not more than sixteen (16) inches center to center, except that for joist resting on a minimum concrete, or brick, pier twelve (12) inches x twelve (12) inches x twenty-four (24) inches deep.

(d) No floor girder or beam used to carry first floor construction shall be less than six (6) inches x eight (8) inches, if of wood.

(e) First floor joists, if of wood, shall not be less than two (2) inches x eight (8) inches in depth, including corrugated (14) feet spans and two (2) inches x twelve (12) inches in depth, including twenty-four (24) feet spans.

(f) Roof rafters shall be spaced at not more than sixteen (16) inches center to center, except that for joist resting on a minimum concrete, or brick, pier twelve (12) inches x twelve (12) inches x twenty-four (24) inches deep.

(g) Roof rafters shall be spaced at not more than sixteen (16) inches center to center, except that for joist resting on a minimum concrete, or brick, pier twelve (12) inches x twelve (12) inches x twenty-four (24) inches deep.

(h) Roof rafters shall be spaced at not more than sixteen (16) inches center to center, except that for joist resting on a minimum concrete, or brick, pier twelve (12) inches x twelve (12) inches x twenty-four (24) inches deep.

(i) Roof rafters shall be spaced at not more than sixteen (16) inches center to center, except that for joist resting on a minimum concrete, or brick, pier twelve (12) inches x twelve (12) inches x twenty-four (24) inches deep.

(j) Roof rafters shall be spaced at not more than sixteen (16) inches center to center, except that for joist resting on a minimum concrete, or brick, pier twelve (12) inches x twelve (12) inches x twenty-four (24) inches deep.

(k) Roof rafters shall be spaced at not more than sixteen (16) inches center to center, except that for joist resting on a minimum concrete, or brick, pier twelve (12) inches x twelve (12) inches x twenty-four (24) inches deep.

(l) Roof rafters shall be spaced at not more than sixteen (16) inches center to center, except that for joist resting on a minimum concrete, or brick, pier twelve (12) inches x twelve (12) inches x twenty-four (24) inches deep.

(m) Roof rafters shall be spaced at not more than sixteen (16) inches center to center, except that for joist resting on a minimum concrete, or brick, pier twelve (12) inches x twelve (12) inches x twenty-four (24) inches deep.

(n) Roof rafters shall be spaced at not more than sixteen (16) inches center to center, except that for joist resting on a minimum concrete, or brick, pier twelve (12) inches x twelve (12) inches x twenty-four (24) inches deep.

(o) Roof rafters shall be spaced at not more than sixteen (16) inches center to center, except that for joist resting on a minimum concrete, or brick, pier twelve (12) inches x twelve (12) inches x twenty-four (24) inches deep.

(p) Roof rafters shall be spaced at not more than sixteen (16) inches center to center, except that for joist resting on a minimum concrete, or brick, pier twelve (12) inches x twelve (12) inches x twenty-four (24) inches deep.

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(t) Roof rafters shall be spaced at not more than sixteen (16) inches center to center, except that for joist resting on a minimum concrete, or brick, pier twelve (12) inches x twelve (12) inches x twenty-four (24) inches deep.

(u) Roof rafters shall be spaced at not more than sixteen (16) inches center to center, except that for joist resting on a minimum concrete, or brick, pier twelve (12) inches x twelve (12) inches x twenty-four (24) inches deep.

combustible wall or partition. (c) Gas ranges without less shall be governed by the requirements for coal ranges without legs.

ARTICLE XI—Hot Air and Steam Heating.

Section 1.—FURNACES AND BOILERS.

(a) The distance from the top of furnaces and heating boilers in residential buildings to the ceiling shall not be less than twenty-four (24) inches except that if such ceiling is protected by a metal shield the distance may be reduced to twelve (12) inches.

(b) The distance from the top of furnaces and heating boilers in residential buildings to the ceiling shall not be less than twenty-four (24) inches except that if such ceiling is protected by a metal shield the distance may be reduced to twelve (12) inches.

(c) The distance from the top of furnaces and heating boilers in residential buildings to the ceiling shall not be less than twenty-four (24) inches except that if such ceiling is protected by a metal shield the distance may be reduced to twelve (12) inches.

(d) The distance from the top of furnaces and heating boilers in residential buildings to the ceiling shall not be less than twenty-four (24) inches except that if such ceiling is protected by a metal shield the distance may be reduced to twelve (12) inches.

(e) The distance from the top of furnaces and heating boilers in residential buildings to the ceiling shall not be less than twenty-four (24) inches except that if such ceiling is protected by a metal shield the distance may be reduced to twelve (12) inches.

(f) The distance from the top of furnaces and heating boilers in residential buildings to the ceiling shall not be less than twenty-four (24) inches except that if such ceiling is protected by a metal shield the distance may be reduced to twelve (12) inches.

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(h) The distance from the top of furnaces and heating boilers in residential buildings to the ceiling shall not be less than twenty-four (24) inches except that if such ceiling is protected by a metal shield the distance may be reduced to twelve (12) inches.

(i) The distance from the top of furnaces and heating boilers in residential buildings to the ceiling shall not be less than twenty-four (24) inches except that if such ceiling is protected by a metal shield the distance may be reduced to twelve (12) inches.

(j) The distance from the top of furnaces and heating boilers in residential buildings to the ceiling shall not be less than twenty-four (24) inches except that if such ceiling is protected by a metal shield the distance may be reduced to twelve (12) inches.

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(s) The distance from the top of furnaces and heating boilers in residential buildings to the ceiling shall not be less than twenty-four (24) inches except that if such ceiling is protected by a metal shield the distance may be reduced to twelve (12) inches.

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(w) The distance from the top of furnaces and heating boilers in residential buildings to the ceiling shall not be less than twenty-four (24) inches except that if such ceiling is protected by a metal shield the distance may be reduced to twelve (12) inches.

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(aa) The distance from the top of furnaces and heating boilers in residential buildings to the ceiling shall not be less than twenty-four (24) inches except that if such ceiling is protected by a metal shield the distance may be reduced to twelve (12) inches.

(ab) The distance from the top of furnaces and heating boilers in residential buildings to the ceiling shall not be less than twenty-four (24) inches except that if such ceiling is protected by a metal shield the distance may be reduced to twelve (12) inches.

(ac) The distance from the top of furnaces and heating boilers in residential buildings to the ceiling shall not be less than twenty-four (24) inches except that if such ceiling is protected by a metal shield the distance may be reduced to twelve (12) inches.

(ad) The distance from the top of furnaces and heating boilers in residential buildings to the ceiling shall not be less than twenty-four (24) inches except that if such ceiling is protected by a metal shield the distance may be reduced to twelve (12) inches.

(ae) The distance from the top of furnaces and heating boilers in residential buildings to the ceiling shall not be less than twenty-four (24) inches except that if such ceiling is protected by a metal shield the distance may be reduced to twelve (12) inches.

ARTICLE XIV—Stairways and Exits.

Section 1.—STAIRWAYS.

(a) The construction of all stairways shall conform in general to the requirements of the class of building in which they are placed. Stairs shall be designed to carry at least ninety (90) pounds per square foot live load.

(b) In general, the width of the riser in inches plus twice the height of the tread in inches shall be less than twenty (20) inches. In no case shall the width of the tread in inches plus twice the height of the riser in inches be less than twenty-five (25) inches.

(c) No wipers shall be permitted on stairs in buildings of a public character. Where wipers are used the tread shall not be less than nine (9) inches wide at the nosing and the riser shall not be less than one (1) inch.

(d) No straight run shall be more than twelve (12) feet in height without a landing. Landings shall not be less than four (4) treads or three (3) risers in length in public buildings. In no case shall the width of the landing be less than the width of the stairway. In commercial or public buildings no doorway shall open directly onto a stairway, unless such stairway is provided with a top landing.

(e) The width of all stairways shall be proportioned on the basis of three (3) feet, no 10 inches for serving thirty-five (35) persons on the floor above, with an increase in width of six (6) inches for each additional ten (10) persons served. In any story the width of the stairway shall not be less than that in the story next above and no stairway shall be less than two (2) feet six (6) inches wide in the clear. The following table shall govern in general the number and width of stairways for the types of buildings classified:

Table with 4 columns: Factories, Offices, Hotels. Rows show requirements for different building types.

An outside stair or fire-escape may be considered as the equivalent of one inside stair, provided that such outside stair complies with the requirements of this section in respect to width, tread and riser, and an elevator shaft may be provided to reduce the number of stairs, provided its capacity is not less than that of the stairway, but no building shall have less than one (1) stairway from floor to floor.

(f) Open stairs shall not extend through more than three stories in any building, and shall have a clear width of not less than three (3) feet, no 24 inches on the open side. Stairways with enclosing walls or balustrades shall not be less than three (3) feet wide. Each such stairway shall be constructed of fire-proof material at least two (2) inches thick.

(g) All stairways in public buildings of more than three (3) stories in height shall be enclosed with at least twelve (12) inches of incombustible material.

(h) Where two (2) or more stairways are required in any building they shall be at least twenty (20) feet apart or otherwise separated by a fire-proof shaft.

(i) Every basement shall have at least one (1) stairway extending directly to a street, alley, or to the floor above, except such basements excepted as hereinafter provided. All basements, containing boilers or machinery requiring venting, shall have at least one stair to an outside exit.

(j) Whenever any basement is used for living rooms, manufacturing purposes, storehouses or places of assembly or resort, it shall have a stairway leading directly to a street, alley or open court with direct access to a street. Such stairway shall not be less than three (3) feet six (6) inches in height, and shall be increased in height according to the number of persons occupying such basement, in accordance with this section.

Section 2.—EXITS.

(a) Every building, including basement, of all buildings, regardless of class, occupancy or size, shall have at least two means of exit, except that two (2) story buildings not over two thousand (2000) square feet in floor area may have only one (1) exit. The two exits shall be in different parts of the building and one (1) story buildings not over four hundred (400) square feet in area may have only one exit.

(b) The aggregate width of exits required at grade shall be equal to the aggregate width of exits required on the floor above. Each exit shall be at least twenty (20) inches wide for every two hundred (200) persons or fraction thereof, occupying the floor above and shall be at least thirty (30) inches wide for every two hundred (200) persons or fraction thereof, occupying the floor below.

(c) All roofs shall have at least one means of exit either by stairway or by ladder. Such roof exits shall be at least twenty (20) inches wide and shall be at least two thousand (2000) square feet area. This shall not include residential roofs or pitched roofs with a slope of more than thirty (30) degrees.

(d) All hallways, passages and enclosed stairways shall be lighted by natural or artificial means at all times during which the building is occupied.

(e) Under no circumstances shall any stairway, fire-escape or exit passage be obstructed by any means whatever.

Section 3.—DOORS FOR STAIRS AND EXITS.

(a) All exit doors except one (1) and two (2) story buildings, shall swing outward. In all cases, regardless of size, the exit doors in schools, hospitals, theaters and other places of public assembly shall swing outward. Hallways and stairways shall have doors which swing outward. Horizontal exit doors where travel may be indeterminate may swing either way.

(b) Exit doors where practicable and except in residences, shall be at least forty (40) inches wide, and where less than this width there shall be one (1) door for every twenty-four (24) inches of required width of passage leading to such exit. Exit doors shall not be less than thirty (30) inches wide and shall be at least twenty-eight (28) inches wide, nor seventy-eight (78) inches high.

(c) All exit doors from any place of public assembly or work room shall be kept unlocked at all times when such building is occupied and shall be easily opened from the inside at all times without the use of a key.

Section 4.—FIRE ESCAPES.

(a) All buildings of Class 1 and 2 over two (2) stories in height shall be equipped with a standard fire-escape, in addition to the main stairways, extending from the 2nd story floor level to the roof. If the building has more than two (2) stories, such building shall exceed three hundred (300) there shall be at least two (2) such fire-escapes, and if the number of persons served six hundred (600) there shall be at least three (3) such fire-escapes, and if the number of persons served one thousand (1000) there shall be at least four (4) such fire-escapes. The number of fire-escapes required shall be as required by the building inspector.

(b) Fire-escapes shall be located when possible on a dead wall or on piers between windows. They must be easily accessible from the inside of the building on which they are placed. At each floor the platform shall extend to the outside of the building. There shall be one (1) door opening from the inside of the building to the fire-escape at each floor level. The door shall be of iron or steel construction and shall have platforms at every floor level of the building above and below the platform on which the fire-escape is located. There shall be a ladder or other leading from the topmost story to the roof. When not constructed over public property there shall be a fixed stair leading from the ground level to the roof, the approval of the Building Inspector, fire-escapes may project over public streets or alleys, but such projection shall in no case exceed four (4) feet. In such cases the lowest platform shall have a counter-balance and shall be provided with a catch to prevent the escape from falling.

(c) No fire-escape shall be placed in a court less than ten (10) feet wide and such court shall have a clear and unobstructed connection to a street or alley.

(d) All fire-escapes shall be of standard construction as approved by the State Fire Insurance Department and shall be kept painted and in first-class repair at all times.

ARTICLE XV—Theaters.

Section 1.—MAJOR THEATERS.

(a) The definition of, and requirements for, Major Theaters shall be as provided in the Ordinance of the City of Detroit, Michigan.

Section 2.—MINOR THEATERS.

(a) A Minor Theater is a building or part of a building, intended for use in the presentation of dramatic, musical, or other entertainment, in which the seating capacity is four (4) or less. There may be a platform without regard to its location.

(b) The construction of a minor theater may be of types one (1), two (2), three (3), four (4), or six (6).

(c) A Minor Theater shall not be located above the first floor of any building.

(d) All Minor Theaters shall have emergency exits, in addition to main entrance, opening into streets, alleys, or open ground, having a clear width of not less than five (5) feet. The aggregate width in feet of such exits shall be not less than one (1) foot to each twenty (20) persons to be accommodated therein. Exit doors shall not be less than three (3) feet wide and shall be at least twenty-eight (28) inches high. Exit doors shall be spaced not less than six (6) feet between any seat and aisle and no aisle shall be less than three (3) feet wide.

(e) All seats shall be securely fastened to the floor and shall not be more than six (6) feet between any seat and aisle and no aisle shall be less than three (3) feet wide.

(f) Minor Theaters shall be equipped with such a number of chemical fire extinguishers as shall be necessary in the judgment of the Chief of the Fire Department.

Every Minor Theater shall have a ventilating system capable of changing the air in the auditorium, if not less than once every seven and one-half (7 1/2) hours, and shall have such a system of heating and cooling as shall be necessary for the comfort of the audience.

Section 3.—MOTION PICTURE MACHINE BOOTHS.

(a) The entire equipment, electrical fixtures, lens and picture machine in any motion picture booth shall be enclosed in a room not less than six (6) feet x eight (8) feet in area.