

DEPARTMENT OF LICENSING AND REGULATORY AFFAIRS

DIRECTOR'S OFFICE CONSTRUCTION CODE

Filed with the Secretary of State on June 11, 2014

These rules take effect October 9, 2014

(By authority conferred on the director of the department of licensing and regulatory affairs by section 4 of 1972 PA 230, MCL 125.1504, and Executive Reorganization Order Nos. 2003-1, 2008-4 and 2011-4, MCL 445.2011, 445.2025, and 445.2030)

R 408.30401, R 408.30404, R 408.30409, R 408.30411, R 408.30412, R 408.30414, R 408.30415a, R 408.30418, R 408.30419, R 408.30420, R 408.30421, R 408.30427, R 408.30428, R 408.30429, R 408.30429a, R 408.30437, R 408.30442, R 408.30443, R 408.30446, R 408.30447, R 408.30449, R 408.30451c, R 408.30459 and R 408.30499 of the Michigan Administrative Code are amended and R 408.30403, R 408.30429b, R 408.30441, and R 408.30452 are added as follows:

PART 4. BUILDING CODE

R 408.30401 Applicable code.

Rule 401. The provisions of the international building code, 2012 edition, including appendices F, G, and H, except for sections 104.8, 109.2 to 109.6, 114.3, 415.8.2.2 to 415.8.2.9, 415.8.3 table 1608.2, 2902 to 2902.5, Table 2902.1, 3006.5, the definition of "agricultural building" in section 202, the definition of "recreational vehicle" in Appendix G, and, IECC-2012, IEBC-2012, IMC-2012, IPC-2012, IPSDC-2012, NFPA 70-2011, listed in chapter 35, govern the construction, alteration, relocation, demolition, use, and occupancy of buildings and structures, and, with exceptions noted, the international building code is adopted by reference in these rules. All references to the International Building Code, International Residential Code, International Energy Conservation Code, National Electrical Code, International Existing Building Code, International Mechanical Code, and International Plumbing Code mean the Michigan Building Code, Michigan Residential Code, Michigan Uniform Energy Code, Michigan Electrical Code, Michigan Rehabilitation Code for Existing Buildings, Michigan Mechanical Code, and Michigan Plumbing Code respectively. The code is available for inspection at the Okemos office of the Michigan Department of Licensing and Regulatory Affairs, Bureau of Construction Codes. The code may be purchased from the International Code Council, 500 New Jersey Avenue, N.W., 6th Floor, Washington, D.C. 20001, or from the Michigan Department of Licensing and Regulatory Affairs, Bureau of Construction Codes, 2501 Woodlake Circle, Okemos, Michigan 48864, at a cost as of the time of adoption of these amendatory rules of \$120.00.

R 408.30403 Residential group R-3.

Rule 403. Sections 310.5 and 310.5.1 are amended and 903.2.8.3 is added to the code to read as follows:

310.5. Residential group R-3. Residential occupancies where the occupants are primarily

permanent in nature and not classified as group R-1, R-2, R-4, or I, including any of the following:

- (a) Adult foster care family homes or adult foster care small group homes licensed per the adult foster care facility licensing act, 1979 PA 218, MCL 400.701 to 400.737, that provide accommodations for 6 or fewer persons receiving care.
- (b) Buildings that do not contain more than 2 dwelling units.
- (c) Boarding houses (nontransient) with 16 or fewer occupants.
- (d) Boarding houses (transient) with 10 or fewer occupants.
- (e) Congregate living facilities (nontransient) with 16 or fewer occupants.
- (f) Congregate living facilities (transient) with 10 or fewer occupants.
- (g) Foster family homes licensed under the child care organizations act, 1973 PA 116, MCL 722.112 to 722.127a, that provide care for not more than 4 minor children.
- (h) Foster care family group homes licensed under the child care organizations act, 1973 PA 116, MCL 722.112 to 722.127a, that provide care for more than 4 but fewer than 7 minor children.

310.5.1. Care facilities within a dwelling. Care facilities that are located within a single-family dwelling may comply with the Michigan residential code if 1 of the following conditions is met:

- (a) Adult foster care family homes or adult foster care small group homes for 6 or fewer persons receiving care that are within a single-family dwelling and licensed in accordance with the adult foster care facility licensing act, 1979 PA 218, MCL 400.701 to 400.737.
- (b) Family child care homes licensed under the child care organizations act, 1973 PA 116, MCL 722.112 to 722.127a, that provide care for fewer than 7 minor children.
- (c) Group child care homes licensed under the child care organizations act, 1973 PA 116, MCL 722.112 to 722.127a, that provide care for more than 6 but not more than 12 minor children.
- (d) Foster family homes licensed per the child care organizations act, 1973 PA 116, MCL 722.112 to 722.127a, that provide care for not more than 4 minor children.
- (e) Foster care family group homes licensed per the child care organizations act, 1973 PA 116, MCL 722.112 to 722.127a, that provide care for more than 4 but fewer than 7 minor children.

903.2.8.3. Child care organizations. An automatic sprinkler system installed in accordance with section 903.3.1.3 shall be permitted in child care organizations that are within a single-family dwelling and licensed in accordance with the child care organizations act, 1973 PA 116, MCL 722.112 to 722.127a, as follows:

- (a) Foster family homes licensed under the child care organizations act, 1973 PA 116, MCL 722.112 to 722.127a, that provide care for more than 4 but fewer than 7 minor children.
- (b) Foster care family group homes licensed under the child care organizations act, 1973 PA 116, MCL 722.112 to 722.127a, that provide care for more than 4 but fewer than 7 minor children.
- (c) Family child care homes licensed under the child care organizations act, 1973 PA 116, MCL 722.112 to 722.127a, that provide care for fewer than 7 minor children.
- (d) Group child care homes licensed under the child care organizations act, 1973 PA 116, MCL 722.112 to 722.127a, that provide care for more than 6 but not more than 12 minor children.

R 408.30404 Duties and powers of building official.

Rule 404. Section 104.9 of the code is amended to read as follows:

104.9. Approved materials and equipment. Materials, equipment, and devices shall be constructed or installed in accordance with approvals granted under the act or by the building official. The building official shall review reports prepared by recognized evaluation services and determine if the intent of the code is met.

R 408.30409 Permit.

Rule 409. Sections 105.1.1, 105.1.2, and 105.2 of the code are amended to read as follows:

105.1.1. Annual permit. In place of an individual permit for each alteration to an already approved electrical, gas, mechanical, or plumbing installation, the enforcing agency is authorized to issue an annual permit upon application to any person, firm, or corporation. The applicant shall be licensed in accordance with the requirements of 1956 PA 217, MCL 338.881 to 338.892, 1984 PA 192, MCL 338.971 to 338.988, or 2002 PA 733, MCL 338.3511 to 338.3569.

105.1.2. Annual permit records. The person to whom an annual permit is issued shall keep a detailed record of alterations made under an annual permit. Access to the records shall be provided at all times and the records shall be filed with the enforcing agency.

105.2. Work exempt from permit. Exemptions from permit requirements of the code shall not be deemed to grant authorization for any work to be done in any manner in violation of the provisions of the code or any other laws or ordinances of this jurisdiction. Permits shall not be required for any of the following:

- (a) Building permits shall not be required for any of the following:
 - (i) One-story detached accessory structures used as tool and storage sheds, playhouses and similar uses, provided the floor area does not exceed 120 square feet (11).
 - (ii) A fence that is not more than 7 feet (2 134 mm) high.
 - (iii) Oil derricks.
 - (iv) A retaining wall that is not more than 4 feet (1219 mm) in height measured from the bottom of the footing to the top of the wall, unless supporting a surcharge or impounding class I, II or III-A liquids.
 - (v) A water tank supported directly on grade if the capacity is not greater than 5,000 gallons (18 925 L) and the ratio of height to diameter or width is not greater than 2 to 1.
 - (vi) A sidewalk and driveway not more than 30 inches (762 mm) above adjacent grade and not over any basement or story below and are not part of an accessible route.
 - (vii) Painting, papering, tiling, carpeting, cabinets, counter tops, and similar finish work.
 - (viii) Temporary motion picture, television, and theater stage sets and scenery.
 - (ix) Prefabricated swimming pools accessory to a group R-3 occupancy, as applicable in section 101.2, that are less than 24 inches (610 mm) deep, are not greater than 5,000 gallons (18 925 L), and are installed entirely above ground.
 - (x) Shade cloth structures constructed for nursery or agricultural purposes, not including service systems.
 - (xi) Swings and other playground equipment accessory to detached 1- and 2-family dwellings.
 - (xii) Window awnings in group R-3 and U occupancies, supported by an exterior wall that do not project more than 54 inches (1 372 mm) from the exterior wall and do not require additional support, as applicable in section 101.2 and group U occupancies.

(xiii) Nonfixed and movable fixtures, cases, racks, counters, and partitions not over 5 feet 9 inches (1 753 mm) in height.

(b) Electrical permits shall not be required, as in accordance with the Michigan electrical code, R 408.30801 to R 408.30880, for any of the following:

(i) Repairs and maintenance: Minor repair work, including the replacement of lamps or the connection of approved portable electrical equipment to approved permanently installed receptacles.

(ii) Radio and television transmitting stations: The provisions of the code do not apply to electrical equipment used for radio and television transmissions, but do apply to equipment and wiring for power supply and to the installation of towers and antennas.

(iii) Temporary testing systems: A permit is not required for the installation of any temporary system required for the testing or servicing of electrical equipment or apparatus.

(c) Mechanical permits shall not be required for any of the following:

(i) A portable gas heating appliance that has inputs of less than 30,000 Btu's per hour. (ii) Portable ventilation appliances and equipment.

(iii) Portable cooling unit.

(iv) Steam, hot water, or chilled water piping within any heating or cooling equipment or appliances regulated by this code.

(v) Replacement of any minor part that does not alter the approval of equipment or an appliance or make such equipment or appliance unsafe.

(vi) A portable evaporative cooler.

(vii) Self-contained refrigeration systems that contain 10 pounds (4.5 kg) or less of refrigerant, or that are actuated by motors of 1 horsepower (0.75 kW) or less.

(viii) Portable fuel cell appliances that are not connected to a fixed piping system and are not interconnected to a power grid.

(ix) An oil burner that does not require connection to a flue, such as an oil stove and a heater equipped with a wick.

(x) A portable gas burner that has inputs of less than 30,000 Btu's per hour.

(xi) When changing or relocating a gas meter or regulator, a permit is not required when installing gas piping which shall be limited to 10 feet (3 005 mm) in length and not more than 6 fittings.

(xii) When installing geothermal vertical closed loops under the supervision of a mechanical contractor licensed in HVAC as long as the company meets both the following:

(A) Has obtained a certificate of registration as a well drilling contractor pursuant to part 127 of the public health code.

(B) Has installed the geothermal vertical closed loops in accordance with the department of environmental quality best practices regarding geothermal heat pump closed loops.

Exemption from the permit requirements of this code shall not be deemed to grant authorization for work to be done in violation of the provisions of this code or other laws or ordinances of this jurisdiction.

(d) Plumbing permits shall not be required for either of the following:

(i) The stopping of leaks in drains, water, soil, waste, or vent pipe. However, if any concealed trap, drainpipe, water, soil, waste, or vent pipe becomes defective and it becomes necessary to remove and replace the drain or pipe with new material, then the work is considered new work and a permit shall be obtained and inspection made as provided in the code.

(ii) The clearing of stoppages or the repairing of leaks in pipes, valves, or fixtures, and the removal and reinstallation of water closets, if the repairs do not involve or require the replacement or rearrangement of valves, pipes, or fixtures.

R 408.30411 Stop-work order.

Rule 411. Section 115.2 of the code is amended to read as follows:

115.2. Issuance. Notice shall be in accordance with the act. A person who is served with a stop work order, except for work that the person is directed to perform to remove a violation or unsafe condition is subject to the penalty provisions prescribed in the act.

R 408.30412 Certificate of use and occupancy.

Rule 412. Sections 111.1 and 111.2 of the code are amended to read as follows:

111.1. Use and occupancy. A building or structure shall not be used or occupied, and a change in the existing occupancy classification of a building or structure or portion thereof shall not be made until a certificate of occupancy has been issued in accordance with the act. Exception: Certificates of occupancy are not required for work exempt from permits under section 105.2.

111.2. Certificate issued. After the building official inspects the building or structure and finds no violations of the provisions of this code or other laws that are enforced by the department and all permit and plan review fees are paid, the building official shall issue a certificate of occupancy that contains all of the following:

- (a) The building permit number.
- (b) The address of the structure.
- (c) A description of that portion of the structure for which the certificate is issued.
- (d) A statement that the described portion of the structure has been inspected for compliance with the requirements of this code for the occupancy and division of occupancy and the use for which the proposed occupancy is classified.
- (e) The name and signature of the building official or designee, registered in accordance with the building officials and inspectors registration act, 1986 PA 54, MCL 338.2301 to 338.2313.
- (f) The edition of the code under which the permit was issued.
- (g) The use and occupancy, in accordance with the provisions of chapter 3. (h) The type of construction as defined in chapter 6.
- (i) The design occupant load.
- (j) If an automatic sprinkler system is provided, whether the sprinkler system is required.
- (k) Any special stipulations and conditions of the building permit.

R 408.30414 Board of appeals.

Rule 414. Sections 113.1 and 113.3 of the code are amended to read as follows:

113.1. Means of appeal. An interested person may appeal a decision of the enforcing agency to the board of appeals in accordance with the act. An application for appeal shall be based on a claim that the true intent of the code or the rules governing construction have been incorrectly interpreted, the provisions of the code do not apply, or an equal or better form of construction is proposed. The decision of a local board of appeals may be appealed to the construction code commission in accordance with the act and time frames.

Exception: Requests for barrier free design exception shall be in accordance with 1966 PA 1, MCL 125.1352 to 125.1356.

113.3. Qualifications. The board of appeals shall consist of members who are qualified in accordance with the act and are not employees of the governmental subdivision or the agency enforcing the code.

R 408.30415a Definitions.

Rule 415a. The definitions of act, agricultural or agricultural purposes, and source point are added and the definitions of building, building inspector, building official, high-rise building, registered design professional, and structure in section 202 of the code are amended to read as follows:

202. Definitions.

“Act” means 1972 PA 230, MCL 125.1501 to 125.1531 and known as the Stille-DeRossett-Hale single state construction code act.

“Agricultural or agricultural purposes” means of, or pertaining to, or connected with, or engaged in agriculture or tillage which is characterized by the act or business of cultivating or using land and soil for the production of crops for the use of animals or humans, and includes, but is not limited to, purposes related to agriculture, farming, dairying, pasturage, horticulture, floriculture, viticulture, and animal and poultry husbandry.

“Air-impermeable insulation” means an insulation having air permanence equal to or less than 0.02 L/s-m^2 at 75 Pa. pressure differential tested according to ASTM E 2178 or E 283.

“Attic, uninhabitable with limited storage” means uninhabitable attics with limited storage are those where the minimum clear height between joists and rafters is 42 inches or greater, 42 inches high by 24 inches in width, or greater, within the plane of the trusses, or where there are not two or more adjacent trusses with web configurations capable of accommodating an assumed rectangle.

“Attic, uninhabitable without storage” means uninhabitable attics without storage are those where the maximum clear height between joists and rafters is less than 42 inches, or where there are not two or more adjacent trusses with web configurations capable of accommodating an assumed rectangle 42 inches high by 24 inches in width or greater, within the plane of the trusses.

"Building" means a combination of materials, whether portable or fixed, forming a structure affording a facility or shelter for use or occupancy by persons, animals, or property. The term does not include a building incidental to the use for agricultural purposes of the land on which the building is located if it is not used in the business of retail trade. The term shall be construed as though followed by the words "or part or parts of the building and all equipment in the building" unless the context clearly requires a different meaning.

"Building inspector" means the person who is appointed and employed by a governmental subdivision, who is charged with the administration and enforcement of the state codes specified in R 408.30499, and who is registered in compliance with 1986 PA 54, MCL 338.2301 to 338.2313.

"Building official" means the person who is appointed and employed by a governmental subdivision, who is charged with the administration and enforcement of the state codes specified in R 408.30499, and who is registered in accordance with the requirements of 1986 PA 54, MCL 338.2301 to 338.2313.

“High-rise building” means a building with an occupied floor located more than 55 feet (1

6764 mm)

above the lowest level of fire department vehicle access.

"Registered design professional" means an individual who is licensed under, 1980 PA 299, MCL 339.101 to 339.2919.

"Structure" means that which is built or constructed, an edifice or building of any kind, or a piece of work artificially built up or composed of parts joined together in some definite manner.

Structure does not include a structure incident to the use for agricultural purposes of the land on which the structure is located and does not include works of heavy civil construction, including without limitation, any of the following:

- (a) A highway.
- (b) A bridge.
- (c) A dam.
- (d) A reservoir.
- (e) A lock.
- (f) A mine.
- (g) A harbor.
- (h) A dockside port facility.
- (i) An airport landing facility.
- (j) A facility for the generation, or transmission, or distribution of electricity.

Structure shall be construed as though followed by the words "or part or parts of the structure and all equipment in the structure," unless the context clearly indicates otherwise.

"Source point" is defined in 1972 PA 230, MCL 125.1504d.

R 408.30418 Maximum floor area allowances per occupant.

Rule 418. Table 1004.1.2 of the code is amended to read as follows:

Table 1004.1.2
MAXIMUM FLOOR AREA ALLOWANCES PER OCCUPANT

FUNCTION OF SPACE	FLOOR AREA IN SQ. FT. PER
Agricultural building	300 gross
Aircraft hangars	500 gross
Airport terminal	
Baggage claim	20 gross
Baggage handling	300 gross
Concourse	100 gross
Waiting areas	15 gross
Assembly	
Gaming floors (keno, slots, etc.)	11 gross
Exhibit Gallery and Museum	30 net
Assembly with fixed seats	See section 1004.7

Assembly without fixed seats Concentrated (chairs only-not fixed) Standing space Unconcentrated (tables and chairs)	7 net 5 net 15 net
Bowling centers, allow 5 persons for each lane including 15 feet of runway, and for additional areas	7 net
Business areas	100 gross
Courtrooms-other than fixed seating areas	40 net
Day care	35 net
Dormitories	50 gross
Educational Classroom area Shops and other vocational room areas Locker rooms	20 net 50 net 15 gross
Exercise rooms	50 gross
H-5 Fabrication and manufacturing areas	200 gross
Industrial areas	100 gross
Institutional areas Inpatient treatment areas Outpatient areas Sleeping areas	240 gross 100 gross 120 gross
Kitchens, commercial	200 gross
Library Reading rooms Stack area	50 net 100 gross
Mall buildings-covered and open	See Section 402.8.2
Locker rooms	50 gross
Mercantile Areas on other floors Basement and grade floor areas Storage, stock, shipping areas	60 gross 30 gross 300 gross
Parking garages	200 gross
Residential	200 gross
Skating rinks, swimming pools Rink and pool Decks	50 gross 15 gross
Stages and platforms	15 net
Accessory storage areas, mechanical equipment room	300 gross

Warehouses	500 gross
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For SI: 1 square foot = 0.0929 m²

R 408.30419 Toilet room requirements.

Rule 419. Sections 1210.1, 1210.5, and 1210.6 are amended to the code to read as follows:

1210.1. Required fixtures. The number and type of plumbing fixtures provided in any occupancy shall comply with the Michigan plumbing code.

1210.5. Baby changing stations. A building or structure that has baby changing stations in the women's restrooms shall have baby changing stations in the men's restrooms.

1210.6. Directional signage. Directional signage indicating the route to the public facilities shall be posted in accordance with section 3107 of the international building code. Signage shall be located in a corridor or aisle at the entrance to the facilities for customers and visitors.

R 408.30420 Ventilation.

Rule 420. Sections 1203.1, 1203.2 and 1607.1 are amended and 1203.2.2 and table 1203.2.2 are added to the code to read as follows:

1203.1. General. Buildings shall be provided with natural ventilation in accordance with section 1203.4 or with mechanical ventilation in accordance with the Michigan mechanical code.

1203.2. Attic spaces. Enclosed attics and enclosed rafter spaces formed where ceilings are applied directly to the underside of roof framing members shall have cross ventilation for each separate space by ventilation openings protected against the entrance of rain and snow. Blocking and bridging shall be arranged so as not to interfere with the movement of air. An airspace of not less than 1 inch (25 mm) shall be provided between the insulation and the roof sheathing. The net free ventilating area shall not be less than 1/150 of the area of the space ventilated.

Exceptions:

1. The net free cross-ventilation area may be reduced to 1/300 provided that not less than 50% and not more than 80% of the required ventilating area provided by ventilators located in the upper portion of the space to be ventilated at least 3 feet (914 mm) above eave or cornice vents with the balance of the required ventilation provided by eave or cornice vents.

2. The net free cross-ventilation area may be reduced to 1/300 where a Class I or II vapor retarder is installed on the warm-in-winter side of the ceiling.

3. Attic ventilation shall not be required when in climate zones 5A through 7, as defined in chapter 13, sufficient insulation is installed to maintain the monthly average temperature of the condensing surface above 45 degrees Fahrenheit (7 degrees Celsius). The condensing surface is defined as either the structural roof deck or the interior surface of an air-impermeable insulation applied in direct contact with the underside or interior of the structural roof deck. For calculation purposes, an interior temperature of 68 degrees Fahrenheit (20 degrees Celsius) is assumed. The exterior temperature is assumed to be the monthly average outside temperature, or when the conditions outlined in section 1203.2.2 are met.

1203.2.2 Unvented attic and unvented enclosed rafter assemblies. Unvented attic assemblies (spaces between the ceiling joists of the top story and the roof rafters) and unvented enclosed rafter assemblies (spaces between ceilings that are applied directly to the

underside of roof framing members [rafters] and the structural roof sheathing at the top of the roof framing members[rafters]) shall be permitted if all the following conditions are met:

- a. The unvented attic space is completely contained within the building thermal envelope.
- b. No interior Class I vapor retarders are installed on the ceiling side (attic floor) of the unvented attic assembly or on the ceiling side of the unvented enclosed rafter assembly.
- c. Where wood shingles or shakes are used, a minimum ¼-inch (6 mm) vented air space separates the shingles or shakes and the roofing underlayment above the structural sheathing.
- d. In climate zones 5A, 6A, and 7, any air-impermeable insulation shall be a class II vapor retarder, or shall have a class III vapor coating or covering in direct contact with the underside of the insulation.

5. Either items 5.1, 5.2, or 5.3 shall be met, depending on the air permeability of the insulation directly under the structural roof sheathing.

5.1. Air-impermeable insulation only. Insulation shall be applied in direct contact with the underside of the structural roof sheathing.

5.2. Air-permeable insulation only. In addition to the air-permeable insulation installed directly below the structural sheathing, rigid board or sheet insulation shall be installed directly above the structural roof sheathing as specified in table 1203.2.2 for condensation control.

5.3. Air-impermeable and air-permeable insulation. The air-impermeable insulation shall be applied in direct contact with the underside of the structural roof sheathing as specified in Table 1203.2.2 for condensation control. The air-permeable insulation shall be installed directly under the air-impermeable insulation.

5.4 Where preformed insulation board is used as the air-impermeable insulation layer, it shall be sealed at the perimeter of each individual sheet interior surface to form a continuous layer.

Table 1203.2.2
INSULATION FOR CONDENSATION CONTROL

CLIMATE ZONE	MINIMUM RIGID BOARD ON AIR-IMPERMEABLE INSULATION R-VALUES ^a
5A	R-20
6A	R-25
7	R-30

a. Contributes to but does not supersede the requirements in chapter 13

TABLE 1607.1
MINIMUM UNIFORMLY DISTRIBUTED LIVE LOADS, L^o, AND
MINIMUM CONCENTRATED LIVE LOADS^g

Occupancy or use	Uniform (psf)	CONCENTRATED (lbs.)
1. Apartments (see residential)	—	—
2. Access floor systems		
Office use	50	2,000
Computer use	100	2,000

3. Armories and drill rooms	150 ^m	—
4. Assembly areas	60 ^m	
Fixed seats (fastened to floor)	50	—
Follow spot, projections and control rooms	100 ^m	
Lobbies	100 ^m	
Movable seats	150 ^m	
Stage floors	100 ^m	
Platforms (assembly)	100 ^m	
Other assembly areas	100 ^m	
5. Balconies and decks ^h	Same as occupancy served	—
6. Catwalks	40	300
7. Cornices	60	—
8. Corridors	100	—
First floor	Same as occupancy served except as indicated	
Other floors		
9. Dining rooms and restaurants	100 ^m	—
10. Dwellings (see residential)	—	—
11. Elevator machine room grating (on area of 2 inches by 2 inches)	—	300
12. Finish light floor plate construction (on area of 1 inch by 1 inch)	—	200
13. Fire escapes	100	
On single-family only	40	—
14. Garages (passenger vehicles only)	40 ^m	Note a
Trucks and buses	See Section 1607.7	
15. Handrails, guards and grab bars	See Section 1607.8	
16. Helipads	See Section 1607.6	
17. Hospitals		
Corridors above first floor	80	1,000
Operating rooms, laboratories	60	1,000
Patient rooms	40	1,000
18. Hotels (see residential)	—	—
19. Libraries		
Corridors above first floor	80	1,000
Reading rooms	60	1,000
Stack rooms	150 ^{b, m}	1,000
20. Manufacturing		
Heavy	250 ^m	3,000
Light	125 ^m	2,000
21. Marquees	75	—
22. Office buildings		
Corridors above first floor	80	2,000

File and computer rooms shall be designed for heavier loads based on anticipated occupancy	—	—
Lobbies and first-floor corridors	100	2,000
Offices	50	2,000
23. Penal institutions		
Cell blocks	40	—
Corridors	100	
24. Recreational uses:		
Bowling alleys, poolrooms and similar uses	75 ^m	
Dance halls and ballrooms	100 ^m	
Gymnasiums	100 ^m	—
Reviewing stands, grandstands and bleachers	100 ^{c, m}	
Stadiums and arenas with fixed seats (fastened to floor)	60 ^{c, m}	
25. Residential		
One- and two-family dwellings		
Uninhabitable attics without storage ⁱ	10	
Uninhabitable attics with storage ^{j, k}	20	
Habitable attics and sleeping areas ^k	30	—
All other areas	40	
Hotels and multifamily dwellings		
Private rooms and corridors serving them	40	
Public rooms ^m and corridors serving them	100	
26. Roofs		
All roof surfaces subject to maintenance workers		300
Awnings and canopies:		
Fabric construction supported by a skeleton structure	5 nonreducible	
All other construction	20	
Ordinary flat, pitched, and curved roofs (that are not occupiable)	20	
Where primary roof members are exposed to a work floor, at single panel point of lower chord of roof trusses or any point along primary structural members supporting roofs:		
Over manufacturing, storage warehouses, and repair garages		2,000

All other primary roof members		300
Occupiable roofs:		
Roof gardens	100	
Assembly areas	100 ^m	
All other similar areas	Note 1	Note 1
27. Schools		
Classrooms	40	1,000
Corridors above first floor	80	1,000
First-floor corridors	100	1,000
28. Scuttles, skylight ribs and accessible ceilings	–	200
29. Sidewalks, vehicular drive ways and yards, subject to trucking	250 ^{d, m}	8,000 ^c
30. Stairs and exits		
One- and two-family dwellings	40	300 ^f
All other	100	300 ^f
31. Storage warehouses (shall be designed for heavier loads if required for anticipated storage)		–
Heavy	250 ^m	
Light	125 ^m	
32. Stores		
Retail		
First floor	100	1,000
Upper floors	75	1,000
Wholesale, all floors	125 ^m	1,000
33. Vehicle barriers	See Section 1607.8.3	
34. Walkways and elevated platforms (other than exitways)	60	–
35. Yards and terraces, pedestrians	100 ^m	–

For SI: 1 inch = 25.4 mm, 1 square inch = 645.16 mm²,

1 square foot = 0.0929 m²,

1 pound per square foot = 0.0479 kN/m², 1 pound = 0.004448 kN,

1 pound per cubic foot = 16 kg/m³.

- a. Floors in garages or portions of buildings used for the storage of motor vehicles shall be designed for the uniformly distributed live loads of Table 1607.1 or the following concentrated loads: (1) for garages restricted to passenger vehicles accommodating not more than nine passengers, 3,000 pounds acting on an area of 4.5 inches by 4.5 inches; (2) for mechanical parking structures without slab or deck that are used for storing passenger vehicles only, 2,250 pounds per wheel.
- b. The loading applies to stack room floors that support nonmobile, double-faced library book stacks, subject to the following limitations:
 1. The nominal bookstack unit height shall not exceed 90 inches;
 2. The nominal shelf depth shall not exceed 12 inches for each face; and
 3. Parallel rows of double-faced book stacks shall be separated by aisles not less than 36 inches wide.

- c. Design in accordance with ICC 300.
- d. Other uniform loads in accordance with an approved method containing provisions for truck loadings shall also be considered where appropriate.
- e. The concentrated wheel load shall be applied on an area of 4.5 inches by 4.5 inches.
- f. The minimum concentrated load on stair treads shall be applied on an area of 2 inches by 2 inches. This load need not be assumed to act concurrently with the uniform load.
- g. Where snow loads occur that are in excess of the design conditions, the structure shall be designed to support the loads due to the increased loads caused by drift buildup or a snow design determined by the building official (see Section 1608).
- h. See Section 1604.8.3 for decks attached to exterior walls.
- i. This live load need not be assumed to act concurrently with any other live load requirements.
- j. The live load need only be applied to those portions of the joists or truss bottom chords where both of the following conditions are met:
 - i. The attic area is accessible from an opening not less than 20 inches in width by 30 inches in length that is located where the clear height in the attic is a minimum of 30 inches; and
 - ii. The slopes of the joists or truss bottom chords are no greater than two units vertical in 12 units horizontal.

The remaining portions of the joists or truss bottom chords shall be designed for uniformly distributed concurrent live load of not less than 10 lb./ft².
- k. Attic spaces served by stairways other than the pull-down type shall be designed to support the minimum live load specified for habitable attics and sleeping rooms.
- l. Areas of occupiable roofs, other than roof gardens and assembly areas, shall be designed for appropriate loads as approved by the building official. Unoccupied landscaped areas of roofs shall be designed in accordance with Section 1607.12.3.
- m. Live load reduction is not permitted unless specific exceptions of Section 1607.10 apply.

R 408.30421 Emergency escape and rescue.

Rule 421. Sections 1024.1 and 1029.1 of the code are amended and 1014.2.2 is added to read as follows:

1014.2.2. Group E. Egress from classrooms in group E occupancies shall be limited to pass through 1 intervening space before reaching an exit access door leading directly to a corridor or an exit.

1024.1. General. Approved luminous egress path markings delineating the exit path shall be provided in buildings with an occupied floor located more than 75 feet (16 764 mm) above the lowest level of fire department vehicle access of groups A, B, E, I, M, and R-I occupancies in accordance with sections 1024.1 to 1024.5.

1029.1. General. In addition to the means of egress required by this chapter, provisions shall be made for emergency escape and rescue in group R as applicable in section 101.2, classrooms greater than 250 feet² (23.2 m²) in group E, and group I-1 occupancies. Basements and sleeping rooms below the fourth story above grade plane shall have at least 1 exterior emergency escape and rescue opening in accordance with this section. Where basements contain 1 or more sleeping rooms, emergency egress and rescue openings shall be required in each sleeping room, but shall not be required in adjoining areas of the basement.

The opening shall open directly into a public street, public alley, yard, or court.

Exceptions:

1. In other than group R-3 occupancies as applicable in section 101.2, buildings equipped throughout with an approved automatic sprinkler system in accordance with section 903.3.1.1 or 903.3.1.2.
2. In other than group R-3 occupancies as applicable in section 101.2, sleeping rooms provided with a door to a fire-resistance-rated corridor having access to 2 remote exits in opposite directions.
3. The emergency escape and rescue opening may open onto a balcony within an atrium in accordance with the requirements of section 404, provided the balcony provides access to an exit and the dwelling unit or sleeping unit has a means of egress that is not open to the atrium.
4. Basements with a ceiling height of less than 80 inches (2 032 mm) shall not be required to have emergency escape and rescue openings.
5. High-rise buildings in accordance with section 403.
6. Emergency escape and rescue openings are not required from basements, classrooms, or sleeping rooms which have an exit door or exit access door that opens directly into a public street, public alley, yard, egress court, or to an exterior exit balcony that opens to a public street, public alley, yard, or egress court.
7. Basements without habitable spaces and having not more than 200 square feet (18.6 square meters) in floor area shall not be required to have emergency escape and rescue openings.

R 408.30427 Barrier free design for buildings, structures, and improved areas.

Rule 427. Sections 1101.2 and 1109.8 of the code are amended and section 1103.2.16 is added to the code to read as follows:

1101.2. Design. Buildings and facilities shall be designed and constructed to be accessible in accordance with 1966 PA 1, MCL 125.1351 to 125.1356, this code, and ICC/ANSI A 117.1, except sections 611 and 707.

1109.8. Lifts. Platform (wheelchair) lifts may be a part of a required accessible route in new construction where indicated in items 1 to 10. Platform (wheelchair) lifts shall be installed in accordance with the Michigan elevator code, R 408.7001 to R 408.8695.

- (1) An accessible route to a performing area and speakers' platforms in occupancies in group A.
- (2) An accessible route to wheelchair spaces required to comply with the wheelchair space dispersion requirements of sections 1108.2.2 to 1108.2.5.
- (3) An accessible route to spaces that are not open to the general public with an occupant load of not more than 5.
- (4) An accessible route within a dwelling or sleeping unit.
- (5) An accessible route to wheelchair seating spaces located in outdoor dining terraces in A-5 occupancies where the means of egress from the dining terraces to a public way are open to the outdoors.
- (6) An accessible route to jury boxes and witness stands; raised courtroom stations including judges' benches, clerks' stations, bailiffs' stations, deputy clerks' stations, and court reporters' stations; and to depressed areas such as the well of the court.
- (7) An accessible route to load and unload areas serving amusement rides.

- (8) An accessible route to play components or self-contained play structures.
- (9) An accessible route to team or player seating areas serving areas of sport activity.
- (10) An accessible route where existing exterior site constraints make use of a ramp or elevator infeasible.

1103.2.16. Military, fire service, and police facilities. Housing, bathing, toilet, training, and storage areas intended for use and occupancy exclusively by military, fire service, police, or security personnel required to be physically agile are not required to be accessible.

R 408.30428 Structural integrity.

Rule 428. Section 1614.1 of the code is amended to read as follows:

1614.1. General. Buildings with an occupied floor 75 feet (22 860 mm) or more in height above the lowest level of fire department vehicle access and assigned to risk category III or IV shall comply with the requirements of this section. Frame structures shall comply with the requirements of section 1615.3. Bearing wall structures shall comply with the requirements of section 1615.4.

R 408.30429 High-rise buildings.

Rule 429. Sections 403.1, 403.5.4, 907.2.1.3, and 907.6.3.2 of the code are amended to read as follows:

403.1. Applicability. The provisions of this section shall apply to buildings having the occupied floors located more than 55 feet (16 764 mm) above the lowest level of fire department vehicle access.

Exception: The provisions of this section shall not apply to the following buildings and structures:

1. Airport traffic control towers in accordance with section 412 of the code.
 2. Open parking garages in accordance with section 406.3 of the code.
 3. Buildings with an occupancy in group A-5 in accordance with section 303.1 of the code.
 4. Low-hazard special industrial occupancies in accordance with section 503.1.1 of the code.
 5. Buildings with an occupancy in group H-1, H-2, or H-3 in accordance with section 415 of the code.
 6. Existing buildings having occupied floor levels not more than 75 feet (22 860 mm) above the lowest level of fire department vehicle access where the local unit of government complies with both of the following:
 - 6.1. The local unit of government has a municipal fire department with an ISO rating of 3 or lower, employing a full-time career firefighting staff.
 - 6.2. The governing body of the local unit of government has passed a resolution affirming the use of this exception and filed that resolution with the department of energy, labor, and economic growth, bureau of construction codes.
- 403.5.4. Smokeproof exit enclosures. Every required stairway serving floors more than 55 feet (16 764 mm) above the lowest level of fire department vehicle access shall comply with sections 909.20 and 1022.9 of the code.
- 907.2.13. High-rise buildings. Buildings having floors used for human occupancy located more than 55 feet (16 764 mm) above the lowest level of fire department vehicle access shall be provided with an automatic fire alarm system and an emergency responder radio coverage system in accordance with section 907.2.13.2 of the code.

Exceptions:

1. Airport traffic control towers in accordance with sections 412 and 907.2.22 of the code.
2. Open parking garages in accordance with section 406.3 of the code.
3. Buildings with an occupancy in group A-5.
4. Low-hazard special occupancies in accordance with section 503.1.1 of the code.
5. Buildings with an occupancy in group H-1, H-2, or H-3 in accordance with section 415 of the code.
6. In group I-1 and I-2 occupancies, the alarm shall sound at a constantly attended location and general occupant notification shall be broadcast by the emergency voice or alarm communication system.

907.6.3.2. High-rise buildings. In buildings used for human occupancy that have floors located more than 55 feet (16 764 mm) above the lowest level of fire department vehicle access, a separate zone by floor shall be provided for all of the following types of alarm-initiating devices where provided:

1. Smoke detectors.
2. Sprinkler water-flow devices.
3. Manual fire alarm boxes.
4. Other approved types of automatic fire detection devices or suppression systems.

R 408.30429a Compliance.

Rule 429a. Sections 3412.1 and 3412.2 of the code are amended to read as follows:

3412.1. Compliance. The provisions of this section are intended to maintain or increase the current degree of public safety, health, and general welfare in existing buildings while permitting repair, alteration, addition, and change of occupancy without requiring full compliance with chapters 2 to 33 of the code, or sections 3401.3 to 3407, except where compliance with other provisions of the code is specifically required in this section.

Exception: Buildings made to comply with the provisions of the Michigan rehabilitation code for existing buildings, R 408.30551 to R 408.30577, shall be deemed to comply with the requirements of the code.

3412.2. Applicability. Structures existing before November 6, 1974, in which work involving additions, alterations, or changes of occupancy shall be made to conform to the requirements of this section or the provisions of sections 3402 to 3406 of the code.

The provisions in sections 3412.2.1 to 3412.2.5 of the code shall apply to existing occupancies that will continue to be, or are proposed to be, in groups A, B, E, F, M, R, S, and U. These provisions shall not apply to buildings that have occupancies in group H or I.

R 408.30429b Elevator lobby.

Rule 429b. Section 713.14.1 of the code is amended to read as follows:

713.14.1. An enclosed elevator lobby shall be provided at each floor where an elevator shaft enclosure connects more than 3 stories. The lobby enclosure shall separate the elevator shaft enclosure doors from each floor by fire partitions. In addition to the requirements in section 708 for fire partitions, doors protecting openings in the elevator lobby enclosure walls shall also be in compliance with section 716.5.3 as required for corridor walls and penetrations of the elevator lobby enclosure by ducts and air transfer openings shall be protected as required for corridors in accordance with section 717.5.4.1. Elevator lobbies shall have at least 1 means of egress complying with chapter 10 and other provisions within

this code.

Exceptions:

1. Enclosed elevator lobbies are not required at the level or levels of exit discharge provided the level or levels of exit discharge is equipped with an automatic sprinkler system in accordance with section 903.3.1.1.

2. Elevators not required to be located in a shaft in accordance with section 712.1 are not required to have enclosed elevator lobbies.

3. Enclosed elevator lobbies are not required where additional doors are provided at the hoistway opening in accordance with section 3002.6. The doors shall comply with the smoke and draft control door assembly requirements in section 716.5.3.1 when tested in accordance with UL 1784 without an artificial bottom seal.

4. Enclosed elevator lobbies are not required where the building is protected by an automatic sprinkler system installed in accordance with section 902.2.1.1 or 903.3.1.2. This exception shall not apply to all of the following:

4.1. Group I-2 occupancies.

4.2. Group I-3 occupancies.

4.3. Elevator serving floor levels over 55 feet above the lowest level of fire department vehicle access in high-rise buildings.

5. Smoke partitions may be in place of fire partitions to separate the elevator lobby at each floor where the building is equipped throughout with an automatic sprinkler system installed in accordance with section 903.3.1.1 or 903.3.1.2. In addition to the requirements in section 710 for smoke partitions, doors protecting openings in the smoke partitions shall also be in compliance with sections 710.5.2.2, 710.5.2.3, and 716.5.9 and duct penetrations of the smoke partitions shall be protected as required for corridors in accordance with section 717.5.4.1.

6. Enclosed elevator lobbies are not required where the elevator hoistway is pressurized in accordance with section 909.21.

7. Enclosed elevator lobbies are not required where the elevator serves only open parking garages in accordance with section 406.5.

R 408.30437 Masonry heater clearance.

Rule 437. Section 2112.5 of the code is amended to read as follows:

2112.5. Masonry heater clearance. Combustible materials shall not be placed within 36 inches (914 mm) of the outside surface of a masonry heater in accordance with NFPA 211-2010 chapter 12, paragraph 12.6 (clearances for solid-fuel-burning appliances), and the required space between the heater and combustible material shall be fully vented to permit the free flow of air around all heater surfaces.

Exceptions:

1. When the masonry heater wall thickness is at least 8 inches thick of solid masonry and the wall thickness of the heat exchange channels is at least 5 inches thick of solid masonry, combustible materials shall not be placed within 4 inches of the outside surface of a masonry heater. A clearance of at least 8 inches shall be provided between the gas-tight capping slab of the heater and a combustible ceiling.

2. Masonry heaters listed and labeled in accordance with UL 1482 and installed in accordance with the manufacturer's instructions.

R 408.30441 Consumer fireworks facilities.

Rule 441. Sections 307.5.1, 415.1.1, 425.1, 509.4.2.2, 907.2.5.1, 910.2.3, and 1030.1 of the code are added to read as follows:

307.5.1. High-hazard group H-3. Consumer fireworks 1.4G (class C common) Consumer fireworks 1.4G facilities shall meet the requirements of this code and those requirements of this code and those requirements referenced in section 425.1.

415.1.1. Consumer fireworks facilities 1.4 G (class C common) consumer fireworks 1.4 G facilities shall be designed and constructed in accordance with NFPA 1124 as referenced by the Michigan fireworks safety act, 2011 PA 256, MCL 28.451 to 28.471.

425.1. Consumer fireworks (1.4G) facilities. The items in buildings used for the retail sale of consumer fireworks shall be designed and constructed in accordance with NFPA 1124, as referenced by the Michigan fireworks safety act, 2011 PA 256, MCL 28.451 to 28.471 as follows:

- (a) Means of egress.
- (b) Storage rooms.
- (c) Fire alarms.
- (d) Smoke control.
- (e) Automatic sprinkler systems.

509.4.2.2. Consumer fireworks (1.4G) facilities storage rooms. Storage rooms in consumer fireworks (1.4G) facilities used for the retail sale of consumer fireworks shall be designed and constructed in accordance with the code for the manufacture, transportation, storage, and retail sales of fireworks and pyrotechnic articles, NFPA 1124, as referenced by the Michigan fireworks safety act, 2011 PA 256, MCL 28.451 to 28.471.

907.2.5.1. Consumer fireworks (1.4G) facilities fire alarms. Fire alarm systems in consumer fireworks (1.4G) facilities used for the retail sale of consumer fireworks storage shall be designed and constructed in accordance with the code for the manufacture, transportation, storage, and retail sales of fireworks and pyrotechnic articles, NFPA 1124, as referenced by the Michigan fireworks safety act, 2011 PA 256, MCL 28.451 to 28.471.

910.2.3. Consumer fireworks (1.4G) facilities smoke and heat vents. Smoke and heat vents in consumer fireworks (1.4G) facilities used for the retail sale of consumer fireworks storage shall be designed and constructed in accordance with the code for the manufacture, transportation, storage, and retail sales of fireworks and pyrotechnic articles, NFPA 1124, as referenced by the Michigan fireworks safety act, 2011 PA 256, MCL 28.451 to 28.471.

1030.1. Consumer fireworks (1.4G) facilities means of egress. The means of egress in consumer fireworks (1.4G) facilities used for the retail sale of consumer fireworks means of egress shall be designed and constructed in accordance with the code for the manufacture, transportation, storage, and retail sales of fireworks and pyrotechnic articles, NFPA 1124, as referenced by the Michigan fireworks safety act, 2011 PA 256, MCL 28.451 to 28.471.

R 408.30442 Automatic sprinkler systems.

Rule 442 . Sections 903.2.8, 903.2.8.2, 903.2.5, and 903.2.5.1 are amended and section 903.2.5.4 is added to the code to read as follows:

903.2.8. Group R. An automatic sprinkler system installed in accordance with section 903.3 shall be provided throughout all buildings with a Group R fire area.

Exception: Camp buildings in remote areas without municipal water supply that meet all of the following:

1. Not more than 1 story, 2000 square feet (186 m²) and 25 occupants.
2. Are used not more than 5 months in a year.
3. Shall be provided with not less than 2 exits in compliance with section 1019.
4. Shall not be provided with cooking equipment.
5. Provided with a manual fire alarm system and smoke alarms throughout in compliance with NFPA 72 as listed in chapter 35. For cabins sleeping 4 or fewer occupants only, smoke alarms are required.
6. Storage and equipment rooms shall be protected by a 1-hour fire partition.
7. Compliance with all applicable requirements of the code.

903.2.8.2. Adult foster care family homes. An automatic sprinkler system installed in accordance with section 903.3.1.3 shall be permitted in adult foster care family homes or adult foster care small group homes for 6 or fewer persons receiving care that are within a single-family dwelling and licensed in accordance with the adult foster care facility licensing act, 1979 PA 218, MCL 400.701 to 400.737.

903.2.5. Group H. Automatic sprinkler systems shall be provided in high-hazard occupancies as required in sections 903.2.5.1 to 903.2.5.4.

903.2.5.1. General. An automatic sprinkler system shall be installed in group H occupancies unless the requirements of section 903.2.5.4 are met for buildings containing consumer fireworks.

903.2.5.4. Consumer fireworks (1.4G). Buildings used for the retail sale of consumer fireworks shall be provided with an automatic sprinkler system in accordance with the Michigan fireworks safety act, 2011 PA 256, MCL 28.451 to 28.471.

R 408.30443 Masonry.

Rule 443. Section 1405.4.2 of the code is amended to read as follows:

1405.4.2. Masonry. Flashing and weep holes shall be located in the first course of masonry above finished ground level above the foundation wall or slab; at the heads of windows, doors, and other wall openings; at window sills and at other points of support including structural floors, shelf angles, and lintels where anchored veneers are designed in accordance with section

1405.6. Flashing shall extend to, or beyond, the finished face of the wall.

R 408.30446 Smoke alarm locations.

Rule 446. Sections 907.2.11.5 and 907.2.11.5.1 are added to the code as follows:

907.2.11.5. Smoke alarm locations in existing buildings constructed before November 6, 1974. Within each dwelling unit or sleeping unit, a single-station smoke alarm shall be installed in all of the following locations:

- (1) In each sleeping room or each area directly outside the sleeping room.
- (2) On each floor level including the basement level.

For sleeping units with split levels and without an intervening door between the adjacent levels, a smoke alarm installed on the upper level shall suffice for the adjacent lower level provided that the lower level is less than 1 full story below the upper level.

907.2.11.5.1. Equipment requirements. The required equipment for smoke alarms shall consist of the following:

- (1) Installation. Smoke alarm devices shall be listed and installed in accordance with the manufacturer's installation requirements, the provisions of the code, and the provisions of

NFPA

72 as listed in chapter 35.

(2) Power Source. The equipment shall be operable by power from 1 of the following primary sources:

(a) The building wiring provided the wiring is served from a commercial source and is equipped with a battery backup. Wiring shall be permanent and without a disconnecting switch other than as required for overcurrent protection.

(b) A non-rechargeable battery able to power the smoke alarm in the normal condition for a life of 5 years.

(c) A rechargeable battery, with proper charging, able to power the alarm for a life of 5 years.

(d) A commercial use alarm system with battery backup listed and approved in accordance with the commercial fire warning equipment provisions of NFPA 72, as adopted by reference in this rule.

(3) Audible Alarm Notification. The activation of the alarm signal shall produce a sound that is audible in all occupiable dwelling areas.

(4) Testing and Maintenance. The owner of a dwelling unit, in which required or optional fire detection or fire protection systems equipment is installed, shall be responsible for the proper operation, testing, and maintenance of the equipment in accordance with the manufacturer's instructions included with the equipment. The occupant of rental dwelling units shall be responsible for the periodic operational testing and periodic cleaning of the installed equipment within the rental unit in accordance with the testing instructions provided in the manufacturer's instructions for the equipment. If the system fails, breaks, or is out of service, it shall be repaired and functional within 30 days.

Exception: Smoke alarms and devices installed in buildings constructed before November 6, 1974 where an installation was approved by the appropriate enforcing agency under regulations in effect at the time of the installation shall be considered to comply with the provisions of the code.

R 408.30447 Smokeproof enclosures.

Rule 447. Section 1022.10 of the code is amended to read as follows:

1022.10. Smokeproof enclosures. In buildings required to comply with section 403 or 405 of the code, each of the exits of a building that serves stories where the floor surface is located more than 55 feet (16 764 mm) above the lowest level of fire department vehicle access or more than 30 feet (9 144 mm) below the level of exit discharge serving such floor levels shall be a smokeproof enclosure or pressurized stairway in accordance with section 909.20 of the code.

R 408.30449 Frost protection.

Rule 449. Section 1809.5 of the code is amended to read as follows:

1809.5. Frost protection. Except where otherwise protected from frost, foundation walls, piers, and other permanent supports of buildings and structures shall be protected from frost by at least 1 of the following methods:

(1) Extending not less than 42 inches (1 067 mm) below finish grade.

(2) Constructing in accordance with ASCE-32 listed in chapter 35. (3) Erecting on solid rock.

Exceptions:

1. Free-standing buildings meeting all of the following conditions shall not be required to be protected:
 - a. Classified in risk category I in accordance with section 1604.5 of the code.
 - b. Area of 600 square feet (55.74 m²) or less for light-frame construction or 400 square feet (37 m²) or less for other than light-frame construction.
 - c. Eave height of 10 feet (3 048 mm) or less.
2. Upon evidence of the existence of any of the following conditions, the building official may modify the footing depth accordingly:
 - a. Freezing temperatures.
 - b. Soil type.
 - c. Groundwater conditions.
 - d. Snow depth experience.
 - e. Exposure to the elements.
 - f. Other specific conditions identified by the building official that may affect the foundation system.

Footings shall not bear on frozen soil unless such frozen condition is of a permanent character.

R 408.30451c. Flood loads.

Rule 451c. Sections 1612.3.1 and 1612.4 of the code are amended and 1612.4.1, 1612.4.2, 1612.4.3, 1612.4.4, and 1612.4.5 are added to the code to read as follows:

1612.3.1. Alternate flood hazard provisions. Absent the adoption of a flood hazard map and supporting data, flood hazard areas as determined by the state under its administration of the Part 31, floodplain regulatory authority of the natural resources and environmental protection act, 1994 PA 451, MCL 324.101 to 324.90106, shall become the basis for regulation of floodplain development within the community and section 1612 shall apply to buildings and structures within those areas.

1612.4.1. Minimum requirements for buildings and structures. All of the following are in addition to the requirements of ASCE 24:

(1) Buildings and structures in flood hazard areas subject to high velocity wave action (zone V) shall be in compliance with the requirements of ASCE 24 for such flood hazard areas.

(2) The lowest floors of structure category II buildings and structures shall be at or above the elevation specified in ASCE 24 or 1 foot (305 mm) above the design flood elevation, whichever is higher.

(3) The lowest floors of structure category III and IV buildings and structures in flood hazard areas not subject to high velocity wave action (zone A) shall be at or above the elevation specified in ASCE 24 or 1 foot (305 mm) above the 500-year flood elevation, whichever is higher. For the purpose of this requirement, the 500-year flood elevation is the elevation of flooding having a 0.2% chance of being equaled or exceeded in any given year.

(4) Dry floodproofing for structure category II buildings and structures shall extend to or above the elevation specified in ASCE 24 or 1 foot (305 mm) above the design flood elevation, whichever is higher.

(5) Dry floodproofing for structure category III and IV buildings and structures shall extend to or above the elevation specified in ASCE 24 or 1 foot (305 mm) above the 500- year flood elevation, whichever is higher. For the purpose of this requirement, the 500-year flood elevation is the elevation of flooding having a 0.2% chance of being equaled or exceeded in

any given year.

(6) The interior floor or finished ground level of under-floor spaces and crawlspaces shall comply with section 1805.1.2.1 of this code.

R 408.30452 Flood hazard areas.

Rule 452. Section 3403.2 of the code is amended and section 1612.3.3 is added to read as follows:

3403.2. Flood hazard areas. Both of the following apply to buildings and structures in flood hazard areas established in section 1612.3:

(1) All additions shall be in compliance with the flood design requirements for new construction.

(2) If an addition constitutes substantial improvement of the existing structure, as defined in section 1612.2, all aspects of the existing structure shall be brought into compliance with the requirements for new construction for flood design.

1612.3.3. Alternate flood hazard area determinations. Absent the adoption of a flood hazard map and supporting data, flood hazard areas as determined by the state under its administration of the part 31, floodplain regulatory authority of the natural resources and environmental protection act, 1994 PA 451, MCL 324.101 to 324.90106, shall become the basis for regulation of flood hazard area development and the flood load provisions of this code shall apply to buildings and structures within those areas.

R 408.30459 Elevators.

Rule 459. Sections 1007.4 and 1607.9.1 of the code are amended to read as follows:

1007.4. Elevators. To be considered part of an accessible means of egress, an elevator shall be in compliance with the emergency operation and signaling device requirements of the Michigan elevator code, R 408.7001 to R 408.8695.

1607.9.1. Elevators. Elevator loads shall be increased by 100% for impact and the structural supports shall be designed within the limits of deflection prescribed by the Michigan elevator code, R 408.7001 to R 408.8695.

R 408.30499 Adoption of standards by reference; referenced codes.

Rule 499. Chapter 35 of the code is amended to add the following referenced codes, which are available from the Michigan Department of Licensing and Regulatory Affairs, Bureau of Construction Codes, 2501 Woodlake Circle, Okemos, Michigan 48864:

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| (a) Michigan Electrical Code | R 408.30801 to R 408.30880; of the Michigan Administrative Code. |
| (b) Michigan Mechanical Code | R 408.30901 to R 408.30998a of the Michigan Administrative Code. |
| (c) Michigan Plumbing Code | R 408.30701 to R 408.30796 of the Michigan Administrative Code. |
| (d) Michigan Uniform Energy Code | R 408.31061 to R 408.31099 of the Michigan Administrative Code. |
| (e) Michigan Elevator Code
Michigan Administrative Code. | R 408.7001 to R 408.8695 of the |
| (f) Michigan Boiler Code | R 408.4001 to R 408.5507 of the |

Michigan Administrative Code.