

DEPARTMENT OF LICENSING AND REGULATORY AFFAIRS

DIRECTOR'S OFFICE

CONSTRUCTION CODE

Filed with the secretary of state on November 13, 2023

These rules become effective 120 days after filing with the secretary of state.

(By authority conferred on the director of the department of licensing and regulatory affairs by section 4 of the Stille-DeRossett-Hale single state construction code act, 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 408.30701, R 408.30711, R 408.30716, R 408.30727, R 408.30729, R 408.30755, R 408.30758, and R 408.30762 of the Michigan Administrative Code are amended, R 408.30725d, R 408.30725e, R 408.30725f, R 408.30725g, R 408.30725h, R 408.30726a, R 408.30727a, R 408.30727b, R 408.30727c, R 408.30729a, R 408.30729b, R 408.30732, R 408.30736, R 408.30753b, R 408.30755a, R 408.30758a, and R 408.30758b are added, as follows:

PART 7. PLUMBING CODE

AMENDMENTS AND ADDITIONS TO BASIC PLUMBING CODE

R 408.30701 Applicable code.

Rule 701. Rules governing the installation, replacement, alteration, relocation, and use of plumbing systems or plumbing materials are those contained in the international plumbing code, 2021 second printing edition, including appendices B, C, D, and E, except for sections 103.1, 103.2, 103.3, 104.2, 104.5 to 104.7, 104.8, 104.8.1, 106.3, 106.3.1, 106.3.2, 106.5.5, 108.2.5, 108.2.5.1, 108.2.5.2, 109.2 to 109.5, 113.1 to 113.4, 114.1 to 114.4, 115.3, 404.2, 404.3, 602.3 to 602.3.5.1, 608.18 to 608.18.8, 712.3.3.1, 712.3.3.2, 715.1 to 715.4, 802.4.3.1, 1106.3, 1106.6, 1301 to 1304.4.2, 1401 to 1403.2.1 and tables 608.18.1, 1106.3, and 1106.6. With the exceptions noted, the code is adopted in these rules by reference. All references to the International Building Code, International Residential Code, International Energy Conservation Code, National Electrical Code, International Mechanical Code, and International Plumbing Code mean the Michigan Building Code, Michigan Residential Code, Michigan Energy Code, Michigan Electrical Code, Michigan Mechanical Code, and Michigan Plumbing Code, respectively. The code is available for inspection, and purchase at the Lansing office of the Michigan Department of Licensing and Regulatory Affairs, Bureau of Construction Codes, 611 West Ottawa Street, First Floor Ottawa Building, Lansing, Michigan 48933. The code may be purchased from the International Code Council, through the bureau's

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website at www.michigan.gov/bcc, at a cost as of the time of adoption of these rules of \$87.50 for each code book.

AMENDMENTS AND ADDITIONS TO BASIC PLUMBING CODE

R 408.30711 Title and scope.

Rule 711. Sections 101.1, 101.2, and 101.3 of the code are amended to read as follows:

101.1. Title. This part shall be known as the Michigan plumbing code and is to be referred to as “the plumbing code” or “the code.” This part shall control all matters concerning the installation, replacement, alteration, relocation, and use of plumbing systems or plumbing materials as defined in this code and shall apply to existing or proposed buildings and structures in this state.

101.2. Scope. The design and installation of plumbing systems, including sanitary and storm drainage, sanitary facilities, medical gas systems, water supplies, water service, and storm water and sewage disposal in and exiting buildings, shall comply with the requirements of the code. The design and installation of gas piping, chilled water piping in connection with refrigeration process and comfort cooling, and hot water piping in connection with building heating systems shall conform to the Michigan mechanical code. The design and installation of all fire sprinkler systems and standpipe systems shall conform to the Michigan building code. Water and drainage connections to such installations shall be made in accordance with the requirements of the code.

Exception: Detached 1-and 2-family dwellings and multiple single-family dwellings, such as townhouses, not more than 3 stories high with separate means of egress and their accessory structures shall comply with the Michigan residential code.

101.3. Intent. The purpose of this code and the Stille-DeRossett-Hale single state construction code act, 1972 PA 230, MCL 125.1501 to 125.1531 is to establish minimum standards to provide a reasonable level of safety, health, property protection, and public welfare by regulating and controlling the design, construction, installation, quality of materials, location, and operation and maintenance or use of plumbing equipment and systems. The Stille-DeRossett-Hale single state construction code act, 1972 PA 230, MCL 125.1501 to 125.1531, takes precedence over all provisions of this code.

R 408.30716 Fees.

Rule 716. Section 109.1 of the code is amended to read as follows:

109.1. Fees. The fees prescribed by the act shall be paid to the enforcing agency of the jurisdiction before a permit to begin work for new construction, alteration, removal, demolition, or other building operation may be issued. In addition, an amendment to a permit necessitating an additional fee shall not be approved until the additional fee is paid. The authority having jurisdiction may withhold issuance of any newly requested permits to an individual who has outstanding permit fees owed to that authority having jurisdiction.

R 408.30725d Type of fixtures.

Rule 725d. Section 915.1 is added to the code to read as follows:

915.1. Type of fixtures. A combination waste and vent system shall not serve fixtures other than floor drains, sinks, lavatories and drinking fountains. Combination waste and vent systems shall not receive the discharge from a food waste disposer or clinical sink.

R 408.30725e Fixture traps.

Rule 725e. Section 1002.1 is added to the code to read as follows:

1002.1. Fixtures traps. Each plumbing fixture shall be separately trapped by a liquid-seal trap, except as otherwise allowed by this code. The vertical distance from the fixture outlet to the trap weir shall not exceed 24 inches, 609.6 mm, and the horizontal distance shall not exceed 30 inches, 762 mm, measured from the centerline of the fixture outlet to the centerline of the inlet of the trap. The height of a clothes washer standpipe above a trap shall conform to section 802.4.3. A fixture shall not be double trapped.

Exceptions:

1. This section shall not apply to fixtures with integral traps.
2. A combination plumbing fixture is allowed to be installed on 1 trap, provided that 1 compartment is not more than 6 inches, 152 mm, deeper than the other compartment and the waste outlets are not more than 30 inches, 762 mm, apart.
3. A grease interceptor intended to serve as a fixture trap in accordance with the manufacturer's installation instructions shall be allowed to serve as the trap for a single fixture or a combination sink of not more than 3 compartments where the vertical distance from the fixture outlet to the inlet of the interceptor does not exceed 30 inches, 762 mm, and the developed length of the waste pipe from the most upstream fixture outlet to the inlet of the interceptor does not exceed 60 inches, 1524 mm.
4. Floor drains in multilevel parking structures that discharge to a building storm sewer shall not be required to be individually trapped. Where floor drains in multilevel parking structures are required to discharge to a combined building sewer system, the floor drains shall not be required to be individually trapped provided that they are connected to a main trap in accordance with section 1103.1.

R 408.30725f Inspection and testing of backflow prevention assemblies.

Rule 725f. Section 312.10 is added to the code to read as follows:

312.10. Inspection and testing of backflow prevention assemblies. Inspection and testing shall comply with section 312.10.1 and 312.10.2

R 408.30725g Inspections.

Rule 725g. Section 312.10.1 is added to the code to read as follows:

312.10.1. Inspections. Inspections shall be made of all backflow prevention assemblies and air gaps after installation or relocation to determine whether the assemblies are operable and air gaps exist.

R 408.30725h Testing.

Rule 725h. Section 312.10.2 is added to the code to read as follows:

312.10.2. Testing. Reduced pressure principle, double check, pressure vacuum breaker, reduced pressure detector fire protection, double check detector fire protection, and spill-resistant vacuum breaker backflow preventer assemblies and hose connection backflow preventers shall be tested at the time of installation, immediately after repairs or at the

time of relocation. Test gauges shall comply with ASSE 1064. The testing procedure shall be performed in accordance with 1 of the following standards:

- (a) ASSE 5013.
- (b) ASSE 5015.
- (c) ASSE 5020.
- (d) ASSE 5047.
- (e) ASSE 5048.
- (f) ASSE 5052.
- (g) ASSE 5056.
- (h) CSA B64.10.
- (i) CSA B64.10.1.

R 408.30726a Pipe fittings.

Rule 726a. Section 702.4 is added to the code to read as follows:

Table 702.4

PIPE FITTINGS

MATERIAL	STANDARD
Acrylonitrile butadiene styrene (ABS) plastic pipe in IPS diameters	ASME A112.4.4; ASTM D2661; ASTM F628; CSA B181.1
Acrylonitrile butadiene styrene (ABS) plastic pipe in sewer and drain diameters	ASTM D2751
Cast iron	ASME B16.4; ASME B16.12; ASTM A74; ASTM A888; CISPI 301
Copper or Copper alloy	ASME B16.15; ASME B16.18; ASME B16.22; ASME B16.23; ASME B16.26; ASME B16.29
Galvanized steel pipe	ASTM A53
Glass	ASTM C1053
Gray iron and ductile iron	AWWA C110/A21.10
Polyethylene	ASTM D2683
Polyolefin	ASTM F1412; CSA B181.3
Polyvinyl chloride (PVC) plastic in IPS diameters	ASME A112.4.4; ASTM D2665; ASTM F1866
Polyvinyl chloride (PVC) plastic pipe in sewer and drain diameters	ASTM D3034
Polyvinyl chloride (PVC) plastic pipe with a 3.25-inch O.D.	ASTM D2949
Polyvinylidene fluoride (PVDF) plastic pipe	ASTM F1673; CSA B181.3
Stainless steel drainage system, Types 304 and 316L	ASME A112.3.1
Steel	ASME B16.9; ASME B16.11; ASME B16.28

Vitrified clay	ASTM C700
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R 408.30727 Water distribution pipe.

Rule 727. Table 605.4 of the code is amended to read as follows:

Table 605.4

WATER DISTRIBUTION PIPE

MATERIAL	STANDARD
Chlorinated polyvinyl chloride (CPVC) plastic pipe and tubing	ASTM D2846; ASTM F441; ASTM F442; CSA B137.6
Chlorinated polyvinyl chloride/aluminum/chlorinated polyvinyl chloride (CPVC/AL/CPVC)	ASTM F2855
Copper or copper-alloy pipe	ASTM B42; ASTM B302; ASTM B43
Copper or copper-alloy tubing (Type K, WK, L, WL, M or WM)	ASTM B75; ASTM B88; ASTM B251; ASTM B447
Cross-linked polyethylene (PEX) plastic tubing	ASTM F876; CSA B137.5
Cross-linked polyethylene/aluminum/cross-linked polyethylene (PEX-AL-PEX) pipe	ASTM F1281; ASTM F2262; CSA B137.10
Cross-linked polyethylene/aluminum/high-density polyethylene (PEX-AL-HDPE)	ASTM F1986
Ductile iron pipe	AWWA C151/A21.51; AWWA C115/A21.15
Galvanized steel pipe	ASTM A53
Polyethylene/aluminum/polyethylene (PE-AL-PE) composite pipe	ASTM F1282
Polyethylene of raised temperature (PE-RT) plastic tubing	ASTM F2769; CSA B137.18
Polypropylene (PP) plastic pipe or tubing	ASTM F2389; CSA B137.11
Stainless steel pipe (Type 304/304L)	ASTM A312; ASTM A778
Stainless steel pipe (Type 316/316L)	ASTM A312; ASTM A778

(REFERENCE R 408.30732, SECTION 605.2.1)

R 408.30727a Location of full-open valve.

Rule 727a. Section 606.1 is added to the code to read as follows:

606.1. Location of full-open valve. Full-open valves shall be installed in the following locations:

1. On the building water service pipe from the public water supply near the curb.
2. On the water distribution supply pipe at the entrance into the structure.
 - 2.1. In multiple tenant buildings, where a common water supply piping system is installed to supply spaces other than 1 and 2 family dwellings, a main shutoff valve shall be provided for each tenant or space.
3. On the discharge side of every water meter.

4. On the base of every water riser pipe in occupancies other than multiple-family residential occupancies that are 2 stories or less in height and in 1 and 2 family residential occupancies.

5. On the top of every water down-feed pipe in occupancies other than 1 and 2 family residential occupancies.

6. On the entrance to every water supply pipe to a dwelling unit, except where supplying a single fixture equipped with individual stops.

7. On the water supply pipe to a gravity or pressurized water tank.

8. On the water supply pipe to every water heater.

R 408.30727b Labeling of water distribution pipes in bundles.

Rule 727b. Section 606.7 is added to the code to read as follows:

606.7. Labeling of water distribution pipes in bundles. Where water distribution piping is bundled at installation, each pipe in the bundle shall be identified using stenciling, commercially available pipe labels, or approved color-coded piping materials. The identification shall indicate the pipe contents and the direction of flow in the pipe. The interval of the identification markings on the pipe shall not exceed 25 feet, 7620mm. There shall be at least 1 identification label on each pipe in each room, space, or story.

R 408.30727c Tempered water temperature control.

Rule 727c. Section 607.1.2 is added to the code to read as follows:

607.1.2. Tempered water temperature control. Tempered water shall be controlled by 1 of the following:

1. A limiting device conforming to ASSE 1070/ASME A112.1070/CSA B125.70 and set to not greater than 110 degrees Fahrenheit or 43 degrees Celsius.

2. A thermostatic mixing valve conforming to ASSE 1017.

3. A water heater conforming to ASSE 1082.

4. A water heater conforming to ASSE 1084.

5. Emergency eye wash tepid water limits shall not be less than 60 degrees Fahrenheit or 15.6 degrees Celsius and not greater than 100 degrees Fahrenheit or 37.8 degrees Celsius and conform to ASSE 1071.

R 408.30729 Water service pipe.

Rule 729. Table 605.3 and section 609.3 of the code are amended to read as follows:

Table 605.3

WATER SERVICE PIPE

MATERIAL	STANDARD
Acrylonitrile butadiene styrene (ABS) plastic pipe	ASTM D1527; ASTM D2282
Chlorinated polyvinyl chloride (CPVC) plastic pipe	ASTM D2846; ASTM F441; ASTM F442; CSA B137.6
Chlorinated polyvinyl chloride/aluminum/chlorinated polyvinyl chloride (CPVC/AL/CPVC)	ASTM F2855
Copper or copper-alloy pipe	ASTM B42; ASTM B302

Copper or copper-alloy tubing (Type K, WK, L, WL, M or WM)	ASTM B75; ASTM B88; ASTM B251; ASTM B447
Cross-linked polyethylene (PEX) plastic pipe and tubing	ASTM F876; AWWA C904; CSA B137.5
Cross-linked polyethylene/aluminum/cross-linked polyethylene (PEX-AS-PEX) pipe	ASTM F1281; ASTM F2262; B137.10
Cross-linked polyethylene/aluminum/high-density polyethylene (PEX-AL-HDPE)	ASTM F1986
Ductile iron water pipe	AWWA C151/A21.51; AWWA C115/A21.15
Galvanized steel pipe	ASTM A53
Polyethylene (PE) plastic pipe	ASTM D2239; ASTM D3035; AWWA C901; CSA B137.11
Polyethylene (PE) plastic tubing	ASTM D2737; AWWA C901; CSA B137.1
Polyethylene/aluminum/polyethylene (PE-AL-PE) pipe	ASTM F1282; CSA B 137.9
Polyethylene of raised temperature (PE-RT) plastic tubing	ASTM F2769; CSA B137.18
Polypropylene (PP) plastic pipe or tubing	ASTM F2389; CSA B137.11
Polyvinyl chloride (PVC) plastic pipe	ASTM D1785; ASTM D2241; ASTM D2672; CSA B137.3
Stainless steel pipe (Type 304/304L)	ASTM A312; ASTM A778
Stainless steel pipe (Type 316/316L)	ASTM A312; ASTM A778
Chlorinated polyvinyl chloride (CPVC) plastic pipe and tubing	ASTM D2846; ASTM F441; ASTM F442; CSA B137.6
Chlorinated polyvinyl chloride/aluminum/chlorinated polyvinyl chloride (CPVC/AL/CPVC)	ASTM F2855
Copper or copper-alloy pipe	ASTM B-42; ASTM B302; ASTM B43
Copper or copper-alloy tubing (Type K, WK, L, WL, M or WM)	ASTM B75; ASTM B88; ASTM B251; ASTM B447
Cross-linked polyethylene (PEX) plastic tubing	ASTM F876; CSA B137.5
Cross-linked polyethylene/aluminum/cross-linked polyethylene (PEX-AL-PEX) pipe	ASTM F1281; ASTM F2262; CSA B137.10
Cross-linked polyethylene/aluminum/high-density polyethylene (PEX-AL-HDPE)	ASTM F1986
Ductile iron pipe	AWWA C151/A21.51; AWWA C115/A21.15
Polyethylene/aluminum/polyethylene (PE-AL-PE) composite pipe	ASTM F1282
Polyethylene of raised temperature (PE-RT) plastic tubing	ASTM F2769; CSA B137.158
Polypropylene (PP) plastic pipe or tubing	ASTM F2389; CSA B137.11

Stainless steel pipe (Type 304/304L)	ASTM A312; ASTM A778
Stainless steel pipe (Type 316/316L)	ASTM A312; ASTM A778

(REFERENCE R 408.30732, SECTION 605.2.1)

609.3 Hot water. Hot water shall be provided to supply all of the hospital fixtures, kitchen, and laundry requirements. Special fixtures and equipment shall have hot water supplied at a temperature specified by the manufacturer. The hot water system shall be installed in accordance with section 607.

R 408.30729a. Pipe fitting.

Rule 729a. Table 605.5 is added to the code to read as follows:

Table 605.5

PIPE FITTINGS

MATERIAL	STANDARD
Acrylonitrile butadiene styrene (ABS) plastic	ASTM D2468
Cast iron	ASME B16.4
Chlorinated polyvinyl chloride (CPVC) Plastic	ASSE 1061; ASTM D2846; ASTM F437; ASTM F438; ASTM F439; CSA B137.6
Copper or copper alloy	ASME B16.15; ASME B16.18; ASME B16.22; ASME B16.26; ASME B16.51; ASSE 1061; ASTM F1476; ASTM F1548; ASTM F3226
Cross-linked polyethylene/aluminum/high-density polyethylene (PEX-AL-HDPE)	ASTM F1986
Fittings for cross-linked polyethylene (PEX) plastic tubing	ASSE 1061; ASTM F877; ASTM F1807; ASTM F 1960; ASTM F2080; ASTM F2098, ASTM F2159; ASTM 2434; ASTM F2735; CSA B137.5
Fittings for polyethylene of raised temperature (PE-RT) plastic tubing	ASSE 1061; ASTM D3261; ASTM F1807; ASTM 2098; ASTM F2159; ASTM 2735; ASTM F2769; CSA B137.18
Galvanized steel pipe	ASTM A53
Gray iron and ductile iron	ASTM F1476; ASTM F1548; AWWA C110/A21.10; AWWA C153/A21.53
Insert fittings for polyethylene/aluminum/polyethylene (PE-AL-PE) and cross-linked polyethylene/aluminum/cross-linked polyethylene (PEX-AL-PEX)	ASTM F1281; ASTM F1282; ASTM F1974; CSA B137.9; CSA B137.10
Malleable iron	ASME B16.3

Metal (brass) insert fittings for polyethylene/aluminum/polyethylene (PE-AL-PE) and cross-linked polyethylene/aluminum/cross-linked polyethylene (PEX-AL-PEX)	ASTM F1974
Polyethylene (PE) plastic pipe	ASTM D2609; ASTM D2683; ASTM D3261; ASTM F1055; CSA B137.1
Polypropylene (PP) plastic pipe or tubing	ASTM F2389; CSA B137.11
Polyvinyl chloride (PVC) plastic	ASTM D2464; ASTM D2466; ASTM D2467; CSA B137.2; CSA B137.3
Stainless steel (Type 304/304L)	ASTM A312; ASTM A778; ASTM F1476; ASTM F1548; ASTM F3226
Stainless steel (Type 316/316L)	ASTM A312; ASTM A778; ASTM F1476; ASTM F1548; ASTM F3226
Steel	ASME B16.9, ASME B16.11; ASME B16.28; ASTM F1476; ASTM F1548

(REFERENCE R 408.30732, SECTION 605.2.1)

R 408.30729b Manufactured pipe nipples.

Rule 729b. Table 605.8 is added to the code to read as follows:

Table 605.8

MANUFACTURED PIPE NIPPLES

MATERIAL	STANDARD
Copper, copper alloy, and chromium-plated	ASTM B687
Galvanized steel pipe	ASTM A53
Steel	ASTM A773

(REFERENCE R 408.30732, SECTION 605.2.1)

R 408.30732 Lead content of drinking water pipe and fittings.

Rule 732. Section 605.2.1 is added to the code to read as follows:

605.2.1. Lead content of drinking water pipe and fittings.

Pipe, pipe fittings, joints, valves, faucets, and fixture fittings utilized to supply water for drinking or cooking purposes shall comply with NSF 372 and shall have a weighted average lead content of 0.25% or less.

R 408.30736 Water supply.

Rule 736. Section 411.3 is added to the code to read as follows:

411.3. Water supply. Where hot and cold water is supplied to an emergency shower or eyewash station, the temperature of the water supply shall only be controlled by a temperature-actuated mixing valve complying with ASSE 1071. Where water is supplied

directly to an emergency shower or eyewash station from a water heater, the water heater shall comply with ASSE 1085, section 607.1.2.

R 408.30753b Roof extension unprotected.

Rule 753b. Section 903.1.1 is added to the code to read as follows:

903.1.1. Roof extension unprotected. Open vent pipes that extend through a roof shall be terminated not less than 12 inches, 304.8 mm, above the roof.

R 408.30755 Storm drainage.

Rule 755. Table 1102.4 of the code is amended to read as follows:

TABLE 1102.4

BUILDING STORM SEWER PIPE

MATERIAL	STANDARD
Acrylonitrile butadiene styrene (ABS) plastic pipe in IPS diameters, including Schedule 40, DR 22 (PS 200) and DR 24 (PS 140); with a solid, cellular core or composite wall.	ASTM D2661; ASTM F628; ASTM F1488; CSA B181.1; CSA B182.1
Cast-iron pipe	ASTM A74; ASTM A888; CISPI 301
Concrete pipe	ASTM C14; ASTM C76; CSA A257.1M; CSA A257.2M
Copper or copper-alloy tubing (Type K, L, M or DWV)	ASTM B75; ASTM B88; ASTM B251; ASTM B306
Polyethylene (PE) plastic pipe	ASTM F667; ASTM F2306/F2306; ASTM F2648/F2648M
Polypropylene (PP) plastic pipe	ASTM F2736; ASTM F2764; CSA B182.13
Polyvinyl chloride (PVC) plastic pipe (Type DWV, SDR26, SDR35, SDR41, PS50 or PS100) in IPS diameters, including Schedule 40, DR 22 (PS 200) and DR 24 (PS 140); with a solid, cellular core or composite wall	ASTM D2665; ASTM D3034; ASTM F891; ASTM F1488; CSA B181.2; CSA B182.2; CSA B182.4
Vitrified clay pipe	ASTM C4; ASTM C700
Stainless steel drainage systems, Type 316L	ASME A112.3.1

R 408.30755a Rainfall rate conversion method.

Rule 755a. Section 1106.2.1 is added to the code to read as follows:

1106.2.1. Rainfall rate conversion method. The rainfall rate falling on a roof surface shall be converted to a gallon per minute (L/m) flow rate in accordance with equation 11-1.

R 408.30758 Minimum number of fixtures.

Rule 758. Sections 403.1, 403.1.1 and 403.3.1 and Table 403.1 of the code are amended to read as follows:

403.1. Minimum number of fixtures. Plumbing fixtures shall be provided for the type of occupancy and in the minimum number shown in Table 403.1. Types of occupancies not shown in Table 403.1 shall be considered individually by the code official. The number of occupants shall be determined in accordance with the Michigan building code. Occupancy classification shall be determined in accordance with the Michigan building code.

Exceptions:

1. The actual number of occupants determined by a supporting affidavit from the owner or agency.
2. Hand washing sinks in food service establishments shall be provided in accordance with section 6101 of the food law, 2000 PA 92, MCL 289.6101, incorporating by reference the United States Food and Drug Administration (FDA) food code 5-204.11 related to the location and placement of hand washing sinks.
3. Toilet facilities for public swimming pools shall be provided in accordance with R 325.2111 to R 325.2199.
4. Toilet facilities for childcare center, day care center, and nursery school facilities shall be provided in accordance with R 400.8101 to R 400.8840.
5. Toilet facilities for children's camps shall be provided in accordance with R 400.11101 to R 400.11413.

403.1.1 Fixture calculations. To determine the occupant load of each sex, the total occupant load shall be divided in half. To determine the required number of fixtures, the fixture ratio or ratios for each fixture type shall be applied to the occupant load of each sex in accordance with table 403.1. Fractional numbers resulting from applying the fixture ratios of table 403.1 shall be rounded up to the next whole number. For calculations involving multiple occupancies, the fractional numbers for each occupancy shall be summed and rounded up to the next whole number.

Exceptions:

1. The total occupant load shall not be required to be divided in half where approved statistical data indicate a distribution of the sexes of other than 50% of each sex.
2. Where multiple-user facilities are designed to serve all genders, the minimum fixtures count shall be calculated at 100%, based on total occupant load. The minimum number of required plumbing fixtures shall be in accordance with table 403.1. In multiple-user facilities, each fixture type shall be in accordance with ICC A117.1 and each urinal that is provided shall be located in a stall.
3. Distribution of the sexes is not required where single-user water closets and bathing room fixtures are provided in accordance with section 403.1.2.

403.3.1. Access. The route to the public toilet facilities required by section 403.3 shall not pass through kitchens, storage rooms, or closets. Access to the required facilities shall be from within the building. All routes shall comply with the accessibility requirements of the Michigan building code. The public shall have access to the required toilet facilities at all times that the building is occupied.

TABLE 403.1
 MINIMUM NUMBER OF REQUIRED PLUMBING FIXTURES^a
 (See Sections 403.1.1 and 403.2)

NO.	CLASSIFICATION	OCCUPANCY	DESCRIPTION	WATER CLOSETS (URINALS SEE SECTION 419.2)		LAVATORIES		BATHTUBS/ SHOWERS	DRINKING FOUNTAIN ^{e,f} (SEE SECTION 410.1)	OTHER
				MALE	FEMALE	MALE	FEMALE			
1	Assembly	A-1 ^d	Theaters and other buildings for the performing arts and motion pictures	1 per 125	1 per 65	1 per 200			1 per 500	1 service sink
		A-2 ^d	Nightclubs, bars, taverns, dance halls, and buildings for similar purposes	1 per 40	1 per 40	1 per 75			1 per 500	1 service sink
			Restaurants, banquet halls and food courts	1 per 75	1 per 75	1 per 200			1 per 500	1 service sink
			Casino gaming areas	1 per 100 for the first 400 and 1 per 250 for the remainder exceeding 400	1 per 50 for the first 400 and 1 per 150 for the remainder exceeding 400	1 per 250 for the first 750 and 1 per 500 for the remainder exceeding 750		—	1 per 1,000	1 service sink
		A-3 ^d	Auditoriums without	1 per 125	1 per 65	1 per 200			1 per 500	1 service sink

	permanent seating, art galleries, exhibition halls, museums, lecture halls, libraries, arcades, and gymnasiums							
	Passenger terminals and transportation facilities	1 per 500	1 per 500	1 per 750			1 per 1,000	1 service sink
	Places of worship and other religious services.	1 per 150	1 per 75	1 per 200			1 per 1,000	1 service sink
A-4	Coliseums, arenas, skating rinks, pools, and tennis courts for indoor sporting events and activities	1 per 75 for the first 1,500 and 1 per 120 for the remainder exceeding 1,500	1 per 40 for the first 1,520 and 1 per 60 for the remainder exceeding 1,520	1 per 200	1 per 150		1 per 1,000	1 service sink
A-5	Stadiums, amusement parks, bleachers, and grandstands for outdoor sporting events and activities	1 per 75 for the first 1,500 and 1 per 120 for the remainder exceeding 1,500	1 per 40 for the first 1,520 and 1 per 120 for the remainder exceeding 1,520	1 per 200	1 per 150		1 per 1,000	1 service sink

2	Business	B	Buildings for the transaction of business, professional services, other services involving merchandise, office buildings, banks, light industrial, and similar uses	1 per 25 for the first 50 and 1 per 50 for the remainder exceeding 50	1 per 40 for the first 80 and 1 per 80 for the remainder exceeding 80		1 per 100	1 service sink ^e	
3	Educational	E	Educational facilities	1 per 50	1 per 50		1 per 100	1 service sink	
4	Factory and industrial	F-1 and F-2	Structures in which occupants are engaged in work fabricating, assembling, or processing of products or materials	1 per 100	1 per 100		1 per 400	1 service sink	
5	Institutional	I-1	Custodial care facilities	1 per 10	1 per 10	1 per 8	1 per 100	1 service sink	

		I-2	Medical care recipients in hospitals and nursing homes	1 per room c	1 per room c	1 per 15	1 per 100	1 service sink per floor
			Employees in hospitals and nursing homes ^b	1 per 25	1 per 35		1 per 100	
			Visitors in hospitals and nursing homes	1 per 75	1 per 100		1 per 500	
		I-3	Prisons ^b	1 per cell	1 per cell	1 per 15	1 per 100	1 service sink
			Reformatories, detention centers, and correctional centers ^b	1 per 15	1 per 15	1 per 15	1 per 100	1 service sink
			Employees in reformatories, detention centers and correctional centers ^b	1 per 25	1 per 35	-	1 per 100	-
		I-4	Adult day care and childcare	1 per 15	1 per 15	1	1 per 100	1 service sink
6	Mercantile	M-1	Retail stores, service stations, shops, salesrooms, markets and shopping centers	1 per 500	1 per 750	—	1 per 1,000	1 service sink

7	Residential	R-1	Hotels, motels, and boarding houses (transient)	1 per sleeping unit	1 per sleeping unit	1 per sleeping unit	—	1 service sink
		R-2	Dormitories, fraternities, sororities and boarding houses (not transient)	1 per 10	1 per 10	1 per 8	1 per 100	1 service sink
		R-2	Apartment house	1 per dwelling unit	1 per dwelling unit	1 per dwelling unit	—	1 kitchen sink per dwelling unit; 1 automatic clothes washer connection per 20 dwelling units
		R-3	Congregate living facilities with 16 or fewer individuals	1 per 10	1 per 10	1 per 8	1 per 100	1 service sink
		R-3	1 and 2 family dwelling and lodging houses with five or	1 per dwelling unit	1 per dwelling unit	1 per dwelling unit	—	1 kitchen sink per dwelling unit; 1 automatic

			fewer guestrooms					clothes washer connection per dwelling unit
		R-4	Congregate living facilities with 16 or fewer individuals	1 per 10	1 per 10	1 per 8	1 per 100	1 service sink
8	Storage	S-1 S-2	Structure for the storage of goods, warehouses, storehouses, and freight depots. Low and moderate hazard.	1 per 100	1 per 100	—	1 per 1,000	1 service sink

- a. The fixtures shown are based on 1 fixture being the minimum required for the number of individuals indicated or any fraction of the number of individuals indicated. The number of occupants shall be determined by the International Building Code.
- b. Toilet facilities for employees shall be separate from facilities for inmates or care patients.
- c. A single-occupant toilet room with 1 water closet and 1 lavatory serving not more than 2 adjacent patient sleeping units shall be allowed provided that each patient sleeping unit has direct access to the toilet room and provision for privacy for the toilet room user is provided.
- d. The occupant load for seasonal outdoor seating and entertainment areas shall be included when determining the minimum number of facilities required.
- e. For business and mercantile classifications with an occupant load of 15 or fewer, service sinks shall not be required.
- f. The required number and type of plumbing fixtures for outdoor public swimming pools shall be in accordance with section 609 of the International Swimming Pool and Spa Code.

R 408.30758a High and low drinking fountains minimum number.

Rule 758a. Section 410.3.1 is added to the code to read as follows:

410.3.1. High and low drinking fountains minimum number. Where drinking fountains are required, no fewer than 2 drinking fountains shall be provided. One drinking fountain shall comply with the requirements for people who use a wheelchair, and 1 drinking fountain shall comply with the requirements for standing individuals.

Exceptions:

1. A single drinking fountain with 2 separate spouts that complies with the requirements for individuals who use a wheelchair and standing individuals shall be allowed to be substituted for 2 separate drinking fountains.
2. Where drinking fountains are primarily for children's use, the drinking fountains for people using wheelchairs shall be allowed to comply with the children's provisions in ICC A117.1 and drinking fountains for standing children shall be allowed to have the spout at 30 inches, 762 mm, minimum above the floor.
3. Referencing building code for all height requirements of drinking fountains and water coolers.

R 408.30758b Water supply.

Rule 758b. Section 411.3 is added to the code to read as follows:

411.3. Water supply. Where hot and cold water are supplied to an emergency shower or eyewash station, the temperature of the water supply shall only be controlled by temperature-actuated mixing valve complying with ASSE 1071. Where water is supplied directly to an emergency shower or eyewash station from a water heater, the water heater shall comply with ASSE 1085, See section 607.1.2.

R 408.30762 Floor drains; public toilet rooms.

Rule 762. Section 413.5 is added to the code to read as follows:

413.5. Floor drains; public toilet rooms. In all public toilet rooms that contain a combination of 3 or more water closets or urinals, at least 1 approved floor drain shall be installed connecting to the sanitary system. However, stall urinals may serve as floor drains if the entire floor can be drained to the urinals.