

2021 Michigan Plumbing Code Update Class

Skilled Trades Regulation Act PA 407 2016

Section 113 (2) for Master Plumbers and Section 1115(3) for Journey Plumber

- **Summary:** The law requires code update classes for licensed Masters and Journey plumbers.

The department and board have decided upon a 3-hour class for the 2021 code cycle. Classes shall be completed within the first year of the code change. Included in this code update is the 2021 Michigan Plumbing Code. The 2021 edition of the Michigan Plumbing Code goes into effect on March 12 of 2024.

Section 1111 (1) Contractor

- **Summary:** The plumbing contractor shall have a master plumber representing their company or be a master plumber themselves.

Section 1107 (1) Plumbing Contractor Secures Permit.

- **Summary:** The plumbing contractor shall obtain permits for their company and not for others.

Section 1107 (2) (d) Plumbing; license; exceptions.

- **Summary:** A license is not required for the installation of the building drain or water service if a permit is secured.

Section 1117 (1) Apprentice Plumber

- **Summary:** The law requires that an individual employed as a plumbing apprentice, must register with the department within 30 days after employment.

Section 1125 (5) Master, journey and apprentice plumbers

- **Summary:** All Master, journey and apprentice plumbers are required to carry their license or registration along with a photo-identification.

° Single line in the margin designates an ICC change from the 2018 code.

° A single bullet point (•) in the margin indicates that the text or table has been relocated in the code.

° A double bullet point (••) in the margin indicates the text immediately following has been relocated elsewhere in the code.

° An asterisk (*) in the margin indicates that a section from the International Plumbing Code was not adopted.

° A bold arrow (→) indicates a deletion of an entire section, paragraph, exception or a table from the International Plumbing Code.

° An italicized term in the code text indicates that the term is defined in Chapter 2. If the same term is used and is not italicized it may not have the same meaning as the italicized term.

Letter designations in front of a code section designates that the code section was considered and voted upon by a different code committee than the International Plumbing Code Development Committee.

Examples: (E) designate the International Energy Conservation Code

Development Committee, (BG) designates the IBC- General Code Development Committee and (M) designates the International Mechanical Code Development Committee.

3) As a condition of renewal of a journey plumber's license, the journey plumber must demonstrate the successful completion of a course, approved by the board, concerning any update or change in the state construction code within 12 months after the update or change in that code. This requirement applies only during or after those years that the state construction code is updated or changed.

2) As a condition of renewal of a master plumber's license, the master plumber must demonstrate the successful completion of a course, approved by the board, concerning any update or change in the state construction code within 12 months after the update or change in that code. This requirement applies only during or after those years that the state construction code is updated or changed.

Section 101

Scope and General Requirements

101.2 Scope

Exception: Detached 1- and 2-family dwellings and townhouses not more than 3 stories above grade plane in height with a separate means of egress, and their accessory structures not more than three stories above grade plane in height, shall comply with the Michigan Residential Code.

Summary; Reworded the meaning of family dwellings and townhouses.

(A)101.3 Purpose. The purpose of this code is to establish minimum requirements to provide a reasonable level of safety, health, property

protection and general welfare by regulating and controlling the design, construction, installation, quality of materials, location, and operation and maintenance or use of plumbing equipment and systems.

Summary; Added language for clarification.

[A] 103.1 Creation of Agency. The building department is hereby created and the official in charge thereof shall be known as the code official. The function of the agency shall be the implementation, administration and enforcement of the provisions of this code.

Summary; New section, review

[A] 109.1 Payment of fees. A permit shall not be valid until the fees prescribed by law have been paid. An amendment to the permit shall not be released until the additional fee, if any, has been paid.

Summary; New section, review

[A] 109.2 Schedule of permit fees. Where work requires a permit, a fee for each permit shall be paid as required, in accordance with the schedule as established by the applicable governing authority.

Summary; New section, review

[A] 109.3 Work commencing before permit issuance. Any person who commences any work on a plumbing system before obtaining the necessary permits shall be subject to a fee established by the code official that shall be in addition to the required permit fees.

Summary; New section, review

[A] 109.4 Related fees. The payment of the fee for the construction, alteration, removal or demolition for work done in connection to or

concurrently with the work authorized by a permit shall not relieve the applicant or holder of the permit from the payment of other fees that are prescribed by law.

Summary; New section, review

[A] 109.5 Refunds. The code official is authorized to establish a refund policy.

Summary; New section, review

[A] 110.1 Construction Documents. Construction documents, engineering calculations, diagrams and other such data shall be submitted in two or more sets, or in digital format were allowed by the code official, with each application for a permit. The code official shall require construction documents, computations and specifications to be prepared and designed by a registered design professional where required by state law. Construction documents shall be drawn to scale and shall be of sufficient clarity to indicate the location, nature and extent of the work proposed and show in detail that the work conforms to the provisions of this code. Construction documents for buildings more than two stories in height shall indicate where penetrations will be made for pipes, fittings and components and shall indicate the materials and methods for maintaining required structural safety, fire-resistance rating and fire blocking.

Exception: The code official shall have the authority to waive the submission of construction documents, calculations or other data if the nature of the work applied for is such that reviewing of construction documents is not necessary to determine compliance with this code.

Summary: Digital format for plan submittal, where allowed, is another approved means.

(A) **111.1 Approval.** After the prescribed tests and inspections indicate that the work complies in all aspects with this code, a notice of approval shall be issued by the code official.

Summary; For inspection of plumbing work.

Section 112

[A] 112.2 Temporary Connection.

The code official shall have the authority to authorize the temporary connection of the building or system to the utility, source of energy, fuel, power, water system or sewer system for the purpose of testing plumbing systems or for use under a temporary approval.

Summary; Includes all types of connections.

[A] 112.3 Authority to Disconnect Service Utilities.

The code official shall have the authority to authorize disconnection of utility service to the building, structure or system regulated by this code and referenced codes and standards in case of an emergency where necessary to eliminate an immediate hazard to life or property where such utility connection has been made without approval required by section 1123.1 or 112.2.

The code official shall notify the serving utility, and wherever possible the owner or the owner's authorized agent and occupant of the building, structure or service system, of the decision to disconnect prior to taking such action. If not notified prior to disconnecting, the owner, the owner's authorized agent or occupant of the building, structure or

service system shall be notified in writing as soon as practical thereafter.

Summary: New section, review the requirements for disconnect.

Section 113

Stop work Order.

[A]113.1 Authority. Where the code official finds any work regulated by this code being performed in a manner contrary to the provisions of this code or in a dangerous or unsafe manner, the code official is authorized to issue a stop work order.

Summary: New section, review the requirements.

[A]113.2 Issuance. The stop work order shall be in writing and shall be given to the owner of the property, the owner's authorized agent or the person performing the work. Upon issuance of a stop work order, the cited work shall immediately cease. The stop work order shall state the reason for the order and the conditions under which the cited work is authorized to resume.

Summary: New section, review the requirements.

[A] 113.3 Emergencies. Where an emergency exists, the code official shall not be required to give a written notice prior to stopping the work.

Summary; New section, review

[A] 113.4 Failure to comply. Any person who shall continue any work after having been served with a stop work order, except such work as that person is directed to perform to remove a violation or unsafe

condition, shall be subject to fines established by the authority having jurisdiction.

Summary; New section, review.

Section 114

Means of Appeal

[A] 114.1 General. In order to hear and decide appeals of orders, decisions or determinations made by the code official relative to the application and interpretation of this code, there shall be and is hereby created a board of appeals. The board of appeals shall be appointed by the applicable governing authority and shall hold office at its pleasure. The board shall adopt rules of procedure for conducting its business and shall render all decisions and findings in writing to the appellant with a duplicate copy to the code official.

Summary: New section, review the requirements.

[A] 114.2 Limitations on authority. An application for appeal shall be based on a claim that the true intent of this code or the rules legally adopted thereunder have been incorrectly interpreted, the provisions of this code do not fully apply, or an equivalent or better form of construction is proposed. The board shall not have authority to waive requirements of this code or interpret the administration of this code.

[A] 114.3 Qualifications. The board of appeals shall consist of members who are qualified by experience and training and are not employees of the jurisdiction.

Summary; New section, review.

[A] 114.4 Administration. The code official shall take immediate action with the decision of the board.

Summary: New section, review the outcome.

Definitions, Chapter 2

Copper Alloy. A metal alloy where the principal component is copper.

Dual Flushing Device. A feature that allows the user to flush a water closet with either a reduced or full volume of water, depending on bowl contents.

Group Wash Fixture. A type of lavatory that allows more than one person to utilize the fixture at the same time. The fixture has one or more drains and one or more faucets.

Private. In the classification of plumbing fixtures, “private” applies to the fixtures that are not public.

Public or Public Utilization. In the classification of plumbing fixtures, "public" applies to fixtures with unrestricted exposure to walk-in traffic.

Push-Fit Fitting. A mechanical fitting that joins pipes or tubes and achieves a seal by mating the pipe or tube into the fitting.

Water Dispenser. A plumbing fixture that is manually controlled by the user for the purpose of dispensing potable drinking water into a receptacle such as a cup, glass or bottle. Such fixture is connected to the potable water distribution system of the premises.

Summary: New definitions, review the new definitions.

General Regulations, Chapter 3

308.2 Piping Seismic Supports. Where earthquake loads are applicable in accordance with the building code, plumbing piping supports, anchorage, and bracing shall be designed and installed for seismic forces in accordance with Chapter 16 of the Michigan Building Code.

Summary: New language means of support.

308.9 Parallel Water Distribution Systems. Piping bundles for manifold systems shall be supported in accordance with Table 308.5. Support at changes in direction shall be in accordance with the manufacturer's instructions. Where hot water piping is bundled with cold water piping, hot water piping shall be insulated in accordance with Section 607.5.

Summary; New language, directing to section number.

The bureau has amended Section 312.10.1 of the IPC regarding inspections of backflow prevention assemblies as follows:

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 on all backflow prevention assemblies and air gaps after installation or relocation to determine whether the assemblies are operable and air gaps exist.

Summary; Michigan Rule, Part 7

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 fire 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: ASSE 5013, ASSE 5015, ASSE 5020, ASSE 5047, ASSE 5048, ASSE 5052, ASSE 5056, CSA B64.10, CSA B64.10.1.

Summary; Michigan Rule, Part 7

Condensate Disposal

Section 314

[M] 314.1.1 Identification. The termination of concealed condensate piping shall be marked to indicate whether the piping is connected to the primary or secondary drain. (Fuel-burning appliances)

Summary; New section, review requirements.

[M] 314.2.1.1 Condensate Discharge. Condensate drains shall not directly connect to any plumbing drain, waste or vent pipe. Condensate drains shall not discharge into any plumbing fixture other than a floor sink, floor drain, trench drain, mop sink, hub drain, standpipe, utility sink or laundry sink. Condensate drain connections to a lavatory wye branch tailpiece, or a bathtub overflow pipe shall not be considered as discharging to a plumbing fixture. Except where discharging to grade outdoors, the point of discharge of condensate drains shall be located within the same occupancy, tenant space or dwelling unit as the source of the condensate.

Summary; New section, review connection options.

[M] 314.2.2 Drainpipe Materials and Sizes. Components of the condensate disposal system shall be ABS, cast-iron, copper and copper-alloy, CPVC, cross-linked polyethylene, galvanized steel, PE-RT, polyethylene, polypropylene, PVC, or PVDF pipe or tubing. Components shall be selected for the pressure and temperature rating of the installation. Joints and connections shall be made in accordance with the applicable provisions of Chapter 7 relative to the material type. Condensate waste and drain line size shall be not less than 3/4-inch (19.1 mm) pipe size and shall not decrease in size from the drain pan connection to the place of condensate disposal. Where the drain pipes from more than one unit are manifolded together for condensate drainage, the pipe or tubing shall be sized in accordance with Table 314.2.2

Summary; New material and language.

[M] 314.2.3.3 Identification. The termination of concealed piping shall be marked to indicate whether the piping is connected to the primary or secondary drain (Appliance, equipment).

Summary; New requirements, review.

Fixtures, Faucets and Fixture Fittings, Chapter 4

The bureau has amended Sections 403.1 through 403.3.1 of the IPC regarding the minimum number of fixtures as follows:

R 408.30758 Minimum number of fixtures.

Rule 758. Section 403.1.1(2) is added to read as follows:

403.1.1(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 ICC A117.1 and each urinal that is provided shall be located in a stall.

Summary; New Michigan Rule, Part 7, review fixture calculations, including accessible fixture requirements.

403.1.2 Single-User Toilet Facility and Bathing Room Fixtures. The plumbing fixtures located in single-user toilet facilities and bathing rooms, including family or assisted-use toilet and bathing rooms that are required by Section 1109.2.1 of the Michigan Building Code, shall contribute toward the total number of required plumbing fixtures for a building or tenant space. Single-user toilet and bathing rooms, and family or assisted-use toilet rooms and bathing rooms shall be identified as being available for use by all persons regardless of their sex.

The total number of fixtures shall be permitted to be based on the required number of separate facilities or based on the aggregate of any combination of single-user or separate facilities.

Summary: New language and requirements, discuss fixture requirement calculation.

403.2 Separate facilities. (exceptions)

5. Separate facilities shall not be required to be designated by sex where single-users toilet rooms are provided in accordance with Section 403.1.2.

6. Separate facilities shall not be required where rooms having both water closets and lavatory fixtures are designed for use by both sexes

and privacy for water closets is provided in accordance with Section 405.3.4. Urinals shall be located in an area visually separated from the remainder of the facility or each urinal that is provided shall be located in a stall.

Summary; New exceptions, review.

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 or from the exterior of the building. The public shall always have access to the required toilet facilities that the building is occupied.

403.3.3 Location of Toilet Facilities in Occupancies Other Than Malls.

(Added to exceptions)

2. The location and maximum distances of travel to required public and employee facilities in Group S occupancies shall be permitted to exceed that required by this section, provided that the location and maximum distances of travel are approved.

Summary; New exceptions, review distance requirements.

403.6 Service sink location. Service sinks shall not be required to be located in individual tenant spaces in a covered mall provided that the service sinks are located within a distance of travel of 300 feet (91 m) of the most remote location in the tenant space and not more than one story above or below the tenant space. Service sinks shall be located on an accessible route.

Summary; New section, review service sinks.

404.2 Accessible fixture requirements. Accessible plumbing fixtures shall be installed in accordance with ICC A117.1.

Summary: New section, discuss ICC A117.1

405.3.1 Water Closets, Urinals, Lavatories and Bidets.

A water closet, urinal, lavatory or bidet shall not be set closer than 15 inches (381 mm) from its center to any side wall, partition, vanity or other obstruction. Where partitions or other obstructions do not separate adjacent water closets, urinals, or bidets, the fixtures shall not be set closer than 30 inches (762 mm) center to center between adjacent fixtures or adjacent water closets, urinal, or bidets. There shall be not less than a 21-inch (533 mm) clearance in front of a water closet, urinal, lavatory or bidet to any wall, fixture or door. Water closet compartments shall be not less than 30 inches (762 mm) in width and not less than 60 inches (1524 mm) in depth for floor-mounted water closets and not less than 30 inches (762 mm) in width and 56 inches (1422 mm) in depth for wall-hung water closets.

Exception: An accessible children's water closet shall be set not closer than 12 inches (305 mm) from its center to the required partition or to the wall on one side.

Summary; New language, and lists fixtures.

405.4.3 Securing Wall-Hung Water Closet Bowls. Wall-hung water closet bowls shall be supported by a concealed metal carrier that is attached to the building structural members so that strain is not transmitted to the fixture connector or any other part of the plumbing system. The carrier shall conform to ASME A112.6.1 or ASME A112.6.2.

Summary: New Language, lists standards

407.2 Bathtub Waste Outlets and Overflows. Bathtubs shall be equipped with a waste outlet that is not less than 1 ½ inches (38 mm) in diameter. The waste outlet shall be equipped with a water-tight stopper. Where the overflow is installed, the overflow shall be not less than 1 ½ inches (38 mm) in diameter.

Summary; New language, and lists dimensions.

410.1 Approval. Drinking fountains shall conform to ASME A112.19.1/CSA B45.2 or ASME A112.19.2/CSA B45.1 or ASME A112.9.3/CSA B45.4 and water coolers shall conform to ASHRAE 18. Drinking fountains, water coolers and water dispensers shall conform to NSF 61, Section 9. Electrically operated, refrigerated drinking water coolers and water dispensers shall be listed and labeled in accordance with UL 399.

Summary; New language, and lists standards.

410.3 High and Low Drinking Fountains. Where drinking fountains are provided on an exterior site, on a floor or within a secured area, the drinking fountains shall be provided in accordance with Sections 410.3.1 and 410.3.2.

Summary; New section, new drinking fountain requirements

[BE] 410.3.1 Minimum number. Not fewer than two drinking fountains shall be provided. One drinking fountain shall comply with the requirements for people who use a wheelchair and one drinking fountain shall comply with the requirements for standing persons.

Summary; New section heading language.

[BE] 410.3.2 More than the minimum number. Where more than the minimum number of drinking fountains specified in Section 410.3.1 is provided, 50 percent of the total number of drinking fountains provided shall comply with the requirements for persons who use wheelchair and 50 percent of the total number of drinking fountains provided shall comply with the requirements for standing persons.

Summary; New section, new language for drinking fountain installation.

410.3 High and Low Drinking Fountains (continued) .

Exceptions:

1. Where 50 percent of the drinking fountains yields a fraction, 50 percent shall be permitted to be rounded up or down, provided that the total number of drinking fountains complying with this section equals 100 percent of the drinking fountains.

2. Where drinking fountains are primarily for children's use, drinking fountains for people using wheelchairs shall be permitted to comply with the children's provisions in ICC A117.1 and drinking fountains for standing children shall be permitted to provide the spout at 30 inches (752 mm) minimum above the floor.

Summary: New language, changes for exceptions, review application.

410.4 Substitution. Where restaurants provide drinking water in a container free of charge, drinking fountains shall not be required in those restaurants. In other occupancies where three or more drinking fountains are required, water dispensers shall be permitted to be substituted for not more than 50 percent of the required number of drinking fountains.

Summary; New language.

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.

Summary; New language, standard for water heater.

412.3 Individual Shower Valves. Individual shower and tub-shower combination valves shall be balanced-pressure, thermostatic or combination balanced-pressure/thermostatic valves that conform to the requirements of ASSE 1016/ASME A112.1016/CSA B125.16 or ASME A112.18.1/CSA B125.1. Such valves shall be installed at the point of use. Shower control valves shall be rated for the flow rate of the installed shower head. Shower and tub-shower combination valves required by this section shall be equipped with a means to limit the maximum setting of the valve to 120°F (49°C), which shall be field adjusted in accordance with the manufacturer's instructions to provide water at a temperature not to exceed 120 degrees (49 c). In-line thermostatic valves shall not be utilized for compliance with this section.

Summary; New language, location and requirements for valves.

412.4 Multiple (Gang) Showers. Multiple (gang) showers supplied with a single-tempered water supply pipe shall have the water supply for such showers controlled by an approved automatic temperature control mixing valve that conforms to ASSE 1069 or CSA B125.3, or each shower head shall be individually controlled by a balanced-pressure,

thermostatic or combination balanced-pressure/thermostatic valve that conforms to ASSE 1016/ASME A112.1016/CSA B125.16 or ASME A112.18.1/CSA B125.1 and that is installed at the point of use. Where a shower head is individually controlled, shower control valve shall be rated for the flow rate of the installed shower head. Such valves shall be equipped with a means to limit the maximum setting of the valve to 120 degrees F (49 C), which shall be field adjusted in accordance with the manufacturers' instructions to provide water at a temperature). Access not to exceed 120 degrees F (49 C shall be provided to an ASSE 1069 or CSA B125.3 valve.

Summary; New, language location and requirements.

412.5 Bathtub and whirlpool bathtub valves. Bathtubs and whirlpool bathtub valves shall have or be supplied by a water-temperature-limiting device that conforms to ASSE1070/ASME A 112.1070/CSA B125.70 or by a water heater complying with ASSE 1082 or ASSE 1084, except where such valves are combination tub/shower valves in accordance with Section 412.3. The water-temperature-limiting device required by this section shall be equipped with a means to limit the maximum setting of the device to 120 degrees F (49C), and, where adjustable, shall be field adjusted in accordance with the manufacturer's instructions to provide hot water at a temperature not to exceed 120 degrees F (49C). Access shall be provided to water-temperature-limiting devices that conform to ASSE1070/ASME A 112.1070/CSA B125.70.

Exception. Access shall not be required for non-adjustable water-temperature-limiting devices that conform to ASSE1070/ASME A

112.1070/CSA B125.70 and are integral with fixture fitting, provided that the fixture fitting itself can be accessed for replacement.

Summary; New section, standards and installation requirements.

412.10 Head Shampoo Sink Faucets. Head shampoo sink faucets shall be supplied with hot water that is limited to not more than 120°F (49°C). Each faucet shall have integral check valves to prevent crossover flow between the hot and cold-water supply connections. The means for regulating the maximum temperature shall be one of the following:

1. A limiting device that conforming to ASSE 1070/ASME A112.1070/CSA B125.70.

2. A water heater conforming to ASSE 1082.

3. A temperature-actuated, flow-reduction device conforming to ASSE 1062.

Summary; New, language requirements and standards.

412.11 Prerinse spray valve. Prerinse spray valves for commercial food service shall conform to ASME A112.18.1/CSA B125.1.

Summary; New section, standards.

416.1 Approval. Domestic food waste disposers shall conform to ASSE 1008 and shall be listed and labeled in accordance with UL 430. Commercial food waste disposers shall be listed and labeled in accordance with UL 430. Food waste disposers shall not increase the drainage fixture unit load on the sanitary drainage system.

Summary; New language, standards.

419.1 Approval. Lavatories shall conform to ASME A112.19.1/CSA B45.2, ASME A112.19.2/CSA B45.1, ASME A112.19.3/CSA B45.4 or CSA B45.5/IAPMO Z124. Group wash fixtures shall conform to the requirements of Section 402. For determining the number of lavatories required by Table 403.1, every 20 inches (508 mm) of rim space of a group wash fixture shall be considered as one lavatory.

Summary; New language, requirements and sizing calculation.

419.3 Lavatory Waste Outlets. Lavatories and group wash fixtures shall have a waste outlet not less than 1 1/4 inches (32 mm) in diameter. A strainer, pop-up stopper, crossbar or other device shall be provided to restrict the clear opening of the waste outlet.

Summary: New, language includes group wash fixture

421.1 Approval. Prefabricated showers and shower compartments shall conform to ASME A112.19.1/CSA B45.2, ASME A112.19.2/CSA B45.1, ASME A112.19.3/CSA B45.4 or CSA B45.5/IAPMO Z124. Shower valves for individual showers shall conform to the requirements of Section 412.3.

Summary; New language, standards.

421.3.1 Waste fittings. Waste fittings shall conform to ASME A112.18.2/CSA B125.2.

Summary; New section, standards.

Water heaters, Chapter 5

501.2 Water Heater as Space Heater. Where a combination potable water heating and space heating system requires water for space

heating at temperatures greater than 140°F (60°C), a temperature-actuated mixing valve complying with ASSE 1017 shall be provided to limit the water supplied to the potable hot water distribution system to a temperature of 140°F (60°C) or less. The potability of the water shall be maintained throughout the system. Requirements for combination potable water heating and space heating systems shall be in accordance with the International Mechanical Code.

Summary; New language, requirements, review.

Water supply and Distribution, Chapter 6

Table 605.3 Water service pipe. There are new listed standards for Stainless Steel Pipes:

Stainless steel pipe (Type 304/304L) ASTM A312; ASTM A778; ASTM A 269/A269M.

Stainless steel pipe (Type 316/316L) ASTM A312; ASTM A778; ASTM A269/A269M.

Summary; New standards, material.

605.12.3 Solder Joints. Solder joints (for pipes) shall be made in accordance with ASTM B828. Cut tube ends shall be reamed to the full inside diameter of the tube end. Joint surfaces shall be cleaned. A flux conforming to ASTM B813 shall be applied. The joint shall be soldered with a solder conforming to ASTM B32. The joining of water supply piping shall be made with lead-free solder and fluxes. "Lead free" shall mean a chemical composition equal to or less than 0.2-percent lead. Solder and flux joining pipe or fittings intended to supply drinking water shall conform to NSF 61.

Summary; New language, requirements for pipe.

605.13.6 Solder Joints. Solder joints (for tubing) shall be made in accordance with the methods of ASTM B828. Cut tube ends shall be reamed to the full inside diameter of the tube end. Joint surfaces shall be cleaned. A flux conforming to ASTM B813 shall be applied. The joint shall be soldered with a solder conforming to ASTM B32. The joining of water supply piping shall be made with lead-free solder and flux. "Lead free" shall mean a chemical composition equal to or less than 0.2-percent lead. Solder and flux joining pipe or fittings intended to supply drinking water shall conform to NSF 61.

Summary; New language, requirements for tubing.

606.1 Location of Full-Open Valves.

Full-open valves shall be installed in the following locations:

On the building water service pipe from the public water supply near the curb.

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 other than one-and two-family dwellings, a main shutoff valve shall be provided for each tenant.

On the discharge side of every water meter.

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

On the top of every water down-feed pipe in occupancies other than one- and two-family residential occupancies.

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

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

On the water supply pipe to every water heater.

Summary: New language, regarding multiple tenant buildings, discuss.

607.1.1 Temperature Limiting Means. A thermostat control for a water heater shall only serve as the temperature limiting means for the purposes of complying with the requirements of this code for maximum allowable hot or tempered water delivery temperature at fixtures where the water heater complies with ASSE 1082 or ASSE 1085.

Summary; New language and standards for water heater application.

607.1.2 Tempered water temperature control. Tempered water shall be controlled by one 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 F (43 C).

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.

Summary; New section listing standards.

607.2.2 Piping for Recirculation Systems Having Master Thermostatic Valves. Where a temperature-actuated mixing valve is used in a system

with a hot water recirculating pump, the hot water or tempered water return line shall be routed to the cold-water inlet pipe of the water heater and the cold-water inlet pipe or the hot water return connection of the temperature-actuated mixing valve.

Summary; New language.

Table 608.1. The following were added to the table.

Reduce pressure detector fire protection backflow prevention assembly; (under application) (automatic sprinkler system).

Backflow preventer with intermediate atmospheric vent and pressure-reducing valve.

Summary; New language, review.

608.15.2.1 Relief Port Piping. The termination of the piping from the relief port or air gap fitting of a backflow preventer shall discharge to an approved indirect waste receptor or to the outdoors where it will not cause damage or create a nuisance. The indirect waste receptor and drainage piping shall be sized to drain the maximum flow rate from the relief port as published by the backflow preventer manufacturer.

Summary; New language, requirements.

608.17.2 Connections to Boilers. The potable supply to the boiler shall be equipped with a backflow preventer with an intermediate atmospheric vent complying with ASSE 1012, ASSE 1081 or CSA B64.3. Where conditioning chemicals are introduced into the system, the potable water connection shall be protected by an air gap or a reduced pressure principal backflow preventer, complying with ASSE 1013, CSA B64.4 or AWWA C511.

608.17.4 Connections to Automatic Fire Sprinkler Systems and Standpipe Systems. The potable water supply to automatic fire sprinkler systems and standpipe systems shall be protected against backflow by a double check backflow prevention assembly, a double check fire protection backflow prevention assembly, or a reduced pressure principal fire protection backflow prevention assembly.

Summary; New language.

608.17.4.1 Additives or Nonpotable Source. Where systems under continuous pressure contain chemical additives or antifreeze, or where systems are connected to a nonpotable secondary water supply, the potable water supply shall be protected against backflow by a reduced pressure principal backflow prevention assembly or a reduced pressure principal fire protection backflow prevention assembly. Where chemical additives or antifreeze are added to only a portion of an automatic fire sprinkler system or standpipe system, the reduced pressure principal backflow prevention assembly or the reduced pressure principal fire protection backflow prevention assembly shall be permitted to be located to isolate that portion of the system. Where systems are not under continuous pressure, the potable water supply shall be protected against backflow by an air gap or an atmospheric vacuum breaker conforming to ASSE 1001 or CSA B64.1.1.

Summary; New language.

609.2 Water service for Group I-2 facilities, Condition 2 facilities.

Group I-2, Condition 2 facilities shall have not fewer than two water service pipes sized such that with the loss of the largest service pipe, the remaining service pipes will meet the water demand for the entire facility. Each water service shall have a shutoff valve in the building and

a shutoff valve at the utility-provided point of connection to the water main or other source of potable water.

Summary: New section, requirements for group I-2 water services

609.2.1 Tracer wire for non-metallic piping. An insulated tracer wire listed for the purpose or other approved conductor shall be installed adjacent to the underground nonmetallic piping serving as a water service for a hospital. Access shall be provided to the tracer wire or the tracer wire shall terminate above ground at each end of the nonmetallic piping. The tracer wire size shall be not less than 18 AWG and the wire insulation type shall be suitable for direct burial.

Summary; New section, water service tagging.

Sanitary Drainage, Chapter 7

705.2 Push-fit joints. (ABS) Push-fit DWV fittings shall be listed and labeled to ASME A112.4.4 and shall be installed in accordance with the manufacturer's instructions.

Summary; New section, approved fittings for ABS.

705.2 Push-fit joints. (PVC) Push-fit DWV fittings shall be listed and labeled to ASME A112.4.4 and shall be installed in accordance with the manufacturer's instructions.

Summary; New section, approved fittings for PVC.

708.1 Cleanouts Required. Cleanouts shall be provided for drainage piping in accordance with Sections 708.1.1 through 708.1.12.

Summary: New section added.

708.1.6 Cleanout equivalent. A fixture trap or a fixture with integral trap, removable without altering concealed piping, shall be acceptable as a cleanout equivalent.

Summary; New section, Allowance for use as a cleanout.

708.1.12 Prohibited Use. The use of a threaded cleanout opening to add a fixture or to extend piping shall be prohibited except where another cleanout of equal size is installed with the required access and clearance.

Summary; New section heading.

Section 717 Relining Building Sewers and building drains.

(All new section)

Section 718 Rehabilitation of building sewers and building drains.

(All new section)

Summary: New section, discussion will be had on these 2 methods of sewer/ building drain repairs

Vents, Chapter 9

903.1 Vent terminal required. The vent pipe shall terminate by extending to the outdoors through the roof or the sidewall in accordance with one of the methods identified in Sections 903.1.1 through 903.1.4.

Summary; New section, rewording of vent terminal applications.

903.1.1 Roof Extension unprotected. Open vent pipes that extend through the roof shall terminate not less than 12 inches above the roof.

Summary; New section, requirements.

903.1.2 Roof used for recreational or assembly purposes. Where a roof is used as a promenade, restaurant, bar, or sunbathing deck, as an observation deck, or for similar purposes, open vent pipes shall terminate not less than 7 feet (2134 mm) above the roof.

Summary; New section, requirement.

903.1.3 Protected vent terminal. Where an open vent pipe terminates above a sloped roof and is covered by either a roof mounted panel (such as a solar collector or photovoltaic panel mounted over the vent opening) or a roof element (such as an architectural feature or a decorative shroud), the vent pipe shall terminate not less than 2 inches (51 mm) above the roof surface. Such roof elements shall be designed to prevent the adverse effects of snow accumulation and wind on the function of the vent. The placement of the panel over the vent pipe and the design of the roof element covering the vent pipe shall provide for an open area for the vent pipe to the outdoors that is not less than the area of the pipe, as calculated from the inside diameter of the pipe. Such vent terminals shall be protected by a method that prevents birds and rodents from entering or blocking the vent pipe opening.

Summary; New section, requirement for vent terminals terminating under an obstruction.

903.1.4 Sidewall vent terminal. Vent terminals extending through the wall shall terminate not less than 10 feet (3048 mm) from the lot line and 10 feet (3048 mm) above the highest adjacent grade within 10 feet (3048 mm) horizontally of the vent terminal. Vent terminals shall not terminate under the overhang of a structure with soffit vents. Side wall

vent terminals shall be protected to prevent birds or rodents from entering or blocking the vent opening.

Summary; New language, for sidewall venting.

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 (removed food waste disposer) clinical sink.

Summary: Language removed; new language added.

Traps, Interceptors and Separators, Chapter 10

1002.4.1 Trap Seal Protection. Trap seals of emergency floor drain traps and trap seals subject to evaporation shall be protected by one of the methods in Sections 1002.4.1.1 through 1002.4.1.5.

Summary: New section added.

1002.4.1.5 Fixture drain connection for trap priming. A fixture drain from a lavatory or hand sink shall serve as a method of providing trap seal protection for an emergency floor drain, a trench drain, or a floor sink where such fixtures are located in the same room. A fixture drain from a drinking fountain shall serve as a method of providing trap seal protection for an emergency floor drain, a trench drain, or a floor sink where such fixtures are in the same room or in a room adjacent to the room having the drinking fountain. The fixture drain shall not be routed on or above the surface of the floor and shall connect to the floor drain, trench drain, or floor sink at a point that is below the flood level rim and above the inlet to the trap of the receiving fixture.

Summary; New section, allowances for trap primer/connections.

Storm Drainage, Chapter 11

1102.6 Roof drains. Roof drains shall conform to ASME A112.3.1 or ASME A112.6.4. Roof drains, other than siphonic roof drains, shall be tested and rated in accordance with ASME A112.6.4 or ASPE/IAPMO Z1034.

Summary; New section, standards.

1106.2 Size of Storm Drain Piping. Vertical and horizontal storm drain piping shall be sized based on the flow rate through the roof drain. The flow rate, as calculated in accordance with Section 1106.2.1, shall be checked against the roof drain manufacturer's published flow rate for the specific roof drain model and size to verify that the selected roof drain will handle the anticipated flow. The flow rate in the storm drain piping shall not exceed that specified in Table 1106.2.

Summary; New language, calculations for roof drain sizing.

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 the Equation 11-1.

$$\text{GPM} = R \times A \times 0.0104 \quad (\text{Equation 11-1})$$

Where:

R= Rainfall intensity in inches (mm) per hour.

A= Roof area in square feet (m squared).

Summary; New section, formula

Special Piping and Storage Systems, Chapter 12

[F] 1202.1 Nonflammable Medical Gases

Nonflammable medical gas systems, inhalation anesthetic systems and vacuum piping systems shall be installed, tested and labeled in accordance with NFPA 99.

Exceptions:

This section shall not apply to portable systems or cylinder storage.

Vacuum system exhaust terminations shall comply with the Michigan Mechanical Code.

Summary; New language, requirement.