



Town of Marana
Building Safety Division
Proposed Amendments to the:
2012 International Plumbing Code

Chapter 1. DELETE chapter 1 in its entirety. **ADD:** Refer to Chapter 1 of the 2012 International Building Code for Administrative requirements.

Section 305.4.1 Sewer depth. INSERT [number] as 12" in both locations of the section.

Section 312.1 Required tests. REVISE section by **DELETING** the last two sentences of the first paragraph.

Section 410.3 Substitution. REVISE section by **ADDING** a second sentence to read: When a single drinking fountain is required, it may be substituted with a point-of-use water cooler or dispenser.

Section 504.6 Requirements for discharge piping. REVISE section by **DELETING** item number 2 for areas under 4000 feet elevation.

ADD new section 504.6.1 to read:

Section 504.6.1 Replacement water heaters. Replacement water heaters shall comply with the following when it is not feasible to run the Temperature and Pressure Relief Valve line to the exterior of the residence:

1. A drain pan shall be installed under the water heater.
2. The temperature relief valve shall be set to a maximum of 210 degree and the pressure relief valve to 150psi with a line draining into the pan.
3. A pressure relief valve set at no greater that 125psi shall be installed at the main water supply connection outside the dwelling.

Section 608.16.4 Connection to automatic fire sprinkler systems and standpipe systems. REVISE section by DELETING all text therein and REPLACING it with the following:

The potable water supply to automatic fire sprinkler and standpipe systems shall be protected against backflow in accordance with ARS § 41-2168.

Section 608.16.4.1 Additives or nonpotable source. DELETE entire section.

Section 609.6 Clinical, hydrotherapeutic and radiological equipment. REVISE section by ADDING a second sentence to read:

If water is used for cooling or heat removal, it shall comply with *International Mechanical Code*, amended section 929.

Section 707.1 Prohibited joints. REVISE section by DELETING the period at the end of item 5 and ADDING, unless the solvent-cement is listed for the purpose.

Section 715.1 Sewage backflow. REVISE section by DELETING the entire paragraph and REPLACING it with the following:

Where the finish floor elevation is less than 12 inches above the elevation of the next upstream manhole cover in the sewer, a backwater valve shall be installed in the building drain or branch of the building drain serving that floor. Floors discharging from above that reference point shall not discharge through the same backwater valve.

Section 903.1 Roof extension. INSERT [number] as 6 inches for elevations less than 4000 feet.

ADD new section 928.2 to read:

Section 928.2 Water conservation. Evaporative cooling systems shall be provided with a recirculating water system. Any bleed off rate used by the system shall be limited to that recommended by the manufacture. Once through an evaporative cooling system, water shall not re-enter the potable system.

Section 1002.4 Trap seals. REVISE section by DELETING the second sentence and REPLACING with the following:

Where a trap seal is subject to loss by evaporation, a trap seal primer valve or trap seal protection device shall be installed.

Section 1003.3 Grease interceptors: DELETE section and Table 1003.3.4.1 and REPLACE with the following:

- A. Fixtures to be connected to a grease interceptor^{1 2 3 4}
1. Pre-rinse and /or pre-wash sinks
 2. Two or three compartment sinks
 3. Meat prep sinks
 4. Wok stoves
 5. Self-cleaning stove ventilation/exhaust hoods
 6. Kitchen floor drains
 7. Floor sinks
 8. Mop sinks
 9. Food prep sinks
 10. Hand sinks³
 11. Dishwasher
 12. Food waste disposal units⁴

¹ A valid Industrial Wastewater Discharge Permit issued by the Pima County Regional Wastewater Reclamation Department (RWRD) or Marana Utilities Department, as applicable, may eliminate the need to comply with this section.

² Depending on use and context, the requirement for the above listed fixtures to drain through an interceptor may be appealed to the RWRD or Marana Utilities Department, as applicable.

³ A hand wash sink located in the kitchen area shall either discharge through a grease interceptor or have a sign posted above it stating; "HANDWASH SINK ONLY. NO FOOD PREPARATION OR DISHWASHING ALLOWED".

⁴ Discharge from food waste disposal units must drain through a minimum 3/8 inch screen.

B Hydromechanical grease interceptor's^{1 2}

Hydromechanical grease interceptors (HGI), which are generally installed inside, may be used when there are four (4) or fewer fixtures. The minimum size HGI to be installed shall be rated no smaller than 25 gallon per minute with a 50 pound grease capacity. Flow Control devices shall be designed and installed so that the total flow through such devices shall at no time be greater than the rated flow of the HGI.

Exception: Dishwater and food waste disposal units shall not drain through a hydromechanical grease interceptor.

¹ A valid Industrial Wastewater Discharge Permit issued by the Pima County Regional Wastewater Reclamation Department (RWRD) or Marana Utilities Department, as applicable, may eliminate the need to comply with this section.

² Depending on use and context, the requirement for above listed fixtures to drain through an interceptor may be appealed to RWRD or Marana Utilities Department, as applicable.

C. Grease interceptor sizing criteria

$$V (\text{min}) = F \times R \times S$$

Where:

- $V (\text{min})$ = Minimum Gravity Grease Interceptor Operating Volume, gallons
- F = Flow Rate (maximum), gallons per minute
- R = Retention Time = 30 minutes
- S = Storage Factor = 25%

Thus: $V (\text{min}) = F \times 30 \times 1.25\%$

The flow rate shall be determined based on the total flow rate from all equipment and plumbing fixtures connected to the gravity grease interceptor using one of the following equations:

- Drainage Fixture Units (DFU) less than or equal to 40: $F = (0.8 \times \text{DFU})$
- Drainage Fixture Units greater than 40: $F = (0.3 \times \text{DFU}) + 20$

Where: DFU = Drainage Fixture Units per Table 709.1

- The minimum retention time of 30 minutes is based on Wastewater Engineering, Treatment, Disposal and Reuse, Third Edition, Metcalf and Eddy, Inc. McGraw-Hill, Inc., page 1028
- A minimum of 25% storage is required for floatable fats, oil and grease and settled solids is required for gravity grease interceptors.
- The minimum sized GGI to be installed shall be 300 gallons

Note: Providing additional interceptor capacity can reduce an interceptor's maintenance frequency. However, solid accumulation and low flows in an interceptor can, over an extended period of time, produce a corrosive environment which can damage the structural integrity of the interceptor. An oversized interceptor may also generate odor problems.

Appendix B, Rates of rainfall for various cities. REVISE appendix by **ADDING** Tucson...3.0 inches under Arizona.