

# Town of Sahuarita

## AMENDMENTS TO THE 2018 INTERNATIONAL PLUMBING CODE

**Chapter 1 Scope and Administration.** Revise as follows:

Delete Chapter 1 with the exception of section 107. (Deleted sections are administered by 2018 IBC, Chapter 1).

Add the following section:

**“Section 301.4.1 Individual metering in new multi-family residential units.** The water supply to all new multi-family residential buildings shall be individually metered for each dwelling unit. The metering may be private or utility installed.”

**Section 305.4.1 Sewer depth.** Revise as follows:

Insert: [NUMBER] as “12” in both locations.

**Section 312.1 Required tests.** Revise as follows:

Delete the last two sentences of the first paragraph.

**Section 314.2.1 Condensate disposal.** Revise as follows:

Add the following at the end of the paragraph:

“Condensate disposal shall be allowed to terminate as follows:

1. Into an approved fixture tailpiece, funnel drain, waste air gap fitting, floor sink, slop sink and laundry tray.
2. At or below grade outside the building in an area capable of absorbing the condensate flow without surface drainage.
3. Over roof drains or gutters or downspouts that connect to drainage pipes, provided they terminate at or above grade in an area capable of absorbing the condensate flow without surface drainage.”

**410.4 Substitution.** Revise as follows:

Add 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 423.3 Footbaths and pedicure baths.** Revise as follows:

Add the following at the end of the paragraph:

“Provide backflow prevention on both the cold and hot water supply to each individual bath.

For tub fill only, provide air gap of three (3) times the diameter of each water inlet or reduced pressure principle backflow prevention assembly or pressure type vacuum breaker installed not less than 12 inches above the flood rim of the bath.

Drainage from each bath shall terminate with an air gap at an indirect waste receptor that includes a floor sink or washer standpipe. Gravity drains from tubs can be directly connected to the waste system through a trap and vent.”

**Section 504.6 Requirements for discharge piping.** Revise as follows:

Delete item 2.

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**604.3 Water distribution system design criteria required capacity at fixture supply pipe outlets.** Revise table by deleting the column titled “Flow Pressure (psi)” in its entirety.

**Section 608.17.4 Connections to automatic fire sprinkler systems and standpipe systems.** Revise as follows:

Delete all text therein and in subsection 608.17.4.1 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 609.6 Clinical, hydrotherapeutic and radiological equipment.** Revise as follows:

Add a second sentence to read:

“If water is used for cooling or heat removal, it shall comply with the *International Mechanical Code*, amended Section 930.”

**Section 701.2 Sewer required.** Revise as follows:

Delete, “in accordance with the *International Private Sewage Disposal Code*”.

**Section 714.1 Sewage backflow.** Revise as follows:

Delete paragraph and replace with:

“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 back water valve. “

**Section 903.1 Roof extension.** Revise as follows:

Insert: [NUMBER] as “6” inches.

**Section 1003.3 Grease interceptors.** Revise as follows:

Delete section and Table 1003.3.5.1 and replace with the following:

**“A. Fixtures to be connected to a grease interceptor located within the kitchen area or subject to grease waste <sup>1</sup>:**

- pre-rinse and or pre-wash sinks;
- two or three compartment sinks;
- meat prep sink;
- wok stoves;
- self-cleaning stove ventilation/exhaust hood;
- kitchen floor drains;
- floor sinks;
- mop sinks;
- food prep sinks;
- hand sinks <sup>2</sup>;
- dishwasher; and
- food waste disposal units <sup>3</sup>.

<sup>1</sup> Depending on use and context, the requirement for above listed fixtures to drain through an interceptor may be appealed.

<sup>2</sup> 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.”

<sup>3</sup> Discharges from food waste disposal units must drain through a minimum 3/8 inch screen or a solids separator prior to pretreatment.

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### B. Hydromechanical grease interceptors

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 gallons 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. HGIs shall be designed and tested in accordance with ASME A112.14.3, ASME A112.14.4, CSA B481.1, PDI G101, or PDI G102. HGIs shall be installed in accordance with the manufacturer's instructions. Where manufacturer's instructions are not provided, HGIs shall be installed in compliance with ASME A112.14.3, ASME A112.14.4, CSA B481.1, PDI G101, or PDI G102.

*Exception: If a dishwasher and food waste disposal unit is used in a facility, an HGI cannot be used and an appropriately sized GGI or alternative pretreatment device, capable of accepting these wastes, must be installed.*

### C. Grease interceptor sizing criteria

Gravity grease interceptor (GGI) shall be sized in accordance with table or formula below:

**Gravity Grease Interceptors Table**

| Drainage Fixture Units per Table 709.1 | Minimum Size (gallons)        |
|--|-------------------------------|
| Up to 10 DFU                           | 300                           |
| 11-16 DFU                              | 500                           |
| 17-25 DFU                              | 750                           |
| 26-33 DFU                              | 1,000                         |
| 34-44 DFU                              | 1250                          |
| 45-66 DFU                              | 1500                          |
| 67-111 DFU                             | 2000                          |
| Greater than 112 DFU                   | Contact Industrial Wastewater |

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

Where:

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

Thus:  $V_{(\min)} = F \times 30 \times 1.25$

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.

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- 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.*

Gravity grease interceptors shall be designed and tested in accordance with IAPM/ANSI Z1001. GGIs shall be installed per manufacturer's instructions. Where manufacturer's instructions are not provided, GGIs shall be installed in compliance with ASME A112.14.6 and IAPMO/ANSI Z1001.

Grease interceptors shall have a minimum of two compartments and two man-ways. All man-ways shall have a minimum 20" inside diameter.

Grease interceptor discharge shall be vented in accordance with chapter 9, provided with cleanout in accordance with section 708, and directly connected to the sanitary drainage system."

**Section 1302 On-site nonpotable water reuse systems.** Revise as follows:

Delete section and replace with the following:

"Regulated under Arizona Administrative Code (A.A.C.) Title 18, Chapter 9."

Adopt the following Appendix:

**Appendix B: Rates of rainfall for various cities.**

Revise as follows:

Add "Tucson..... 3.0," under "Arizona".