



CITY OF MESA  
BUILDING SAFETY DIVISION  
PLUMBING REQUIREMENTS

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PROJECT STREET ADDRESS: \_\_\_\_\_

PERMIT # \_\_\_\_\_

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THIS CHECKLIST IS TO BE USED AS A GUIDE WHEN REVIEWING PLANS FOR PLUMBING INSTALLATIONS. THESE COMMENTS CAN BE CUT AND PASTED INTO YOUR ELECTRONIC DOCUMENT REVIEW. **NOTE: ALL REFERENCES WERE TAKEN FROM THE 2018 MESA PLUMBING CODE.**

### Chapter 3 General Regulations

- \_\_\_\_\_ 1. The Plumbing Code reference is not on the plans or is incorrect. The City of Mesa has adopted the 2018 Mesa Plumbing Code with Amendments.
- \_\_\_\_\_ 2. Plans submitted are incomplete and therefore a complete comprehensive review was not done at this time. Additional corrections may be identified upon review of a complete set of plans.
- \_\_\_\_\_ 3. Plans, specifications and calculations must be sealed and signed by an architect or engineer licensed by the State of Arizona.
- \_\_\_\_\_ 4. Provide a DWV schematic and connection to the sanitary drain system. 301.3
- \_\_\_\_\_ 5. Show connection to the water supply system. 301.4
- \_\_\_\_\_ 6. Plumbing system equipment is not permitted in an elevator shaft. Provide details for the floor drains, sumps and/or sump pumps, with their associated piping, to comply with Section 301.6.
- \_\_\_\_\_ 7. Complete the Industrial Pretreatment Preliminary Survey form and upload it with your resubmittal to verify compliance with IPC 302. An electronic copy of this form can be obtained from the City of Mesa website. <http://mesaaz.gov/devsustain>
- \_\_\_\_\_ 8. Provide on the plans details for all pipes penetrating the roof and/or walls. 305.1 – 305.7
- \_\_\_\_\_ 9. Underground nonmetallic water and irrigation system piping larger than 2" in diameter shall be installed with insulated copper tracer wire or other approved conductor located adjacent to the piping. 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 insulation type shall be suitable for direct burial. 305.8

- \_\_\_ 10. Provide structural analysis and calculations for the roof loading of all new rooftop supported equipment and/or equipment hung from below. Calculations and analysis to include any new evaporative coolers, water heaters, boilers and other equipment with all associated piping as required for the areas affected by these installations. Provide on the drawings all required structural modification details as specified from your structural analysis. 307
- \_\_\_ 11. Provide on the plans condensate lines and sizes for all fuel burning equipment and evaporators or cooling coils as required by Section 314.

#### **Chapter 4 Fixtures, Faucets and Fixture Fittings**

- \_\_\_ 12. Show on the plans compliance with maximum water flow rates and flush volumes as required by Sections 401.3.
- \_\_\_ 13. Provide the minimum number of plumbing fixtures as required by Section 403 with Amendments.
- \_\_\_ 14. Identify on the plan all employee and/or public toilet facilities with travel distances as required for this occupancy as required by Section 403.3.3.
- \_\_\_ 15. Provide on the plans the locations of the readily visible signs for public restrooms as required by Section 403.4
- \_\_\_ 16. Provide Accessible Plumbing Facilities as required by the 2018 IBC.
- \_\_\_ 17. Show required clearances for water closets, urinals, lavatories and bidets. 405.3.1
- \_\_\_ 18. Identify on the plans and/or in the plumbing fixture schedule, shower or tub/shower valves with balanced-pressure thermostatic or combination valves. Such valves shall be limited to a maximum setting of 120° F, as required by 412.3
- \_\_\_ 19. Provide on the plans or in the plumbing fixture schedule, flushing devices, fill valves and overflows as required by Section 415. Identify type of flush valve or other flushing device.
- \_\_\_ 20. Provide an installation detail with minimum 1 ½" diameter drain for the commercial food waste grinder (disposal). Each commercial food waste grinder shall be connected and trapped separately from any other fixture or sink compartment. 416.3
- \_\_\_ 21. Provide a backflow preventer or a detail showing an air gap on the potable water supply to the garbage can washer as required by Section 417.
- \_\_\_ 22. Lavatories at public hand-washing facilities shall be provided with an approved water temperature limiting device as per 419.5.
- \_\_\_ 23. Provide dimensions of shower compartments. Compartments shall be not less than 900 square feet. 421.4
- \_\_\_ 24. Water closet bowls in toilet facilities for public or employee use shall be of the elongated type with open front seats. 425.2 and 425.3

#### **Chapter 5 Water Heaters**

- \_\_\_ 25. The temperature of water from tankless water heaters shall not be greater than 140° F (60°C) where intended for domestic use. 501.6

- \_\_\_ 26. Provide a detail for the water heater temperature and pressure relief valve as required by Section 504.4.
- \_\_\_ 27. Provide thermal expansion control device. 607.3
- \_\_\_ 28. Provide a pan for the water heater located \_\_\_\_\_. Pan must comply with Sections 504.7 through 504.7.2.

### **Chapter 6 Water Supply and Distribution**

- \_\_\_ 29. Provide the method used to size the main potable water service piping with branch lines, identifying the water pressure available, all pressure losses and piping material. 603.1 and Appendix E.
- \_\_\_ 30. The water service piping and sanitary drain pipe appear to be in the same trench. Identify the material of the pipes and the separation provided. 603.2
- \_\_\_ 31. The maximum water consumption flow notes and quantities for all plumbing fixtures and fixture fittings shall be in accordance with Arizona Revised Statutes Title 45, Chapter 1, Article 12, available at <http://azleg.state.az.us/ArizonaRevisedStatutes.asp>
- \_\_\_ 32. Provide a plumbing schematic that includes size and type of material used for the plumbing system. System must comply with Section 604 and Appendix E.
- \_\_\_ 33. Identify on the plans the backflow prevention as required by Section 608. Contact Water Resources at 480-644-4444 for additional information.
- \_\_\_ 34. Identify on the plans the backflow prevention required for the carbonated beverage dispensers. 608.17.1 through 608.17.1.2. Contact Water Resources at 480-644-4444 for additional information.

### **Chapter 7 Sanitary Drainage**

- \_\_\_ 35. Show on the plans, the location and size of the existing sewer tap. Include the location, size and type of material to be used for the sewer system being installed. 701.2
- \_\_\_ 36. Identify the minimum slopes for all horizontal drainage piping. 704.1
- \_\_\_ 37. Underground nonmetallic sanitary drainage piping larger than 2" in diameter shall be installed with insulated copper tracer wire or other approved conductor located adjacent to the piping. 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 insulation type shall be suitable for direct burial. 701.8
- \_\_\_ 38. Identify all cleanouts as required by Section 708.
- \_\_\_ 39. Provide all plumbing drainage fixture units used to size your sanitary drainage piping. 709 and Table 709.1
- \_\_\_ 40. Provide backwater valves where the flood level rim of the fixtures is below the next upstream manhole cover in the public sewer as required by Section 714.

### **Chapter 8 Indirect/Special Waste**

- \_\_\_ 41. Provide details indicating the type of indirect waste as required Section 802.

## Chapter 9 Vents

- \_\_\_ 42. Provide a detail showing the required flashing for vents through the roof. 903.3
- \_\_\_ 43. The vent from the drainage system shall not be located directly beneath any door, openable window or other air intake opening of the building or of an adjacent building, and any such vent terminal shall not be within 10 feet horizontally of such an opening unless it is 3 feet or more above the top of such opening. 903.5
- \_\_\_ 44. Revise the location of the vent termination(s) to comply with Sections 903.5 and 904.3.
- \_\_\_ 45. Provide a plumbing schematic showing the location, size and/or total developed length of the drainage system vent stack(s) as required by Section 906.
- \_\_\_ 46. Provide an isometric schematic of the entire combination drain and vent system showing all pipe sizes, fixture units, slopes and vents as required by Section 912
- \_\_\_ 47. Show how the island fixtures will be vented. 916
- \_\_\_ 48. Provide additional venting as required by Section 917.6.

## Chapter 10 Traps, Interceptors and Separators

- \_\_\_ 49. Each plumbing fixture shall be separately trapped by a water-seal trap, except as otherwise permitted by the Plumbing Code. The trap shall be placed as close as possible to the fixture outlet. The vertical distance from the fixture outlet to the trap weir shall not exceed 24". 1002.1
- \_\_\_ 50. Each fixture shall have a liquid seal of not less than 2" and not more than 4", or deeper for special designs relating to accessible fixtures. Where a trap seal is subject to loss by evaporation, a trap seal primer valve shall be installed. A trap seal primer valve shall conform to ASSE 1018 or ASSE 1044 and shall be provided with an air gap per Section 608.16.1.
- \_\_\_ 51. Provide installation details for interceptor(s) and/or separator(s) to prevent the discharge of oil, grease, sand and other substances harmful or hazardous to the building drainage system, the public sewer or sewage treatment plant. 1003
- \_\_\_ 52. Wastes that do not require treatment or separation shall not be discharged into any interceptor or separator. 1003.2
- \_\_\_ 53. Provide installation details and a plumbing fixture schedule. Identify the manufacturer, make, model, size and capacity of the grease trap(s) and/or grease interceptor(s) as required by Section 1003.3 through 1003.5 and designed as per City of Mesa Standard Details M36.1 and/or M36.3.
- \_\_\_ 54. Provide size, type, installation details and materials for the commercial laundry interceptor. Include manufacturers cut sheets indicating a wire basket or similar device, removable for cleaning, that prevents passage into the drainage system of solids 0.5 inch or larger in size, string, rags, buttons or other materials detrimental to the public sewage system as required by Section 1003.6 and designed per City of Mesa Standard Detail M36.2.
- \_\_\_ 55. Identify on the plans the size and location of the interceptor and/or separator vent.1003.9

## Chapter 11 Storm Drainage

- \_\_\_ 56. Identify on the plans where the storm drainage discharges. 1101.2 and 1102.3
- \_\_\_ 57. Provide, in the roof truss design criteria and/or the roof design engineering calculations, the amount of load used for storm drainage ponding as required by 1101.7 and 1106.5.
- \_\_\_ 58. Provide calculations used to determine the size of the roof conductors and leaders with horizontal projected roof areas. 1106
- \_\_\_ 59. Provide compliance with 1106.4 for sizing of the roof drains and storm drains.
- \_\_\_ 60. Provide secondary (emergency) roof drains and/or scuppers as required by Section 1108.