



<b>Issue Date:</b>	September 21, 2020
<b>Code/Section:</b>	2018 International Building Code 2018 International Plumbing Code, 2018 Uniform Plumbing Code
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**Objective:** To establish a plan review template for reviewing onsite civil water and sewer plans. The goal and objective are to minimize discrepancies and increase consistency throughout the plan review process. The following items listed below are the plan review template to assist plan review staff and are sorted by category.

**Site / Building:**

- All onsite civil water and sewer plans to be sealed and signed by Professional Engineer
- Points of Connection from public main to private property. - IBC 107.2
- Lot Lines depicting properties. - IBC 107.2
- Identify all streets whether public or private. - IBC 107.2
- Site Piping Plan. - IBC 107.2
- Verify civil and plumbing design coordination. (both must state the same) - IBC 107.2
- Verify 4.01 Aquifer Protection Program (A.P.P.) requirements. - IBC 107.2, Arizona Admin Code R18-9-E3
- Calculate Development Occupancy Fees (DOF), and place in Conditions of Approval. Indicate which sheet the meter information was obtained from.
- Test all sewer and water piping prior to backfill and cover. Call for inspection, and witness testing prior to concealing water and sewer piping. - IBC 107.2, 312.0, UPC 105.3, 609.4
- Provide complete as-builts after installation showing pipe size, installation, inverts, manholes, and tie-in to public sewer system. Submit all required documentation under seal and signature of the Professional Registrant. - IBC 107.2
- All onsite civil utility water and sewer drawings to be stamped and signed by assigned MP reviewer*

**Sewer:**

- Building finish floor elevation and the rim elevation of the first public sewer manhole upstream of building sewer connection. Verify that plumbing fixtures in the building are installed in a floor with a finished floor elevation that is higher than the manhole cover of the next upstream manhole in the public sewer. Verify need for backwater valve. - IPC 714.1, UPC 710.6
- Sewer pipe inverts. - IBC 107.2

- Pipe sewer lengths. - IBC 107.2
- Pipe Materials. - IPC Table 702.2 and 702.3, UPC Table 701.2
- Pipe Cleanouts, 6 inches and smaller, Manholes, 8 inches and larger. - IPC 708.1.2, UPC 719.6
- Pipe Slope. - IPC Table 710, UPC 703.2
- If sewer or drainpipe slope is less than what is specified in the code, plans shall include profiles for all sewer sections and justification for sewer at reduced slope. A low slope sewer installation authorization form TRT DOC 00328 must be submitted under seal, with signature of Professional Engineer. This form must be affixed within the drawings and is located here: [https://www.phoenix.gov/pdds/Docs/Trt\\_Pdf\\_00328.pdf](https://www.phoenix.gov/pdds/Docs/Trt_Pdf_00328.pdf)
- Locator for nonmetallic pipe. - ARS 40-360.22

**Water:**

- Determine size of water meter per City of Phoenix TRT DOC 00142. Revise permit scope to include all water meter sizes. TRT 00142 is located here: [https://www.phoenix.gov/pdds/Docs/Trt\\_Pdf\\_00142.pdf](https://www.phoenix.gov/pdds/Docs/Trt_Pdf_00142.pdf)
- Sizing calculations for both water and sewer. - IPC Appendix E, IPC Table 710.1, UPC Appendix A, UPC Table 703.2
- Back flow prevention device for domestic, landscape, and fire connections to public water main. - IPC 608, UPC 603, COP detail 1351 – 1354
- Backflow clearances, horizontal and vertical
- Water sewer crossings, no concrete encasement for onsite plumbing. - IPC 305.1, UPC 312.2
- Domestic and landscape water meter sizes and location. - TRT DOC 00142: [https://www.phoenix.gov/pdds/Docs/Trt\\_Pdf\\_00142.pdf](https://www.phoenix.gov/pdds/Docs/Trt_Pdf_00142.pdf)
- Water backflow assembly size and location. - IPC 608.14, UPC 603.3
- Verify landscape meter size and check with landscape plans. - IBC 107.2
- Flush all potable water piping prior to occupancy. - IPC 610, UPC 609.9