



Commercial Plumbing Permit Application Instructions and Checklist

Submittal Requirements:

Plumbing

- Site plan, indicating location of work in building.
- Construction plans and Plumbing Schematics detailing floor layout.
- Manufacturer's Equipment Data and Installation instructions, if applicable.

Medical Gas

- Site plan, indicating location of work in building.
- Construction plans and Plumbing Schematics detailing floor layout.
- Test Lab form.

Minimum Requirements for Construction Drawings

The City of Kent upholds the 2021 Uniform Plumbing Code, ANSI A117.1-2017, and Washington State Amendments. No person may engage in or offer to engage in the trade of plumbing without having a journey level certificate, specialty certificate, residential service certificate, temporary permit, or trainee certificate and photo identification in his or her possession per RCW 18.106.

Plans shall be of sufficient clarity to indicate the location, nature, and extent of the work proposed and show that it will conform to the provisions of the adopted Codes and ordinances.

PDF Files must be unlocked or unprotected, so city staff can make comments, reduced, flattened and full-size, one-to-one format (layers must be merged or flattened).

Washington State law requires that any registered professional who prepares or supervises the preparation of drawings and construction documents stamp and sign such documents. Where multiple copies of stamped submittal documents are submitted, at least one set must bear an original wet seal.

Site Plan

- 1. Scale and north arrow. Max. scale 1"= 40' (Preferred scale is 1"= 20' or 1" = 40')
- 2. Dimensions of lot, distance to property lines, location(s) and square footage of existing or proposed structures, street name, location and use.
- 3. Condensing units located on building exterior must be shown on site plan.

Floor Plan

(scale: 1/4" = 1' or 1/8" = 1')

- 1. Indicate location of all exits within rooms or spaces. Required exit doors must be not less than 3' in width and not less than 6 feet 8 inches in height. Provide existing details showing compliance with IBC Sec. 1014, 1015, and 1016 and Chapter 11.
- 2. Show location and include plumbing schematics.

General

- 1. Pipe, pipe fittings, traps, fixtures, material, and devices used in a plumbing system shall be listed (third-party certified) by a listing agency (accredited conformity assessment body) as complying with the approved applicable recognized standards from the UPC. UPC 301.2
- 2. Plumbing systems in a Flood Zone will need to be located above the certified floor elevation per UPC 301.4.
- 3. Sewage, human excrement, or other liquid waste must discharge into a drainage system per UPC 303.1. Water pipes shall not be in the same trench as sewer or drainage piping unless the water piping is above the sewer of a minimum of 12" or a solid shelf excavated of not less than 12" above the sewer per UPC 609.2.

- 4. Piping passing under or through walls shall be protected from breakage and corrosive materials per UPC 312.1.
- 5. No plumbing piping shall be directly embedded into concrete, or any structural member be weakened by such system per UPC 312.2.
- 6. Drain inlets to be rodent-proofed with a strainer plate designed and installed that the opening does not exceed ½" per UPC 312.12.
- 7. Trenches deeper than the footing of a building or structure, and paralleling the same, shall be located not less than 45 degrees from the bottom exterior edge of the footing per UPC 314.1.
- 8. Plumbing fixtures to comply with Chapter 4 of the UPC, Chapter 11 of the IBC and with ANSI A117.1-2017. Please note that Table-422.1 is not adopted, please use UBC Table 2902 for fixture calculations.
- 9. Electric water heaters are to use Chapter 5. Please note code sections 508, 509, and 510 are not adopted. GAS WATER HEATERS are to be permitted as a MECHANICAL PERMIT.
- 10. Water Heaters will need to be strapped to resist horizontal displacement due to an earthquake. The straps are to be located in the upper and lower third of the water heater per UPC 507.2.
- 11. Where water heaters are subject to mechanical damage shall be guarded with a protective barrier or elevated to avoid the normal path of vehicles per UPC 507.13.1.
- 12. Expansion tanks to comply with 608.3 of the UPC.
- 13. Water service lines shall be sized per UPC 610.
- 14. Plastic materials shall be permitted to be used in building supply piping but shall have a 14 AWG electrically continuous corrosion-resistant blue insulated copper tracer wire per 604.10.1.
- 15. Please check Washington State Energy Code section 404 for commercial for water heating requirements.
- 16. Each plumbing fixture shall be provided with an adequate supply of potable running water piped thereto in an approved manner, so arranged as to flush and keep it in a clean and sanitary condition without danger of backflow or cross-connection per UPC 601.2.
- 17. A cross-connection device shall be installed on water-operated equipment or mechanism, or use a water-treating chemical or substance, where it is found that such equipment, mechanism, chemical or substance causes pollution or contamination per UPC 603.
- 18. Drainage piping material shall comply with UPC 701.2. Clean outs shall comply with 707.
- 19. A backwater valve shall be installed when the fixtures are installed on a floor level that is lower than the next upstream manhole cover of the public or private sewer per UPC 710.
- 20. 3-comp sinks and condensate waste will need to have indirect waste per UPC Chapter 8.
- 21. The cross-sectional area of the vents shall not be less the drain determined by Table 703.2 per UPC 904.1. Each fixture must have vent. The UPC does not allow air-admittance valves per UPC 901.2.
- 22. The vertical distance between a fixture outlet and the trap weir shall be as short as practicable but cannot exceed 24 inches per UPC 1001.2.
- 23. No form of trap that depends for its seal upon the action of movable parts shall be used. No trap that has concealed interior partitions, except those of plastic, glass, or similar corrosion-resisting material, shall be used. "S" traps, bell traps, and crown-vented traps shall be prohibited. No fixture shall be double trapped. No trap shall be installed without a vent, except as otherwise provided in the UPC per 1004.1.
- 24. Floor drains will need to be trapped, primed, and vented per UPC 1005, 1006, and 1007. A bathroom with (2) or more fixtures will need to have a floor drain per Washington State Amendments 418.3.
- 25. Grease traps will need to have an independent waste line and sized accordingly to UPC Section 1014.

- 26. Health Care Facilities, Medical Gas, and Medical Vacuum Systems shall comply with CH-13.
- 27. Grease interceptors installed exterior to building, please apply for a Sewer Permit.
- 28. Backflow prevention devices exterior to building, please apply for a Backflow permit application.

Plan Requirements

- Plans to include a fixture count and fixture schedule on the Cover Sheet.
- Please show sizes of the sanitary and potable water systems. Please make sure to show DFUs (UPC Table 703.2) and WSFUs (UPC Table 610.3).
- Identify the location of the proposed fixtures.
- Please provide a riser diagram showing the waste and vents & potable water systems. Indicate size and venting through roof. Please make sure to show DFUs and WSFUs.
- Provide make, model, and sizing of the *Grease Trap being used (If applicable).
- Please show the cross-sectional area for the waste and vent per UPC 904.
- Penetration or membrane fire-rated detail for piping into a fire partition, fire barrier, or fire wall.