



PROGRAM GUIDE

BUREAU OF DEVELOPMENT SERVICES



Commercial Plumbing Plan Review Requirements

Category: Commercial Construction

Revised: October 1, 2006 *[Paul L. Scarlett]* , Director

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Responsible Bureau Section: Commercial Plumbing
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BACKGROUND:

On October 1, 2006, the State Building Code Division revised the Oregon Administrative Rules (OAR) outlining plan review requirements for commercial plumbing systems. The rules contained in OAR 918-311-0040 have been revised to require plan review for those commercial plumbing systems defined as "complex". Plan review for all other commercial plumbing systems is now optional.

This guide provides the Bureau of Development Services (BDS) plan review, submittal and revision requirements for commercial plumbing systems based on the provisions of the OAR, the Oregon Plumbing Specialty Code (plumbing code) and Title 25 of the City Code (Title 25).

A. Plan Review Required.

1. **General.** Under the provisions of OAR 918-780-0040 plan review is required only for complex structures. A complex structure is defined as any plumbing system designed, constructed or reconstructed to accommodate any of the following:
 - a. The installation or alteration of a medical gas and vacuum system for health care facilities;
 - b. The installation or alteration of chemical drainage waste and vent systems containing chemical agents potentially detrimental to the integrity of a plumbing system;
 - c. The installation or alteration of wastewater pretreatment systems for building sewers;
 - d. The installation of vacuum drainage waste and vent systems;
 - e. The installation or alteration of reclaimed wastewater systems;

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- f. The installation of a commercial booster pump system needed to maintain a minimum residual water pressure in a structure supplied by a municipal source;
 - g. The installation of a plumbing system requiring a building water service line with an interior diameter or nominal pipe size of two inches or greater except those two inch systems which have been designed and stamped by a Oregon licensed engineer;
 - h. The installation of any multi-purpose sprinkler system under standards adopted by the department.
2. **Site Utilities.** Plan review is required for installation or alteration of plumbing related site utilities situated outside of the building.
 3. **Grease Processing Equipment Systems.** Plan Review is required for the installation or alteration of grease processing/interception equipment systems associated with food service establishments and food processing facilities.
 4. **Requirement for Food Service.** Regardless of whether or not plumbing plan review is required, all proposed food service occupancies are required to be approved by the Multnomah County Health Department (503-988-3400) or the Oregon State Agricultural Department (503-986-4720). Final plumbing inspection approval will be held until either the Multnomah County Health Department or the Oregon State Agricultural Department has approved the project.
 5. **Voluntary Plan Review.** BDS continues to offer voluntary plumbing plan review services of structures and systems not addressed by one of the above categories. Voluntary plan review is a good tool for new construction, large tenant improvement projects or those projects involving the installation of twelve or more fixtures and may reduce field corrections thereby eliminating costly corrections or construction delays associated with field revisions. Any voluntary plan review is required to meet the submittal requirements outlined in this guide and must also meet all applicable code requirements. The regular plan review fee will be charged for these reviews. For more information on the voluntary plan review program, please contact staff at (503) 823-7255.
 6. **Environmental Services SDC.** Regardless of whether or not plumbing plan review is required, the payment of an Environmental Services SDC may be required. Please call BES at (503) 823-7761 to determine if SDC charges are applicable to the project.

B. Plan Requirements.

1. **General.** Plumbing plans, as indicated below, are required for all complex structures or when a voluntary plan review is requested.

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2. **Number of Plans Required.** Where plans are required for a plumbing permit, plans and specifications shall be submitted in the numbers indicated below:
 - a. **Plumbing permit in conjunction with a building permit.** Four complete sets of plumbing plans and specifications are required to be submitted in conjunction with the building permit.
 - b. **Separate plumbing permit not associated with a building permit.** Three complete sets of plumbing plans and specifications are required if the plumbing project being conducted is separate from the building permit process.
3. **Plan Requirements.** All plumbing plans shall include the following information:
 - a. Plans must be drawn to scale and show the location of:
 - 1) All new plumbing fixtures,
 - 2) Rain drains; or
 - 3) Roof drains.
 - b. Plans shall:
 - 1) Indicate the elevation of the lowest floor containing plumbing fixtures or drains.
 - 2) Include a site or plot plan showing:
 - a) Size, location depth of burial and type of material of the storm and sanitary sewer from the building to the point of disposal;
 - b) Size, location, water pressure, depth of burial and type of material of the water line from the building to the property line or water supply; and
 - c) Elevation of the street or road to which the building sewers drain. If the street or road elevation is the same elevation as the lowest floor level or higher, plans shall show the elevation of the next upstream access cover of the public sewer.
 - 3) Include a diagram showing the size and type of material for the drainage system, venting system, storm water system, and hot and cold water piping in or adjacent to the building.
 - 4) A copy of the specifications describing fixtures, appliances, roof drains and other appurtenances must be provided.
 - 5) For buildings three or more stories in height, plans shall include:

- a) A riser diagram for the drainage system, vent system and storm water system showing size of lines and type of material, and
 - b) A riser diagram for hot and cold water piping, including size, type of material, pressure available, height and required pressure for specific installations.
4. **Additional Requirement for Food Service.** For all proposed food service, the Multnomah County Health Department or the Oregon State Agricultural Department must approve the floor plan, including fixture placement, before BDS plumbing plan review will occur. A minimum of one County or State approved, stamped plan must be submitted to BDS with the required plumbing plans.
 5. **Medical Gas Systems.** Medical gas systems shall be designed to meet the requirements specified in the National Fire Protection Association Standard 99C-2002, Gas and Vacuum Systems. All plans for medical gas systems shall be signed and sealed by an Oregon registered professional engineer.

C. Plan Submittal.

1. Plumbing plans that are submitted as part of the building permit shall be submitted with the building plans to the Development Services Center, 1900 SW 4th Avenue - First Floor, Portland OR.
2. Plumbing plans that are submitted separately shall be submitted to Document Services, 1900 SW 4th Avenue – Second Floor.

Fees.

All required fees, including fees for requested voluntary plan review, shall be paid at the time of permit issuance. A current fee schedule can be obtained on-line at the BDS website www.portlandonline.com/bds or in the DSC located at 1900 SW 4th Avenue, Portland OR 97201.

D. Plan Revisions.

General. Plan revisions are required any time there is a change, alteration or addition to an approved set of plans. All plumbing plan revisions shall follow the standard plan submittal process as outlined in section B, C and D of this document. In addition, the following requirements apply to plan revisions:

1. The applicant name, address and telephone number shall be noted on a standard transmittal form.
2. If the revisions apply to an active permit:

- a. The plans shall be submitted to the Development Services Center.
 - b. Development Services Center staff shall make a TRACS entry showing the plans as a revision to an issued permit.
3. If the revisions apply to construction that has been completed, the revisions shall be processed as a new application. A new permit number will be assigned at this time.
4. **Revision Fees.** An additional plan review fee shall be charged for all revision submittals.
- a. Contact the DSC, Trade Permits at (503) 823-7363 for the current fee.
 - b. Development Services Staff will enter fees into TRACS. All fees shall be paid at the time of permit issuance.

E. Interpretations & Use of Alternate Methods and Materials.

Interpretations. The BDS Plumbing Supervisor or, when necessary, the City's Plumbing Code Board of Appeal shall be responsible for advising the Director on appropriate interpretation of the Plumbing Code.

All BDS interpretations of the Plumbing Code, including those issued by the Plumbing Supervisor and the Plumbing Code Board of Appeal, shall be documented and maintained at BDS. Interpretations shall be filed by job address. A copy shall also be placed in a separate interpretations file.

Alternate Methods and Materials. The Plumbing Supervisor or plans examiner may allow alternate methods or minor modifications, provided that they do not lessen the safety of the plumbing installation. The Plumbing Supervisor may request additional information from the applicant in order to determine the applicability of the alternate method or material to the project under consideration. When necessary, the Plumbing Supervisor may refer the applicant's written request to the Administrative Appeal Board for a ruling.

1. Administrative Appeal Board.

If aggrieved by the Plumbing Division's decision, the applicant may submit an application for approval of an alternate method or material to the Administrative Appeal Board. The Plumbing Supervisor shall write a recommendation to the Administrative Appeal Board advising approval or denial of the application. The recommendation should include a brief analysis of the code requirements and any provisions of the State Plumbing Law or rule that may apply.

2. Plumbing Code Board of Appeal.

If aggrieved by the decision(s) of the plan examiner, Plumbing Supervisor or Administrative Appeal Board, the applicant has the option of submitting an

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appeal to the Plumbing Code Board of Appeal. The Plumbing Supervisor shall write a recommendation to the Board of Appeal advising approval or denial of the appeal. The recommendation should include a brief analysis of the code requirements and any provisions of the State Plumbing Law or rule that may apply. If aggrieved by the decision of the Board of Appeal, the applicant may, within 30 days after the date of the decision, appeal to the Chief Plumbing Inspector of the State of Oregon.