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## **INSTALLATION OF SUMP PUMPS**

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This bulletin clarifies the installation requirements of sump pumps.  
This bulletin replaces Bulletin 2000-025-EL.

### **Storm Sump Pump**

Often buildings have storm and subsurface drainage systems installed at an elevation where pumping becomes necessary. Under these circumstances the design and installation of sump pumps and sump must conform to specific standards and regulations in order to provide the public with protection against flooding. Therefore when applying for a plumbing permit for a pumped storm sump, the following requirements must be met:

- 1) Each application shall be accompanied by a letter bearing the seal and signature of a Registered Professional of BC who is retained to design and inspect the required sump pump, sump, and drainage system.
- 2) The Registered Professional is required to notify the City should their services be terminated prior to the completion of the drainage system.

The Registered Professional should consider the following factors when designing and inspecting a pressurized drainage system:

- 1) Factors such as flow rates to all perimeter drains, drainage area, groundwater levels, type of backfill in trenches, depth of surrounding impervious stratum relative to the drain pipes etc.
- 2) Pumps shall be equipped with a self-resetting thermal overload protection switch and be rated for continuous duty.
- 3) The VBBL (Book II Plumbing Systems of this By-law) contains specific requirement that an approved union, check valve and shut-off (in that order) be used on all discharge piping.
- 4) In addition to the requirements of the Vancouver Electrical By-law No. 5563, the following provisions are required:
  - a) The sump pump shall be supplied by a branch circuit that supplies no other outlets or equipment,
  - b) The branch circuit must be installed in conformance with the applicable requirements of the Canadian Electric Code, Part 1, and
  - c) The sump pump shall have provisions for a hard-wired direct connection to a watertight outlet within the sump; or a plug in cord or a hard-wired direct connection cord which is long enough to reach a receptacle or an outlet box through a raceway extending above the sump.

**Residential Sump Pumps**

Where a sump pump is installed to control water from a drainage system in residential occupancies, the following requirements must be met:

- 1) A receptacle shall be installed for the connection of the sump pump,
- 2) The receptacle for the sump pump shall be supplied by a branch circuit that supplies no other outlets or equipment,
- 3) The foregoing receptacle and branch circuit must be installed in conformance with the applicable requirements of the Canadian Electric Code, Part 1, and
- 4) Only an approved double insulated sump pump assembly provided with a flexible cord and an attachment plug shall be installed.

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