



Planning, Building & Development Services

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SAFETY CODES SERVICES

CONSTRUCTION BULLETIN

Date: November 2011

Subject: SUMP PIT GUIDELINES

The following is recommended for all new home construction;

Sump Design Criteria

a) Sump Pit Details:

- i) Sump pit containers should be perforated and are to be a minimum of 750 mm (30") deep and 0.25 m² in area.
- ii) Sump pits are to be fitted with a tightly fitting removable cover that is designed to resist removal by children.
- iii) Sump pits will be constructed of concrete, plastic, or non-corrosive metal.
- iv) Locate sumps as close to the basement exterior wall as possible (1.2m max) on the side of the building that provides positive drainage.
- v) Sump pits are to be fitted with an opening to accept a 100mm (4") drain with the invert of the pipe located above the center of the sump pits' height.
- vi) Sump pits are to be placed on even and well compacted surface.

b) Foundation Drain (Weeping Tile) Drainage to Sump Pit:

- i) Provide a weeping tile collection system around the buildings perimeter tied to a sump pit using a 100mm (4") pipe which discharges into the side of the pit.

- ii) The outside perimeter of the sump pit, if of metal or plastic, should be filled with 150mm (6") of clean washed rock 19mm - 25mm (3/4" - 1") around the full perimeter of the sump container to facilitate good
- iii) drainage.

IF REQUIRED

c) Sump Pump

- i) Provide a sump pump (column or submersible type) capable of pumping 0 L/m at 3m (10') of head. The pump is to be connected to an electrical power source (hardwired or by way of an electrical outlet) in accordance with the Electrical Protection Act.
- ii) The pump shall be fitted with an automatic on/off level of control.
- iii) The pump discharge must be a minimum of 32mm (1 1/4") pipe which is placed under the floor slab and rises up the exterior foundation wall and exits the building. The pipe must be adequately secured to the warm side of the wall.
- iv) If discharge is above ground, the discharge cannot be to a neighboring property and must be away from the foundation wall. The discharge shall be contained within the property or directed to the rear lane or front street.
- v) The discharge line within the sump must be equipped with the following valves and fittings as per the requirements of the Alberta Plumbing Code:
 - (1) A union coupling,
 - (2) A check valve located on the downstream side of the union.
- vi) Sump pumps discharging to a sanitary sewer, storm sewer or foundation collector drain must be equipped with a shut-off valve located downstream of the check valve, so that the connection to the main can be isolated for maintenance, etc.
- vii) When needed, sump pits and sump pumps are required in each dwelling unit of a duplex, triplex , fourplex etc.

The City of Medicine Hat Safety Codes Services, in an ongoing effort to provide updates to Home Builders, Contractors, Designers and Trades people, regarding the Alberta Building Codes, provide these bulletins as a service. Any questions should be directed to the Residential plans examiner at 403-529-8205.