



CITY OF
GRAND RAPIDS
ITS IN MINNESOTA'S NATURE

FOUNDATION DRAINAGE

City of Grand Rapids
Building Safety Division

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This handout is intended only as a guide and is based in part on the 2015 Minnesota State Building Code, Grand Rapids City ordinances, and good building practice. While every attempt has been made to insure the correctness of this handout, no guarantees are made to its accuracy or completeness. Responsibility for compliance with applicable codes and ordinances falls on the owner or contractor. For specific questions regarding code requirements, refer to the applicable codes or contact your local Building Safety Division.

FOUNDATION DRAINAGE

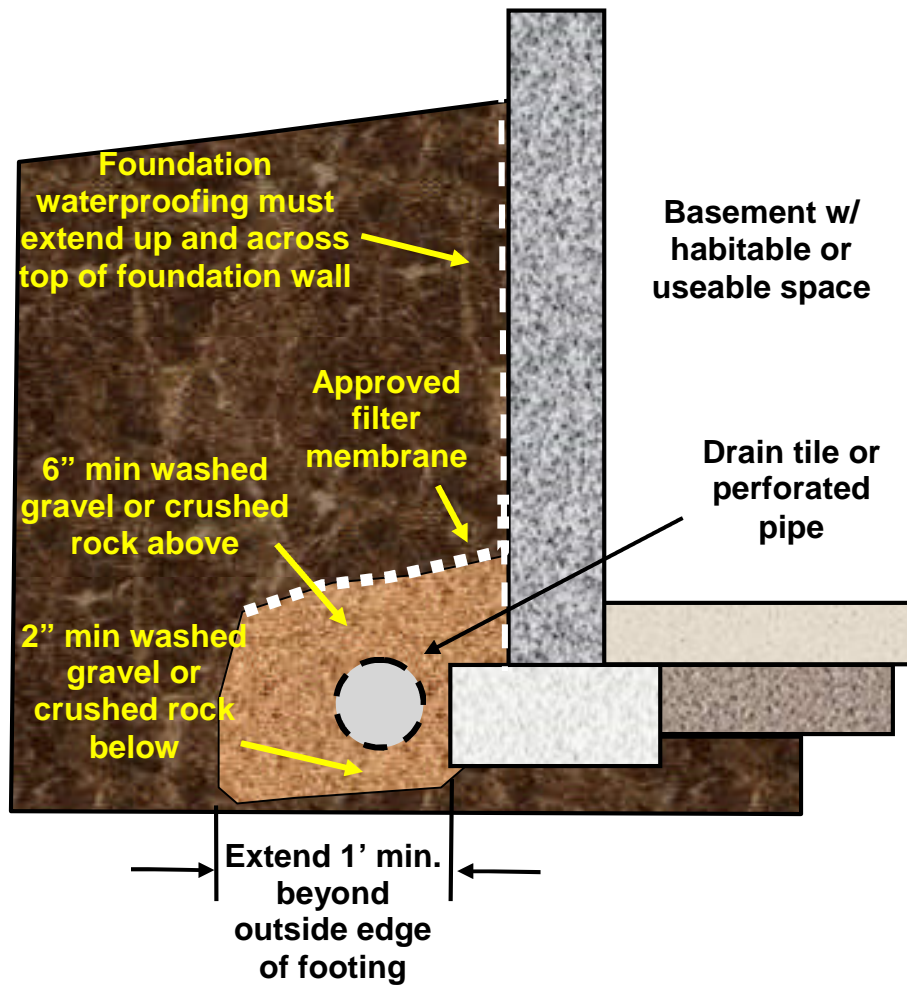
Drains shall be provided around all concrete and masonry foundations that retain earth and enclose habitable or usable spaces located below grade. Drainage tiles, gravel, or crushed stone drains, perforated pipe or other approved systems or materials shall be installed at or below the area to be protected and shall discharge by gravity or mechanical means into an approved drainage system. Gravel or crushed stone drains shall extend at least 1 foot beyond the outside edge of the footing and 6 inches above the top of the footing and be covered with an approved filter membrane material. Open joints on the top of drain tiles shall be protected with strips of building paper, and the drainage tiles or perforated pipe shall be placed on a minimum of 2 inches of washed gravel or crushed rock at least one sieve size larger than the tile joint openings or perforation and covered with not less than 6 inches of the same material.

A drainage system is not required when the foundation is installed on well-drained ground or sand-gravel mixture soils according to the Unified Soil Classification System, Group I Soils.

FOUNDATION WATERPROOFING

Exterior foundation walls that retain earth and enclose habitable or usable spaces located below grade shall be waterproofed. The waterproofing shall extend from the top interior wall edge, across the top of the wall, and down the exterior wall face to the top of the footing. The membrane shall consist of 2-ply hot-mopped felts; 55 pound roll roofing; 6-mil polyvinyl chloride; 6-mil polyethylene; 40-mil polymer-modified asphalt; 60-mil flexible polymer cement; 1/8" cement based, fiber reinforced, waterproof coating; 60-mil solvent free liquid applied synthetic rubber; or other materials approved for such use. Joints in membranes shall be lapped and sealed with an adhesive compatible with the waterproofing membrane.

For wood foundations, see the Minnesota State Building Code.



Drains must discharge by gravity or mechanical means to an approved drainage system