



2010 Manitoba Individual Flood Proofing Program

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The following are guidelines to be followed when flood proofing your property:

Construction Guidelines

- Provincial elevations for fill and main floor elevations must be met (levels are set by Provincial survey crews and final compliance surveys are done once work is completed).
- The Landowner should have the contractor construct pads and dikes to higher levels than Provincial standards to allow for settlement.
- It is suggested that Landowners allow for 1 inch of settlement per foot of embankment height.
- The contractor should compact the fill in lifts not exceeding 150 mm (6 inches). Contractors should strive to attain a dry density of 95% of the maximum Standard Proctor dry density. Compaction and scarification equipment should be used when required.
- Clay material should be used for dike construction.
- Side slopes should be no greater than 3 to 1 to allow for the safe maintenance of dikes and pads.
- Fill heights greater than 5 feet require a side slope not steeper than 4 to 1.
- Fill heights greater than 10 feet require a side slope not steeper than 5 to 1.
- Where one or more sides of the dike use a road then approval must be obtained from the appropriate authorities. The road must be raised to the flood protection level. Gravel and pavement must be stripped from the road prior to raising. Gravel road surface should be stockpiled for re-use.
- If space is limited the applicant may choose to use a retaining wall for containment of fill material. Retaining walls are to be designed by registered engineers with suitable experience.
- An engineering assessment may be required for stability and erosion concerns. The Landowner should obtain the services of an engineer when working near riverbanks, shorelines, depression areas or any unstable slopes or erosion concerns. In areas with slope stability concerns, it is preferred that the works be set back a suitable distance from the slope.
- Prior to placement of fill material for dike construction the sod should be removed and the dike should be keyed in to the earth.
- Thru dike openings should be kept to a minimum.
- Provision should be made for sealing thru dike openings.
- Provision should be made for internal dike drainage.
- The drain between the structure and any septic or holding tank or a common sanitary sewer line should have a backup valve.
- Weeping tiles should drain to a covered sump pit equipped with a submersible pump and discharge piping.
- The Landowner is to ensure that all works are completely on their property and that adequate set backs are maintained from adjacent properties.
- The flood protection method employed must be the most cost effective method that is practical.
- The constructed works must adhere to all building codes, and all permits and authorizations including municipal guidelines must be in place before work begins.