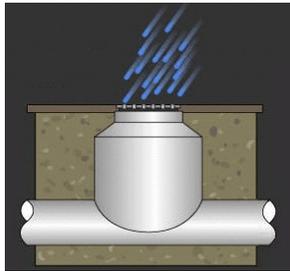
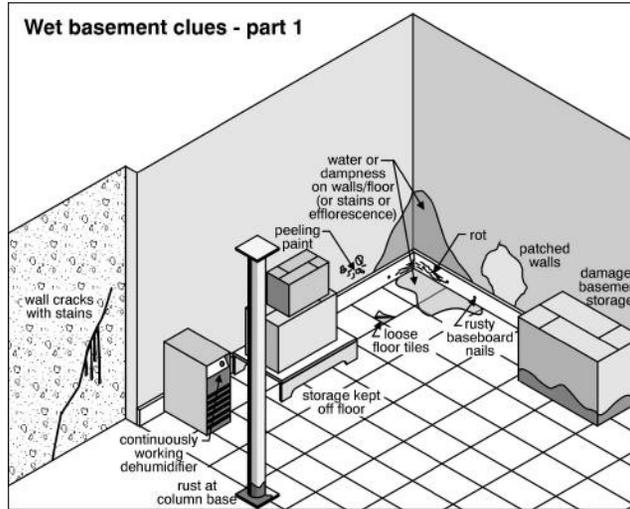


Town of Brighton Drainage Systems Information



Do You Need a Rowboat to Navigate Your Basement?

If your basement smells moldy or shows signs of moisture or water damage, it may be the result of an improperly functioning drainage system. Since the exterior components of a home are often the most neglected, and the drainage system is largely hidden from sight, this system is especially prone to problems.



Efflorescence, a white powdery deposit found on the interior of foundation walls is usually caused by excessive moisture penetration through the wall. Efflorescence can usually be removed by scrubbing or chemical cleaning. If the condition

is recurring it is an indication that water is penetrating the wall.

There are things you can do yourself to assess the condition of your drainage system and to maintain your home.

Although localized repair is sometimes possible, costs to replace the entire drainage system could be \$5,000 to \$10,000, making this a costly repair.

How the drainage system works

Drainage systems direct roof and ground water away from the foundation of the home. Water is collected in the roof gutters (eaves troughs) and drained via downspouts which then discharge onto the ground to be dispersed over the lawn, or into a closed pipe (conductors) located along the exterior walls of the house, just below the soil surface, and channeled directly to the storm sewer in the street via a storm service lateral. Surface water can also filter down to the drain tiles, where it is diverted away from the building, reducing water pressure on the foundation walls and keeping the interior of the home dry and protected.

Drain tiles were commonly used in residential construction beginning in the early 1950's. Prior to that time it is possible that no such drainage system was installed. In older systems, clay pipes were laid around the base of the foundation wall, with each one-foot long pipe section separated by a 1/4" space to allow water to enter. The joints were covered with building paper to prevent debris from entering the pipe system. Newer systems employ sump pump systems and plastic underdrain pipe suited to foundation drain applications.

Common Problems

As excess water builds up in the ground surrounding the house, it presses against the basement walls from the outside. The pressure eventually forces the water through the walls at the points of least resistance - through gaps and cracks in the exterior, then into the interior wall through cracks, joints, or porous concrete or masonry. The water may show up as an obvious leak, or it may seep through fissures or enter by capillary action.

Root growth from trees and shrubs planted close to exterior walls can damage foundations, and clog the drain tiles. Tree roots naturally grow towards water and the drain tiles provide a steady source. Eventually roots will clog the tile,

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2300 Elmwood Avenue
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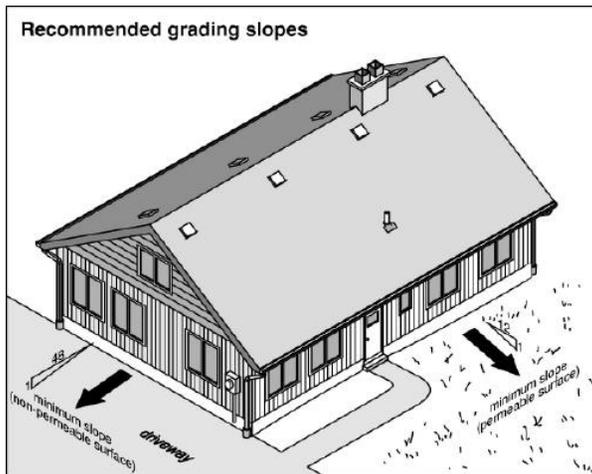
block drainage, and in severe cases can dislodge foundation walls. Leaves and debris on the roof can clog gutters, downspouts and underground conductors, causing gutters to overflow near the foundation, or underground conductors to back-up water towards the problem area(s).

Downspouts that drain to ground level at or near the house foundation can overload basement walls and foundation drain systems. Lot grading that slopes towards the house can direct water to the foundation wall, which adds an extra load on the drain tiles, creating problems.

Some older homes have foundation drain systems or basement floor drains that discharge by gravity directly into the public storm sewer system, creating potential for back-flow in severe rainstorms. Basement floor drains should be connected to the sanitary sewer system.

Solutions

Surface levels should slope away from the foundation wall at a rate of one inch per foot (1/12) for at least the first six feet, if possible. Topsoil can usually be added to accomplish this (never sand, gravel or wood chips, as these are very porous). Walkways should have a slight slope to drain water away from the structure.



NOTE: Do not place soil higher than the foundation wall. - Soil levels higher than the foundation wall can cause water damage to siding and house walls. Soil contact with siding promotes rot and creates an ideal environment for pests. Water damage to house walls can be costly to repair. Ideally, soil surfaces should be kept 6 to 8 inches below siding, if

possible. *Be sensitive to drainage patterns at the rear and side lot lines of your property - you are not allowed to collect and cast drainage to your neighbor's property. This includes grading and gutter downspout discharges.*

Large trees and shrubs should be planted well away from exterior walls.

Clean gutters and downspouts regularly to maintain proper roof drainage. Trim shrubs and trees away from roof and exterior walls. Do not flush debris into underground conductors. Downspout filters are available to separate leaves and debris from the rainwater, keeping conductors clean.

If you suspect clogged or damaged conductor pipes, call a li-



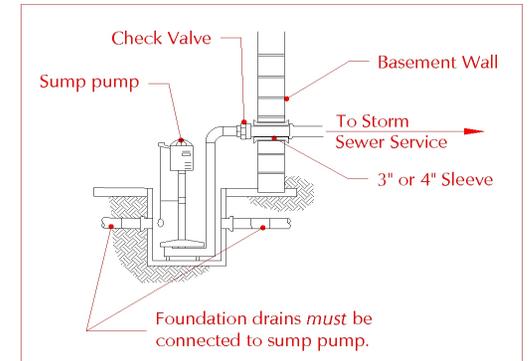
DOWNSPOUT FILTERS

censed plumber to clean and inspect your system. You can obtain a list of licensed plumbers from the Department of Public Works (784-5221), or the Sewer Department (784-5282).

Discharge downspouts at a point several feet (8' or more, if possible) away from the foundation wall to mitigate existing drainage problems. Redirecting roof water away from the perimeter wall is sometimes effective, but may not totally solve the problem. *Be careful to direct downspout discharges away from side and rear property lines. You are not allowed to collect and cast drainage to your neighbor's property.* A more permanent solution, if feasible, is to install underground conductors to the street storm sewer system. This system can, in most cases, be extended to provide yard drains to intercept surface drainage in problem areas. If you already have an underground conductor system that has been abandoned, it is highly recommended that you hire a plumber to clean and inspect the system, making any necessary repairs to restore the system to good working order.

Install a sump pump system to intercept water from foundation drains and pump discharge into your storm sewer service. This will eliminate the possibility of storm water backing up into your system from the street. NOTE: *connecting the sump pump directly to the sanitary sewer system is*

in violation of the Brighton Town Code. Violations and possible fines may be issued to homeowners and contractors who connect storm water devices to the sanitary sewer. If you have any questions, call the Sewer Department at 784-5282.



Check your sump pump every few months to assure it is in good working order. An easy way to do this is to pour several buckets of water into the sump well until it activates and begins to pump.

Basement floor drains should be connected to your sanitary system - connection to the storm water system is illegal.

Prevent potential backups with the installation of a back-water device, or provide a removable plug or screw-cap and close the drain when not in use.



FLOOR DRAIN WITH BALL VALVE

Make sure basement windows are closed during rainstorms. Check the basement regularly during heavy downpours. Protect your windows with properly installed window-well liners and covers.

Patch cracks and holes in the basement wall with hydraulic cement. In some cases, two coats of properly applied basement waterproofing paint can eliminate dampness caused by a minor amount of seepage or weeping.

When leakage into the basement cannot be controlled by other means, a complete repair of the foundation drain system may be necessary. A properly functioning drainage system will protect the home from moisture and water damage caused by heavy rainfall. If you are concerned about the condition of your drainage system it would be wise to have it professionally inspected by a qualified drainage company.