HOME
REPAIR
RESOURCE
CENTER

for do-self or contracted repairs

WHY DO I HAVE A WET BASEMENT?

When was the last time your basement turned into a swimming pool? Living here in north-eastern Ohio, with its periods of heavy rainfall, you may have experienced a wet basement and wondered what to do. The first thing to consider is why water is getting inside your house and not staying outside where it belongs. Then we can look at how to get your house dry again – and keep it dry.

First, you need to understand how your house was built. In the Heights area, most basement walls were constructed from hollow structural clay tile, a reddish-brown block much larger than bricks (usually 5" x 12"). Because corner blocks had exposed hollow ends, builders generally stuffed a lump of mortar into the cavities to keep dirt and water out of the wall. Below the soil line, the exterior of the walls were "parged" (smeared with mortar and then coated with an asphalt liquid) for moisture-proofing. Walls built using clay tile were usually 18" thick and rested upon a concrete footer with drain tile laid alongside. The trench was filled with gravel, and then 14" to 36" of soil. A perforated clay footer drain installed around the foundation ran out to a sewer line in the yard. In most cases, this line went all around the base of your house and out to a larger sewer in the street; sometimes it was connected to the gutters, as well. This footer drain was designed to carry ground water away from your basement walls.

This footer drain forms your first line of defense against water coming into your basement. Your second line of defense is the waterproof compound that was spread around the outside of your basement walls. The third line is the gravel put around the sewer line; it lets any standing ground water flow away from your house and not toward it. Your last defense is a series of floor drains sunk into your basement floor. They are there to carry away any water brave enough to make it that far.

All these defenses are needed to protect your house. It's when one or more of them become ineffective that the problems usually start. There are few effective solutions that homeowners can do themselves. Re-waterproofing exterior walls or replacing buried sewer lines requires lots of digging – expensive, and too labor intensive to be practical for most people to do by hand. Trying to waterproof your basement walls from the inside is futile at best. **No paint or sealer has yet been proven effective in keeping water out for any length of time.**

But, you <u>can</u> keep your storm sewers clear. First, check that wter isn't backing up from the sewers in the street. Ask your immediate neighbors whether water is entering their basements. If so, talk to your city's sewer department about correcting that problem.

If the sewers from your house to the street have become clogged with tree roots, silt, or anything else, a sewer snake is fairly simple to operate. There are many types designed to clear pipe up to 4 inches in diameter, most powered by an electric motor and featuring a flexible cable, 50- to 100-foot long, with a cutting tip on its end. You can get access to the storm sewers through a driveway drain or at the base of a downspout (chip out the mortar holding the downspout in place, and lift the downspout out of the drain tile it feeds into.) To clear the footer drains, you'll have to go in through a cleanout in the front yard, usually located near the sidewalk.

(continued)

You can also divert surface water away from your foundation before it gets there (usually easier than keeping it from coming through once it's against the wall). If your yard slopes toward the foundation, add a few yards of fill dirt around your house, grade the surface to slope away from your foundation, and cover it with 6 to 8 inches of amended topsoil for plantings. Create another barrier by attaching a sheet of polystyrene (sheet plastic) to the foundation wall and extending it into the yard before adding the topsoil. In some cases, a modified French drain – a trench dug parallel to the wall some distance away from the foundation, containing a drain pipe set in gravel and feeding into your storm sewer or to daylight in the yard – can intercept water that runs toward the foundation wall.

If your driveway comes right up against your foundation, water can find its way into the gap between the asphalt or concrete surface and the house. Seal this gap with silicone caulk or a rubberized crack filler; these materials should stay flexible when our seasonal freeze-and-thaw cycle causes the driveways to heave.

Finally, check that your gutters aren't bent, sagging or pulled away from the house. A bare area in your lawn just beneath the roof line is a good sign that the gutter is dumping water along the foundation in heavy rains, where it can work its way through the basement wall. Securing the gutters in place will let them contain the water and direct it into the downspouts as they are designed to do.

Whether you do them yourself or contract the work these low-tech methods will cost far less than having your home "waterproofed" and will usually solve your basement water problems.