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BASEMENT REMODELING

In most older homes, the basement was never designed to provide living space. Today's homeowner, however, may want to use this area for family recreation, entertainment, or additional office space. The challenge is to "finish" the basement with materials that will not be destroyed when – not if – water comes in through the walls or backs up from a sewer.

"Defensive remodeling" begins with choosing materials that can withstand exposure to water, or which are inexpensive enough that you can replace them when necessary. **"Waterproof paint" is not a good choice**; when water is blocked from moving through the wall, it can either wick up into the wood above the foundation, or build up enough pressure behind it that bits of masonry will "explode" off the wall surface. If you want to coat your walls, use a stain-killing, mildew-resistant primer and paint (an exterior latex works well) to reduce the likelihood of mold growth and mildew odor, with the expectation that you'll have to repaint periodically.

It's really **best to have no drywall along the exterior walls of a basement**, because drywall will prevent you from seeing signs of water intrusion (usually caused by clogged sewer lines, sagging gutters, or other problems that are easily remedied) that can cause expensive damage if the problem goes undetected. However, if you really want to finish your basement with drywall, there are some techniques you can use to protect the drywall from water *(see illustration on reverse side)*. You won't need to use water-resistant drywall or concrete backer board – regular drywall will do. On each exterior wall, staple a layer of 6 mil plastic sheeting to the existing top plate as a moisture barrier, extending it the length of the wall and several feet onto the floor. Then, install sheets of 1"-thick Styrofoam board on the wall surface as an insulating material (to decrease condensation on the cold walls on warm and muggy summer days – though you may still wish to use a dehumidifier during periods of high humidity.)

The next step is to attach the drywall. You don't want to nail anything into the masonry walls, since the holes can provide a route for water to enter. Instead, construct a "free-standing" stud wall, attached only at the top and bottom. Start by securing a 2 x 4 to the floor along the bottom of the wall with Tapcon® screws. Then, nail 2 x 4's between the top plate and this new bottom plate, every 16" on-center. Your drywall can then be nailed or screwed to the studs, just as you would do in any other room. After you've taped, mudded, and sanded the drywall, bring the plastic sheeting up from the floor and secure it in place behind some *plastic* baseboard molding (less likely to be damaged by water than wood trim), and trim off the excess. The sheeting will direct to the floor any water that moves through the wall, protecting the bottom of the Styrofoam, studs, and drywall. (Whether or not you install drywall along your *exterior* walls, you can use plastic sheeting and plastic baseboards to protect the bottom of any drywall you install on *interior* walls.)

If you are adding outlets along your basement walls, position them higher off the floor than you otherwise would (about 4 ft.), to prevent problems during water backup. Using GFCI outlets or GFCI circuit breakers to protect against shock hazard is also a good idea.

Basement floors are best painted with floor enamel or covered with ceramic floor tile glued to the concrete floor. If you plan to install any type of rug or carpeting, make sure the material can be easily taken up and cleaned after sewer back-ups.

Remember – remodeling defensively won't guarantee that you'll never experience a wet basement. You'll simply have a better chance that all those materials you've installed will remain in good condition when water does intrude.

(continued)

Basement drywall installation – exterior walls: