

# TIPS FOR THE BEST BATHROOM RENOVATION

ARE YOU planning a new bathroom? Abundant moisture, lots of traffic and small floor areas mean that new installations will age poorly if you don't have the correct hidden features in place. Whatever you do, remember the four details you'll find here.

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## GET A GOOD TOILET

Toilets are one of the few consumer products where some brands and models come new from the factory unable to perform as they're suppose to. The low-flow revolution is why. Toilet manufacturers launched some new water-saving models with insufficient testing, resulting in a surprising number of toilets that can't flush properly. You can identify the effective models ahead of time at a free Canadian website: [www.map-testing.com](http://www.map-testing.com). I installed two bad toilets in my house when I built it in the late 1980s before this list came out. A few years later I changed them for two lab-tested Toto Drake models and they perform flawlessly in our household of seven people.

## CHOOSE A POWERFUL EXHAUST FAN

Shower moisture is highly destructive to paint (especially ceiling paint), it spawns mold growth, and it damages window frames. All this is why you need a powerful exhaust fan in your bathroom.



*Toto is the largest toilet manufacturer in the world and their products consistently perform well in independent testing.  
Photo credit: Steve Maxwell*

And by powerful, I mean something more energetic than is usually installed. Standard bathroom exhaust fans typically move 80 to 90 cubic feet per minute, but in my experience that's not enough. Aim for a fan that moves at least 120 cubic feet of air per minute, and one that does it quietly. "Sones" are a unit of noise output used by the ventilation industry, and a 1.0 Sone fan is very quiet indeed. This level is usually only achieved by the smallest fans. The best you can probably find in the larger models is 1.2 to 1.4 Sones, but that's still very quiet.

It's also vital that if the duct leading from your exhaust fan passes through any kind of unheated space, that the duct be factory insulated to prevent condensation of the outgoing air. If the warm, moist air is allowed to cool, it will form liquid water in the duct, typically running back down into the fan and into your bathroom.

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# TIPS FOR THE BEST BATHROOM RENOVATION

## WATERPROOF WALLS AND FLOORS

Ceramic tiles might seem waterproof, but they're not. Grout joints are the reason why. Even sealed grout is porous, and spilled, splashed and dripped water is a given in any bathroom. Even if you're reasonably diligent, this water will soak through grout and into wooden floor and wall structures, causing unseen mildew, mold and rot. The trick is to create a waterproof membrane underneath the tiles that doesn't interfere with the solid and durable attachment of those tiles.

*Standard bathroom exhaust fans typically move 80 to 90 cubic feet per minute, but in my experience that's not enough.*

Schluter is a tile accessory company that pioneered the most advanced moisture control products I've seen so far for tiled installations. Their KERDI product is a cloth-like material that goes down on walls and tub surrounds, protecting them from all water contact. Schluter's DITRA is a dimpled plastic membrane that goes down on floors, boosting the crack-resistance of tile installations while also waterproofing the surface underneath.

## DURABLE BATHROOM CAULKING

Caulking is a simple and secure way to anchor new countertops to a bathroom vanity, and polyurethane caulking is substantially better than any other formulation I've used for adhesive and sealing. LePage is more commonly available (I order mine from my local Home Hardware store), but 3M performs a little better if you can find it at industrial supply outlets. It dries quicker and a more rubbery.



*The factory-made foam and waferboard sandwich shown here is part of an insulated panel called Barricade. It's primarily sold for basement wall insulation, but also makes an excellent insulation option for warming up cold floors.*  
Photo credit: Steve Maxwell

Durability usual comes down to a few key details applied where they count. And like most things in life, the details of a great bathroom renovation aren't obvious and aren't automatically done. Insist that they're completed right and you'll enjoy many extra years of trouble-free service from your new bathroom.

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*This cone of KERDI cloth holds water even though the seams aren't sealed. Installed underneath tile installations, it easily makes them 100% waterproof.* Photo credit: Steve Maxwell

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*This high-capacity exhaust fan was retrofitted into a bathroom that didn't have a fan before. It moves 150 cubic feet of air per minute, and is located just outside the shower so it can capture and remove moisture quickly.* Photo credit: Steve Maxwell

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Steve Maxwell, syndicated home improvement and woodworking columnist, has shared his DIY tips, how-to videos and product reviews since 1988. Follow "Canada's Handiest Man" at [SteveMaxwell.ca](http://SteveMaxwell.ca), Facebook or @Maxwells\_Tips on Twitter.

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