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Bathroom remodel started

An overview of the master bathroom remodel I will be working on for a few months.



When an engineer remodels a bathroom, they might make my mistakes. I was over-ambitious, and I over-planned. Nevertheless, by doing the work myself, I will end up with a 60-thousand dollar bathroom for about fifteen thousand dollars. This is the overview article. I will be posting specific items like plumbing and electrical as time goes on. I did [a YouTube video of this article as well](#).

It's a big bathroom, 14 by 10 feet. It had the goofiest built-in bathtub in the United States (above). Later pictures show the mold and crappy plumbing behind those walls. Having a custom house is a mixed blessing. It's the only house like it in Florida, but it can sure be weird. Worse than weird, they did a tile job using mastic adhesive instead of thinset mortar. This made a real mess.



The toilet is over in the corner, and it had a goofy little island to hold the toilet paper roll. The bathroom had carpeting, probably from 1988 when the house was built. The owners had dogs and cats, say no more.



The vanity was an ugly color, and the full-sized mirror, louvered medicine cabinet, and louvered closet door were dated. The soffit over the vanity is outdated and makes the room look smaller. This and the wallpaper screamed “1988”.



The room is not really a room. There is a long hallway entry. To close the bathroom, you have to slide one door to the bedroom and another sliding door to the living room. The bathroom then shares the hallway with the walk-in closet.

Friends found it unsettling to be sitting on the toilet and looking at a hallway where someone might saunter in at any moment. Maybe sliding doors were cool in 1988, but I far prefer a swing door. I will be adding a 36-inch solid core entry, and a 24-inch solid core door instead of the dated louvered bi-fold closet door.

I was over-ambitious because at first I wanted a Jacuzzi tub in the shower pan. That means a new drain P-trap, and a new vent that has to run up the partition wall and tie into the sink vent for the vanity.

I was over-ambitious because I was going to build a little room around the toilet. That would mean changing the 6-foot window to a 2-foot and a 3-foot window. For a while, I figured to leave the long window and have the wall bisected it, kinda absurd. Having this enclosed toilet also meant relocating the light and fan switches.

I was over-ambitious because I was going to re-pipe this side of the house. I don't like copper pipe running under the cement slab.

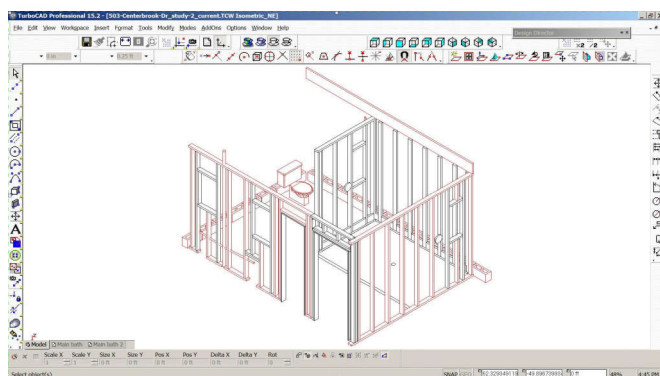
I was over-ambitious because I was going to replace a small water heater in the closet with a recirculating system. I did not like the higher electric bill from having a small water heater in the bath closet.

I was over-ambitious because I insisted on using copper pipe, when everybody said to use CPVC plastic pipe.

It took months, but I decided against the tub. Now I could use the same drain and P-trap. Then I saw a picture of a dual shower. I figured I could plumb a second shower head on the partition wall, and the shower pan size would make more sense. I was going to run pipes in the attic, until a handyman told me the way to do it is run them behind the wall.

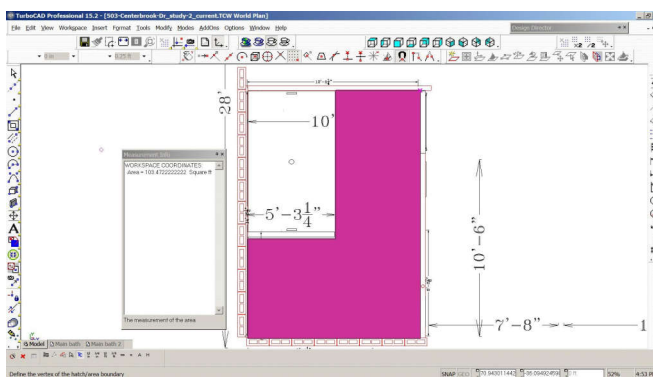
I gave up enclosing the toilet and just put up a partition wall that defined the shower area. I realized I could use the same water pipes already in the ground. If they leak one day, I will fix them.

I decided against re-circulating hot water, and just accepted the higher electric bills from the secondary water heater.

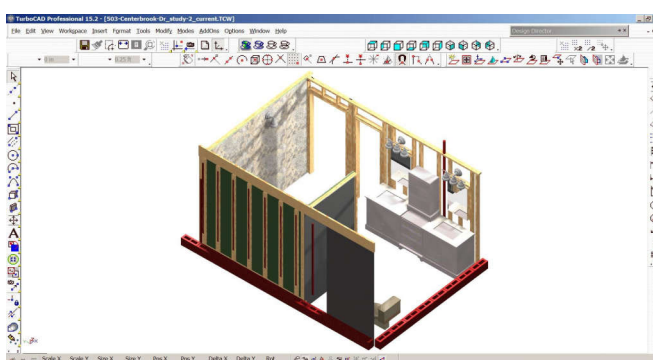


Now, as for the second mistake, maybe I didn't over-plan, but I had trouble dropping the planning stage and get to the building stage. The pandemic didn't help. I drew the whole bathroom out in TurboCAD, an AutoCAD clone, only way better. I did not just throw down wall entities. I drew every 2x4 and cement block.

What is bad about CAD (computer aided design) is that it is not putting up and walls or hammering any nails. What is good is that you can see problems on the computer screen and deal with them ahead of time.



The CAD drawing lets you calculate area with a few mouse clicks.



While it takes a long time to set up the drawing, once you do it is easy to see how to change things. I can even do a simple rendering to get some idea of how things will look.

Another planning issue is that I decided to get a builder's permit. It is the legal way to do things. We can argue about this for days, but this is a big tear-up, plumbing, electric, and walls. Here's an engineer's tip. At first I had several contractors come in. This was during the pandemic, and most did not even bid. I had similar problems hiring a plumber when I wanted copper pipe. Many would not even look at the job.

So I decided that if I could do it myself, I would. The only exception is I decided to use a licensed electrician under my home-owner permit. I have used the guy three times before and was always happy with the job. I am sure the electrical inspector will not worry about the installation if a pro does it.

Related to over-planning, is unknown planning. Nobody told me I had to get a rough-in plumbing for the drain and valves. Then I build the shower, but before tile, do another rough-in inspection to make sure the shower pan does not leak.

Nobody told me that I had to get a rough-in electrical inspection, then hang the drywall and the lights, and then get a final electrical inspection. I called for a mechanical inspector consultation, thinking that was framing. When he got here I realized all he cared about was ceiling fans. When I told him I was going to enclose the toilet and the existing ceiling fan, he said I would need to install a second ceiling fan in the main room. That was one reason I left off the second wall around the toilet.

One thing I learned from projects in Silicon Valley where I used to live. Do a *statement of work*, with all the things that need to be done. Strike off the lines as you accomplish them. Add items as needed.

When everything is crossed off, you are done. I also kept a document where I wrote the time and date I talked to any contractors, and all the lamps and faucets and other stuff I liked enough to save. To me, that was not over-planning, but essential planning.

When some item came up unavailable due to supply chain hassles, I was able to refer to my notes and find an alternative. This document would note the good things I read about Spectalock 1 grout, and the TOTO UltraMax one piece tall, elongated 1.6 GPF toilet.

I also made notes about any articles or videos on building a shower or other construction topics. Then I could refresh my memory before I did that part of the job. It really made things a breeze, there is no way to keep this all in mind.



OK, so armed with my CAD drawing and the whole internet, I had a great time designing the guts of the bathroom. Rather than have a contractor sell me custom-made cabinets, I found a nice 8-foot vanity with marble tops. The 96" Milano white vanity was on a deal at Overstock, and I snagged it for three grand.



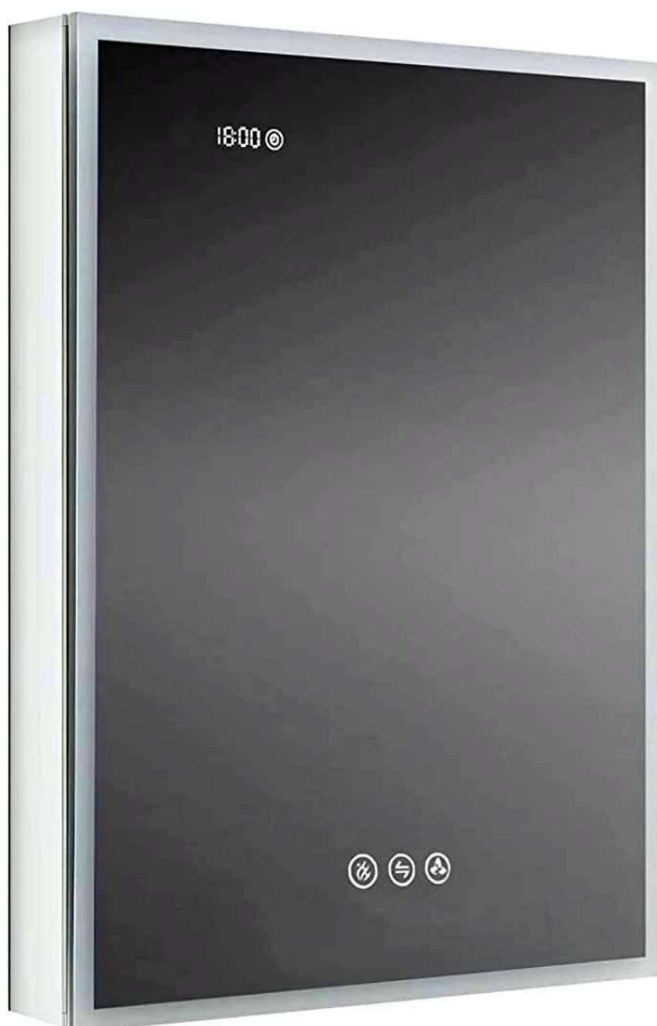
I was going to get a dark blue version, but a pal told me to stick to neutral colors, I'm glad I did.



I bought the faucets on Amazon.



They have an outlet inside and a light, very nice, but 800 bucks a piece. Blossom makes a whole series of these. It was not clear on the listing, but my experiments show me the settings are non-volatile. You can disconnect power to the cabinet, and when you turn it back on, it is set the same. I could wire the mirror to the vanity lamps, but I put them on a separate switch. The electrician told me the lighted mirror is not bright enough by itself, it was good I put the vanity lamps above them.



The next high-end touch was two recessed lighted medicine cabinets I got from Amazon.



In the evening while the TV played, I would look at hundreds of vanity lamps. I ended up with one I felt would not cast shadows on a gal's face as she stood at the mirror. They are Lowes Cascadia Huntley three-light lamps (Lamps).



I even added a matching sconce near the shower. It's OK in Florida if it is on a GFI circuit.



I had read how hard it is to build a good shower niche. So I spent some big money on stainless steel ones. I also bought two solid-core doors from Lowes, one for a new entry, and one to replace the dated folding doors on the closet. I put in Schlage light commercial levers, one privacy, and one passage, for the closet.



The neighbor told me about Delta Multi-choice shower valves. You can put a cheapo simple control in it, or a pressure regulated control, or a thermostatic temperature control.



A Delta Lahara Stainless T14238-SS control fits the Multi-Choice valve.



The old way to make a water hammer buffer.



The modern way with Sioux Chief 660-TS piston-type water hammer arrestors.

I got the 6 by 36-inch rectified floor tile at Lowes, in stock. The hexagonal floor tile came from Home Depot, in stock. The wall tiles were tricky. I wanted 24- by 48-inch. Most tiles are metric and undersized. Look at the area coverage, it will be something like 15.56 Square feet.

Home Depot carries a line of tile from MSI in India. Maybe thanks to being a former British colony, many of their tiles are a true 24- by 48- inches, the area is listed as 16 square feet. I used my CAD drawing to place them, and ordered a 1000 dollars of wall tile. The thing about true 24-inch tiles is that 4 of them will stack from floor to ceiling perfectly with no gap.

I watch that [Tile Coach guy on YouTube](#), and a lot of other shower and tiling videos. I knew I wanted 4x8 foot Durock, not Hardiboard that has fiber in it, and not 3x5 sheets. Permabase is also rock with no fiber, but weights 100 pounds instead of 75 pounds, like Durock. Home Depot carries Durock, Lowes carries Permabase. You can put foam-core Kerdi-board or Wedi-board up for the walls. I prefer cement board when hanging tiles as heavy as mine.

All this adds up. It should be about \$15,000 when I am done, but like I said, it would cost 60- to 80-thousand to have a contractor build it, and they are all backed up. Worst of all, they want to build it their way, not the particular engineering stubborn hard-headed way I want to build things.

Let's go through pictures I took as I did the demolition.

The house had carpet with 28 years of dog and cat pee and poo. Here are some shots as I ripped it all out during the first three days I owned the house.



Some corners were real pee and poop favorites.



You can imagine the smell after they tried to wash this carpet before I took it at closing.



This batch of pee stains is almost artistic.



A concentrated pee and poop stain, I guess their pet liked this corner.



More pee stains on the bedroom carpet. The green is the underlayment mat.



A nice spread of pee and poo stains.



The entry hall carpet underside. Yuck.



There were pee and poop stains on every square yard of carpet in the house. I ripped it all out.



The dog pee stains were everywhere. The blue is the carpet underlayment mat.



This carpet was in the office. It was glued to the floor, but not as soaked in pee and poo.



Here is the entry hallway with the carpet nail strips pulled up.



The carpet nail strips scrapped up by the hand tool lent to me by a neighbor.



The bath area carpet nail strips are next. The glue lines get cleaned with acetone.



The goofy entry hall to the bathroom had nail strips for the carpeting.



The carpet nail-strips scrapped off.



Acetone took the carpet glue off the floor and left it ready for tile.



The tile was loose where the black mold is. I "encouraged" the rest to pop off, it didn't take much effort, a few tiles a day.



The 28 years with no maintenance showed in the toilet seat condition.



Plywood and drywall, really shoddy construction for such a wet area.



The first remodel. A new toilet seat costs a few bucks and takes a few minutes to install.



The entry section is all shorn of tile.



Since the idiots used mastic on the tile, the tiles were easy to pop off the stub wall.



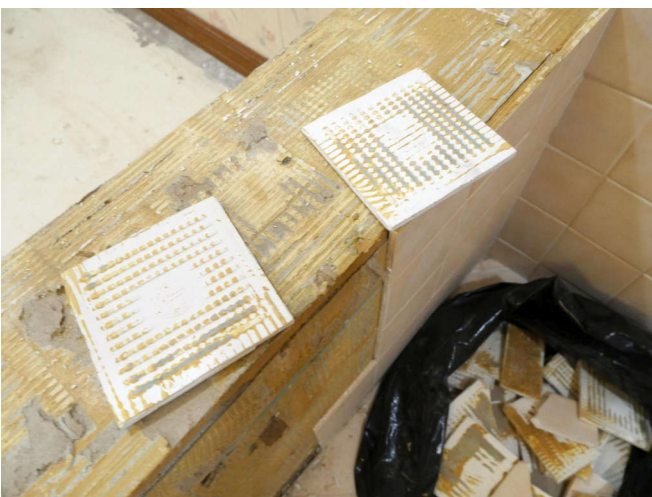
The tiles all held with mastic. Use thinset folks, mastic melts with water.



This part of the wall had the worst mold.



A ton of mold even far from the shower head.



Look at the bad coverage. It's bad enough that it is mastic, it barely had any contact.



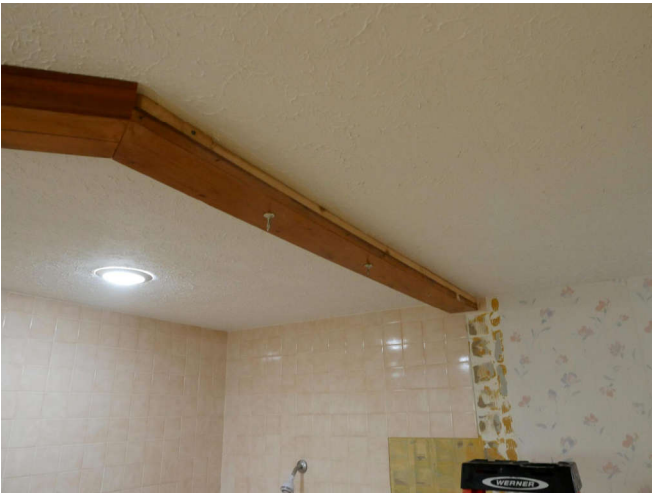
I slipped a little trash into the garbage every week for months.



The "pony" or stub wall is ripped out. I thought I got all the mold, but there is more to come.



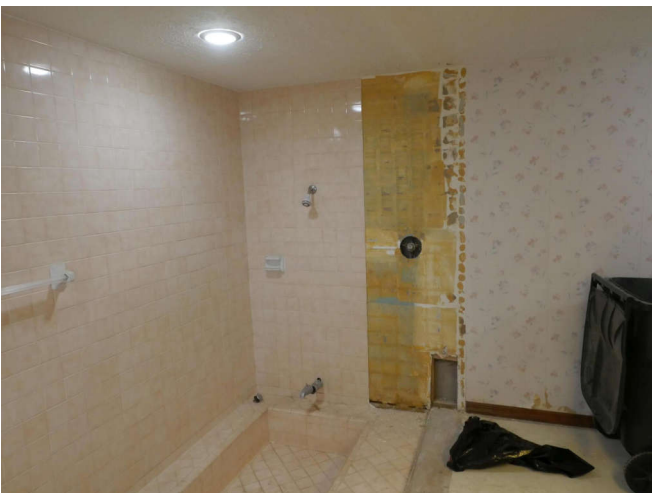
The shower valve is cobbled in a very sketchy method. Don't do this people.



The phony decorative beam gets ripped out.



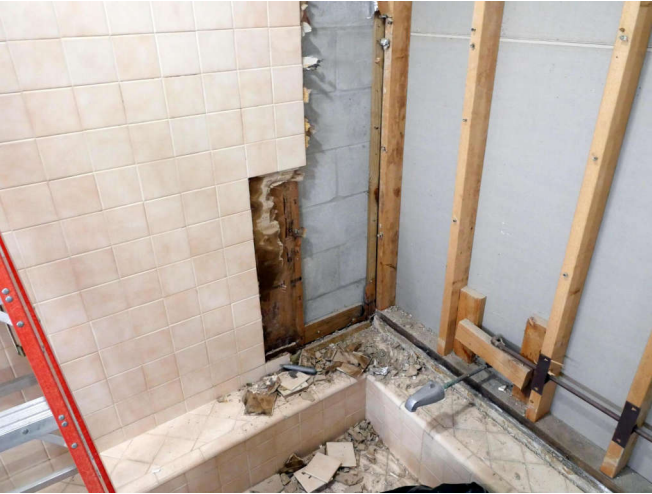
The water outlets are as bad as the valve.



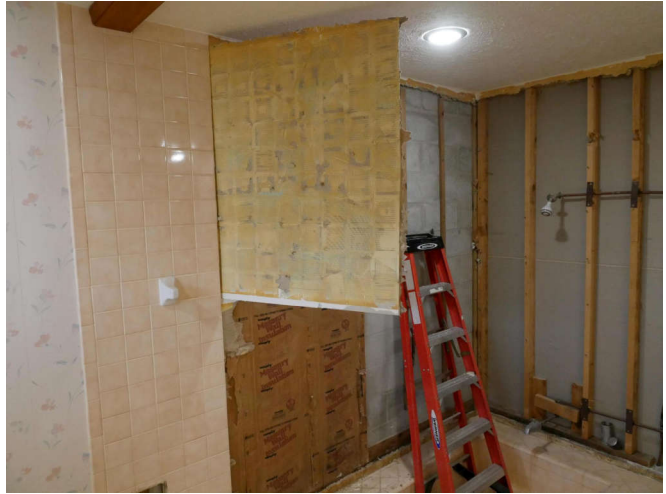
Mastic on tile does not work.



Unbelievably bad construction.



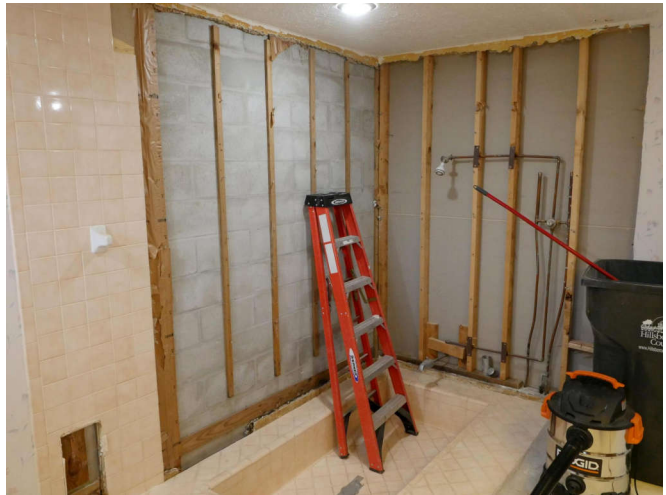
The corner was wet and moldy, this really needed demolition.



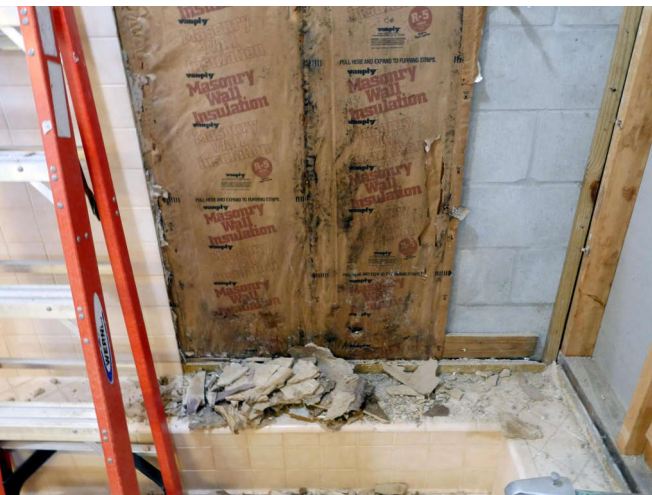
A big section of drywall comes out in one piece.



Pulling off the long wall.



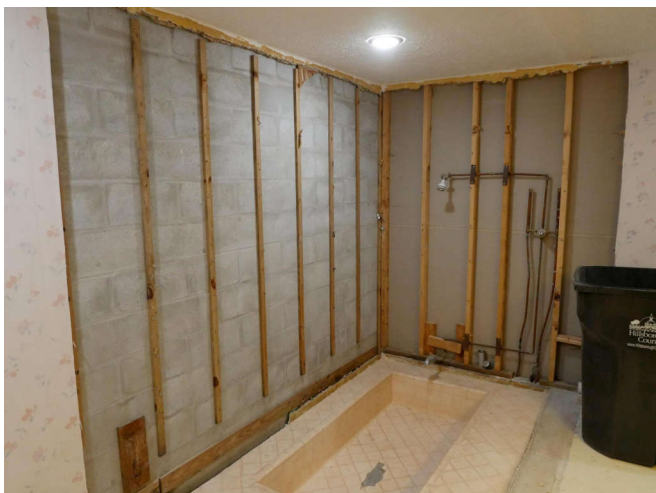
Another section is exposed.



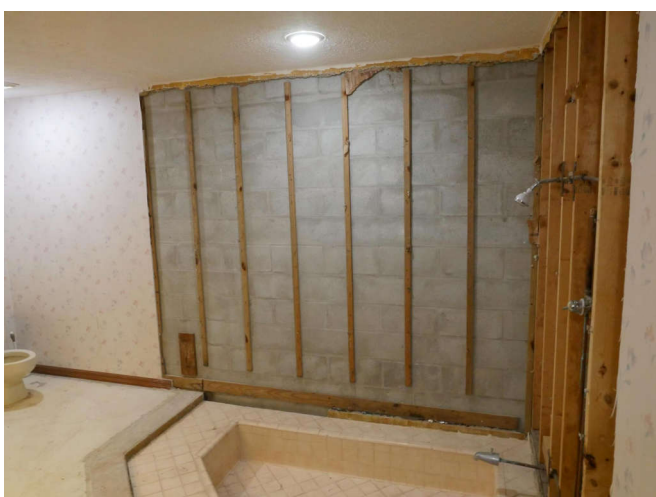
The corner had a lot of mold.



The faux beam on the ceiling gets ripped out.



The bath walls are demo-ed.



The exterior wall is exposed and dry.

I will admit I was overwhelmed by the scope of this job. Doing the demo was easy. Thinking up how to fill in the sunken tub, and how to design the new shower took some work.

I let this sit for a couple years during the pandemic, and only on 2023 did I get off my butt and started working in earnest. I had to extend the homeowner's building permit, but I think I can finish the job in the next few months.

The best thing is I have already got the first plumbing rough-in inspection. Electrical is next, wish me luck.