

Why It Can Be More Expensive to Build in The Mountains

By Jim Jones, The Settings of Black Mountain DRB Chair
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A question that is asked of builders in our area very often is why it costs more to build in the mountains than “back at home”. There are a number of reasons for the higher costs and since the foundation of our new home is finished and framing has begun I can illustrate many of them.



Our dream home was built by Living Stone Construction.

1. Site work- Beautiful views drew many of us to the mountains but those postcard vistas usually are accompanied by a sloped site. The higher degree of slope the more technical and thus expensive it is to prepare the site for your home and driveway. Many times, just getting the construction machinery and materials on to your property is an

engineering exercise. Cutting the drive and clearing the site can take many times longer than on a flat lot. Trees, boulders, root mat and dirt often have to be picked up one bucket claw at a time and transferred to the street to be hauled away. Trees in the steepest area must be cut by hand and roped up to heavy equipment well above or below where the work is occurring. It takes highly skilled operators to avoid rolling that \$300,000 track hoe down the mountain!

2. Geology- The reasons these mountain ridges still stand is that they are mostly rock. Regardless, of your builder's expertise they don't know for sure what they will find when they start digging the footings for your foundation. If they hit hard rock too early it either must be hammered out, blasted out, or your house raised higher.
3. Foundation- No one wants their dream home to slide down the hill. The definition of a bad day! So, your foundation must be carefully engineered and built to handle the significant forces of gravity that would do it harm. Most homes in the Settings of Black Mountain have various versions of poured concrete foundations anchored to bedrock or deep concrete footings. This is not your Daddy's cinderblock! In our case, we encountered hard rock at only 4 ft of depth. Rather than blast away we chose to raise our home higher than initially designed. This has some wonderful effects on our view but caused the foundation walls to be much higher than anticipated further raising our foundation costs. This was no one's fault. We were previously professionally informed by Sean with Living Stone Construction that this may happen. It is part of mountain building, but once your foundation is in, there is no reason for any more surprises.
4. Technology- This is our second custom home and we have renovated several more, so we have seen the changes in building technology. Most of this tech is more expensive than standard building techniques but usually pays for itself over time in lowered bills and higher resell. For example, in our home we used ICF (insulated concrete form) foundations against all of our heated and cooled spaces. This product integrates high grade insulation with sturdy concrete. We will also use Icynene foam insulation in the floors and roof. This soy based super insulator is blown into the cavity and it expands to seal every crack and crevice. We will use Geothermal technology to heat and cool our

home using the constant temperature of the earth in deep wells under our driveway. Twice as expensive as the best conventional systems but with tax credits and 50% lower energy bills it will have a very quick payback. (*Note: Current tax credits may be different from 2012.*) Some of the tech used in building your home is required by difficult mountain conditions and some of it is recommended to enhance comfort and value. You can choose how far you want to take it.