What are the Potential Effects of Foundation Issues on a Home or a Commercial Roof?

Foundation repairs are no minor thing. They can cost you an average of $3,900 and major foundation repairs (i.e. water damage, foundation leveling) cost closer to $10,000.

If left ignored, the problems will only become worse. You may not only have to replace your foundation, but you may have to replace your business's roof as well.

To avoid structural problems, regular maintenance is key. Regular, routine maintenance will help you identify issues early and therefore prevent them from getting worse.

Foundation issues that can affect the roof of your home or business

1. Uneven or Sagging Floors

Do your floors appear to be dipping, bowing or sagging? If they are, it's a sign of trouble. It's highly probable that your home is experiencing foundation failure. When foundation issues impact concrete slabs, floors tend to become uneven.

Besides being unsightly, floors that are uneven or sagging can pose a safety risk, particularly for small children, elderly individuals or the disabled. What could have started as a minor problem could end up becoming a serious issue.

To identify whether your floor is uneven, you'll need a tennis ball. If the floor is level, the ball will naturally remain still. But, if it rolls, then it's a sign that your floor isn't level. A more scientific approach to measuring floor levelness is by using Zip levels.

2. Foundation upheaval

Has your slab foundation moved upwards? If so, it's likely you are experiencing foundation upheaval.

Although it mostly affects the perimeter area of a concrete slab foundation, heaving can affect other structural components as well. Good examples of these components include doorways, hallways, as well as your roof.

Foundation upheaval in slab foundations is caused by excessive moisture. This is especially true in areas that have expansive clay soils. In presence of moisture, expansive clay soil expands. In its absence, it shrinks.

This constant change in soil conditions is what affects foundations. If your structure is experiencing foundation upheaval, the first thing you'll notice are cracks in your floor or walls.

Homes with slab foundations can heave over 8-10" up while buildings can heave over 12" up. Left unaddressed, the problems can begin affecting your structure's roofing as well. The key is to act quickly as soon as you spot any sign of foundation failure.

As already mentioned, moisture is the number one cause of foundation upheaval. The water could be in terms of precipitation, standing water near a home's foundation or plumbing leaks.

3. Foundation settling

Foundation settling is the opposite of foundation upheaval. While heaving occurs in the upward direction, settling occurs downwards. You'll know you are experiencing foundation settling when your structure appears to sink.

In most cases, foundation settling occurs unevenly. In other words, one side of your house could be lower than the other. If in a commercial building, you may notice that the center is sinking.

To fix a settling foundation, a structure needs to be lifted and piers installed both inside and outside.

In the vast majority of the time, cracks caused by foundation settlement are vertical. So, remember this when inspecting your foundation. At first, the gap may begin as a small 1/2" in one area of your house. Over time, the settling could reach up to 4" below the earth's surface.

As with other foundation problems, the longer you wait to fix the problem, the worse it'll become. What's more, excessive settling can lead to a myriad of safety problems.

4. Foundation Cracks

Foundation cracks are often the first sign of foundation failure. They could indicate that your structure is experiencing one of the many conditions that signal a foundation problem.

Wall fissures, floor cracks, and a broken chimney can also spell trouble. Causes of foundation cracks are many. They include:

- Tree roots. Extensive tree roots near your building structure can cause foundation failure. They can do this in two ways. First, they can push your foundation upwards, causing it to heave. Eventually, you'll begin noticing some cracks on the foundation.

  And second, extensive tree roots can cause one part of your house to settle, leading to cracks. This occurs when these roots absorb too much water from the soil beneath your foundation, making it shrink. This is a particularly common problem in areas with expansive clay soil like Texas.

- Poor soil compaction. Your building will eventually start to settle into the ground if it's built on a landfill or soil that hasn't been packed down with great force.
- Under slab leaks. Under slab leaks can create all kinds of foundation cracks. Signs of foundation leaks include foundation cracks, a high water bill, and wet patches in your carpet.
- Soil movement. Any movements beneath the structure of your house can cause cracks' development. This is oftentimes the case in areas with poor soil conditions.

As you can see, foundation issues can cause a myriad of structural issues. From floor cracks to roof problems. With roofs, you may begin to see the ridge or top of the roof start to bow or curve. The roofline could also have a noticeable dip or hump.

The secret to preventing these structural issues is by doing preventative maintenance.