



**"WE OFFER PEACE OF MIND THROUGH KNOWLEDGE AND EXPERTISE"**

# NEWSLETTER

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**MAY, 2008**

# CODE GREEN

On April 15, 2008, Minister responsible for Housing Rich Coleman announced that new Building Code requirements to increase energy and water efficiency would come into effect on September 5, 2008. These first steps in Greening the B.C. Building Code support the province's Throne Speech commitments to reduce greenhouse gas emissions related to buildings and construction. The new requirements have been developed in consultation with industry, local governments and the public:

- 1. Energy Efficiency Requirements for Single Family Houses and Smaller Multi-Family Residential, Commercial and Industrial Buildings***
  - Insulation standards for houses and multi-family residential buildings under five stories have changed. There are new insulation standards for small commercial and industrial buildings.
  - For housing, builders can choose to achieve an EnerGuide rating of 77 as an alternative to meeting the insulation requirements.
- 2. Energy Efficiency Requirements for High-Rise Multi-Family Residential Buildings and Larger Industrial, Commercial and Institutional Buildings***
  - Larger buildings must meet the American Society of Heating, Refrigeration and Air-Conditioning Engineers 90.1(2004) standard. ASHRAE 90.1 is an internationally recognized standard for energy efficiency in buildings.
- 3. Water Efficiency Requirements***
  - Ultra low-flow toilets (6 L) and other water-saving plumbing fixtures and fittings will become mandatory in new construction and renovations.

So what does this mean to the insurance industry?

This first step will have very little impact on new construction, but will have an impact on restoration, remodeling and renovations.

In as far as new home construction is concerned it will only increase the cost of a new home by 2 - 3 percent from the September, 2008 onward.

However with homes older than September, 2008 it will increase the cost in code upgrade by as much as 10 - 15 % depending upon the age of the home. So watch your Bylaw Coverage Limits and adjust accordingly.

By don't become complacent, as the announcement said it is only the first step. So watch for more changes in the building code in the coming months and years. We will keep you informed as these changes happen.



# FROM THE GROUND UP

## FOOTINGS

This is where it all starts. Get this part right and your building will last a lifetime.

If you build a level footing that sits on bearing strata, you should experience very little settlement or not enough to cause any concern. A footing is usually 3 times the width of the foundation wall that will sit on it and approximately 24" to 36" deep depending on the low rise (under 3 stories) structure that will sit on it.

But here is the catch. Minimum Building Code Requirements call for a footing to be approximately 12 inches below the frost line. In Canada that usually means anywhere up to four feet below the surface.

What if there are no bearing strata at that level? Well that usually means that approved fill will be brought in and compacted in order to simulate bearing strata and this does not always work. Then you get settlement, sometimes lots of it depending on how much protection the footing was afforded with properly installed drain tiles.

There are two types of conventional concrete footings: poured concrete, and piers. Again the size and acceptance of these footings are regulated by building codes.

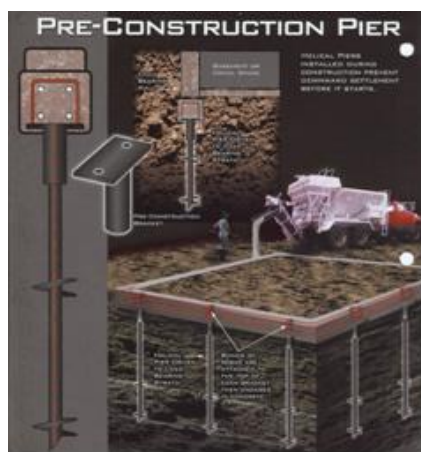
A poured concrete footing may be either a continuous strip perimeter footing, a flat slab on grade with curbs below the slab on the edges, or a combination of both.

In a mild or moderate climate the footing can be monolithic slab where the footing, the foundation, and the slab are a single interwoven unit.

Both a straight flat footing and a stepped footing can support concrete block foundation walls. Steel rebar rods should be placed in footings for strength and support.

A concrete pier is a single square footing that usually has a smaller pier placed on top of it. This type of footing is for support for posts that run down from a main or cross beam supporting the floor, to give it more support and stabilize it.

Now that we know what footings are, this brings up the condition that was raised earlier. What do we do if our footings are not supported by bearing strata? We simply install preconstruction piers. Although we do not push these piers down to bearing strata, we use a helical pier that has an auger (for lack of a better description) on the bottom and they are driven into the ground by a hydraulic torque motor to an accepted depth that has enough pressure to equal bearing strata. These piers are environmentally friendly and will last the lifetime of the building.



The other factor is drainage. The two most common types of drain tile today are "Big O" and "PVC Pipe". We do not recommend the Big O as it can collapse after a few years and it is too pliable which means that it can move and not stay in place. Up until now the PVC Pipe tiles have been the answer because they are rigid and do not move once placed correctly.

However progress moves on in such a fashion that it now makes it more viable and environmentally friendlier by providing new products such as the new double rigid drain pipe which not only has separate drainage for storm water but the normal ground water as well in separate pipes. But it does not stop there because this new product now acts as formwork for the footings and stays in place, so you now have this two pipe system on each side of the footing rather than on the exterior only. And to top it all off they stay in place after the footing is poured, so there is no formwork to strip and fill up the land sites.

Yes it is more expensive to do it this way, but the old adage applies here. "You can pay me now or pay me later" By later meaning a few years later after the foundation has failed and the cost then will be in the hundreds of thousands of dollars, not just a few thousand dollars.

Building Code changes all over North America have introduced these products in the last few years and "Code Green" is just around the corner. This September to be exact.

These two products are part of a greener building code. For more information concerning these products call Mainland Concrete Lifters Inc. toll free at 1 800 231 - 3132.



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