

The Green Line

Energy Efficient and Environmental Building News
Calgary Based - Alberta Focused



The residential construction industry is changing at a fast pace these days. Developments are quick to arise and difficult to keep up with. To help, we offer this quarterly bulletin to notify and keep us all in the loop and part of the discussion. 4 Elements is committed to helping builders reach proven higher levels of performance and environmental certification through all main green building programs.

- LEED Canada for Homes Provider and Faculty
- EnerGuide Rating System Certified Energy Advisors
- R2000 Plan Evaluators and Instructors
- Passive House Design Consultation

Regardless of your starting point or shade we want to help guide projects, builders and our industry to more sustainable practice. To improve our environment, our community and the growing green economy. Feedback, news and links are greatly appreciated.

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Welcome,

Thank you for taking the time to read the first edition of what we hope will be a long history of clear, relevant and timely information about building and certifying high performance homes and residential buildings.

Thank you for your interest in 4 Elements. After all, it is our clients, builders and our friends that make all this possible and such fun.

Upcoming: LEED Canada for Homes

The spring session of the LEED for Homes workshop is set and registration is open. This full day seminar provides a full overview of the LEED for Homes program.

We will:

- Explain the characteristics of green homes & LEED® Homes
- Navigate the scorecard & certification process
- Identify roles & responsibilities
- Manage the costs associated with LEED Canada for Homes



Included are copies of the rating system, power points and lunch.

Time: May 19, 2011

Location: TBA

[Register Here](#)

News from Built Green

Big changes are underway at Built Green, who are now officially Built Green Canada. Now incorporated as a Federal non-profit, with projects underway in ON and NB, Built Green has become a truly a national green building program. Membership is also revised this year with a new Supporting Member level for companies involved in the building sector, but not builders themselves.

See more information here:

[Built Green Canada](#)

The Take Away Thought:

Every quarter we will try to leave you with something interesting, relevant and applicable. This quarter:

Effective Duct Length

Every foot of duct added, every corner, every jog robs the ventilation system of a little flow. Add up enough, especially flex duct, and soon that fancy Energy Star 100 CFM fan is about as good as no fan at all. Worse, because it's still drawing power but does move a puff of air.

Typical 100 CFM Bathfan, rated at 0.1" wc (inch water column)

- Add 15' of flex duct with 2-90' corners = 130' Effective Duct Length

In this case, using 6" duct, the fan is only able to reach 80 CFM, instead of its rated 100 CFM. If using 4" flex duct, it is substantially worse, dropping down to only 20 CFM.

Ducting can be surprisingly restrictive, making what seems like a short jump of only 15' feel 8 times longer to the fan.

The Take Away: Even short duct runs should be carefully considered and rules of thumb never trusted.

Compliance with CSA F326 is required in LEED for Homes, R2000 and Built Green Platinum. Both Tyler and Roger here at 4 Elements are Level 1 trained installers. For information on training and certified companies see Heating, Refrigeration and Air Conditioning Institute of Canada at

www.hrai.ca



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