The LEED V4 Platinum Edelweiss House
Whether you are renovating or building a new home, our categorized guide pages can help you through the process. We have something for all projects, from location and design to finishing and landscaping.

**GREEN BUILDING GUIDE**

**INSULATION & SOUNDPROOFING**

**HEALTH & INTERIOR AIR QUALITY**
Prioritizing in Design

What is negotiable?

- Location
- Size
- Performance
- Features
- Budget
Identify expensive components

• Basement
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- Basement
- Elaborate roofline
Identify expensive components

• Basement
• Elaborate roofline
• Multiple stories
Identify expensive components

- Basement
- Elaborate roofline
- Multiple stories
- Unnecessary space
Passive heating and cooling
Master bedroom
Bedroom
Great room with southern exposure
Kitchen
Closet
Bathroom
Mech room
Bath
Entrance
Bed /storage
Bed/office

1,450 interior square feet
Energy
Energy
• The less heat you lose, the less heat you need to add

• Lower heating demand can mean downsized heating infrastructure

• Heat gain from interior loads start to make a difference
Radiant heat
Mitsubishi ‘Mr. Slim’ ductless heat pump

Electric resistance heat = COP of 1
Heat pumps = COP of 3
AO Smith Voltex hybrid electric heat pump water heater

• Electric resistance water heater = EF of .90
• Voltex water heater = EF of 2.75 – 3
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- Low flow faucets help keep water heater in heat pump mode
- Provided all summer cooling needs
• LED lighting
• ENERGY STAR appliances
• Natural light
• 90% efficient HRV
Total utility cost

- 24.6 kWh per day
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- Quebec Hydro base rate – 5.6 cents for first 30 kWh
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- Never goes to next level of 8.7 cents, 30 % savings
Electric vehicle charging station

91 cents per day for a 66 km commute in electric vehicle 7 days a week (Edelweiss House to Parliament Hill)

Annual total: $830 for total heat, electrical and fuel cost
Build forms
Plumbing and infrastructure
Insulating below slab
Vapour and radon barrier
Radiant floor tubing
Pour concrete and frame walls
The R.E.M.O.T.E Wall

Residential Exterior Membrane Outside-insulation Technique
Wall assembly

- R56 materials, R47 effective
- Excellent drying potential
- Eliminate thermal bridging
- Airtight - .69 ACH
Exterior air barrier membrane
Air sealing windows
Living roof membranes
• Elastomeric membrane
• 15 mil poly root barrier
• Delta Floraxx attached with EPDM washers
Water efficiency

Projected water savings –
60% less than the average
Building products and air quality
- Recycled concrete
- FSC wood
- Cork floors
- Synthetic Gypsum

- Recycled quarts counters
- Zero VOC plywood cabinets and trim
- Zero VOC paint
- Reclaimed river wood ceiling
Complete details of the Edelweiss House at Ecohome.net

• Building Guide
• Demo House
• Video Guide