

## Brattleboro, Vermont – Tiny Infill House

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### **Tiny, green, energy efficient, passivish solar, rental/guest house in a Vermont backyard.**

Caleb and Laura purchased a 1/8<sup>th</sup> acre lot ½ mile from downtown Brattleboro with an existing house and a garage that “begged for help”. They decided to invest their savings in a house that could provide extra income for their family. They took down the garage and created a tiny house rental as a second unit on their property.

#### **Cost/ Design:**

- 400 sf house measures 16’x22’ with a 9’x15’ sleeping loft.
- Cost of the house including appliances was \$53,481 (\$134 per square foot). Of that total cost \$20,035 was DIY labor so the total cash cost out of pocket was \$33,446. (One year after completion the total cost of the project was \$60,000 which included the fence, and other upgrades.)
- Professionals hired for utilities (electrical and plumbing), foundation installation and framing.
- Owner labor included installation of foam insulation and pine wall boarding, painting trim, mudding and painting walls, finishing floors and general contracting over the year.
- Repurposed materials purchased to reduce cost of project. “Use used whenever possible.” credo.
- Defined private yard with cedar fence to clarify personal space between main house and rental house.
- House Specifications: 2x6” walls with cellulose and 1.5” XPS foam over whole shell; 12” cellulose insulation in ceiling with a metal roof; double pane windows; small propane hot water heater in crawlspace; Rinnai 11 (9,000 Btu) propane direct vent heater; Panasonic Whisper Quiet ventilation fan in bathroom (goes on for 5 minutes with a motion detector and also goes on if the bathroom is over 80% humidity); ventilation fan over stove in kitchen operates manually.
- The project took two years total from design to finish. The building process took one year to build to tenant ready.



#### **Financing:**

- Financed with family savings which now provides monthly rental income and increased property value.
- A \$3,000 grant was secured from the Brattleboro Area Affordable Housing agency to support the construction of a 2<sup>nd</sup> housing unit on the property as part of a program to provide additional lower income housing.

- Investment payback of money invested in project is roughly 6 years based on final costs of project assuming a 10 months/year average occupancy at \$825 rental rate.
- 10%+ yearly return on investment including 10 months/yr avg. occupancy.

**Regulatory:**

- Brattleboro, VT allowed for a second unit on the property.

**Lessons Learned**

- It always costs more than you think it will to build a house! Don't be surprised by 20-50% more cost in the budget.
- Dimensions of the building helped to minimize lumber waste.
- An unheated bumped out side entrance could minimize cold entrance during winter and provide for some needed storage.
- A full basement would allow for much more storage for minimal additional cost.
- DIY labor can be a place of savings, way to stay in close touch with the process, and a big learning experience.
- Saved money through: An efficient design, DIY general contracting, utilizing salvaged material whenever appropriate. They painted, stained, installed rigid foam, did site clean-up and landscaping but paid for folks to install floors, siding, and trim.

**Learn More:**

<http://tinyhouseblog.com/stick-built/calebs-small-clog-guest-house/>

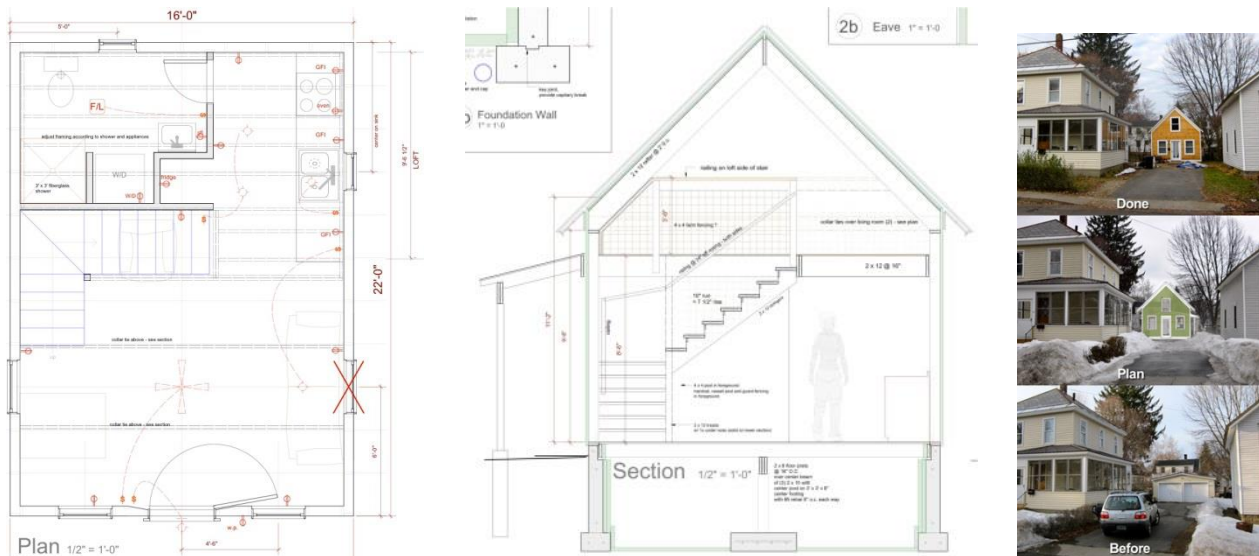
<https://calebjc.com/2011/03/02/building-a-backyard-guest-houserental-unit-in-vermont-for-under-30000-00/>

Incredibly helpful Project Costs Spreadsheet –

[https://docs.google.com/spreadsheets/d/1JHNRyXYej1pqqJsIMNNewK36JmjWzjyQ-J9--10tJIM/edit?hl=en\\_US&hl=en\\_US#gid=3](https://docs.google.com/spreadsheets/d/1JHNRyXYej1pqqJsIMNNewK36JmjWzjyQ-J9--10tJIM/edit?hl=en_US&hl=en_US#gid=3)

<http://swinburnearchitect.com>

<http://baahvt.org/our-programs/apartments-in-homes/>



*Pictured: (Left to right) Floor plan and sectional view. Plans by architect [Bob Swinburn](http://swinburnearchitect.com). [bob@swinburnearchitect.com](mailto:bob@swinburnearchitect.com) Before image of site with garage, plan image from design phase "What might this actually look like?", and completed project image on top.*