



Welcome to Waidy & Earl's Home!

- Your hosts
 - Earl Killian (owner)
 - Waidy Lee (owner)
 - Dan Smith (architect)
 - Greg Vickerman (general contractor)
 - Build It **Green**
- Status
 - Almost complete
 - Move-in 11 October
- Todo
 - Spiral stair, skylights, roof fixes
 - Living roofs, landscape
 - Trim and finishes
- Some requests
 - Follow guidebook rules
 - Stay off of spiral stair
 - Do not open cabinets, drawers, closets, etc.
 - Be careful of the floors and walls
 - Leave these pages at reception when you leave
- More information
 - <http://www.kilee.us/tour/>
 - Construction photos for the curious

Our Solar Straw-Bale Home

(Trying to eliminate direct fossil fuel use)

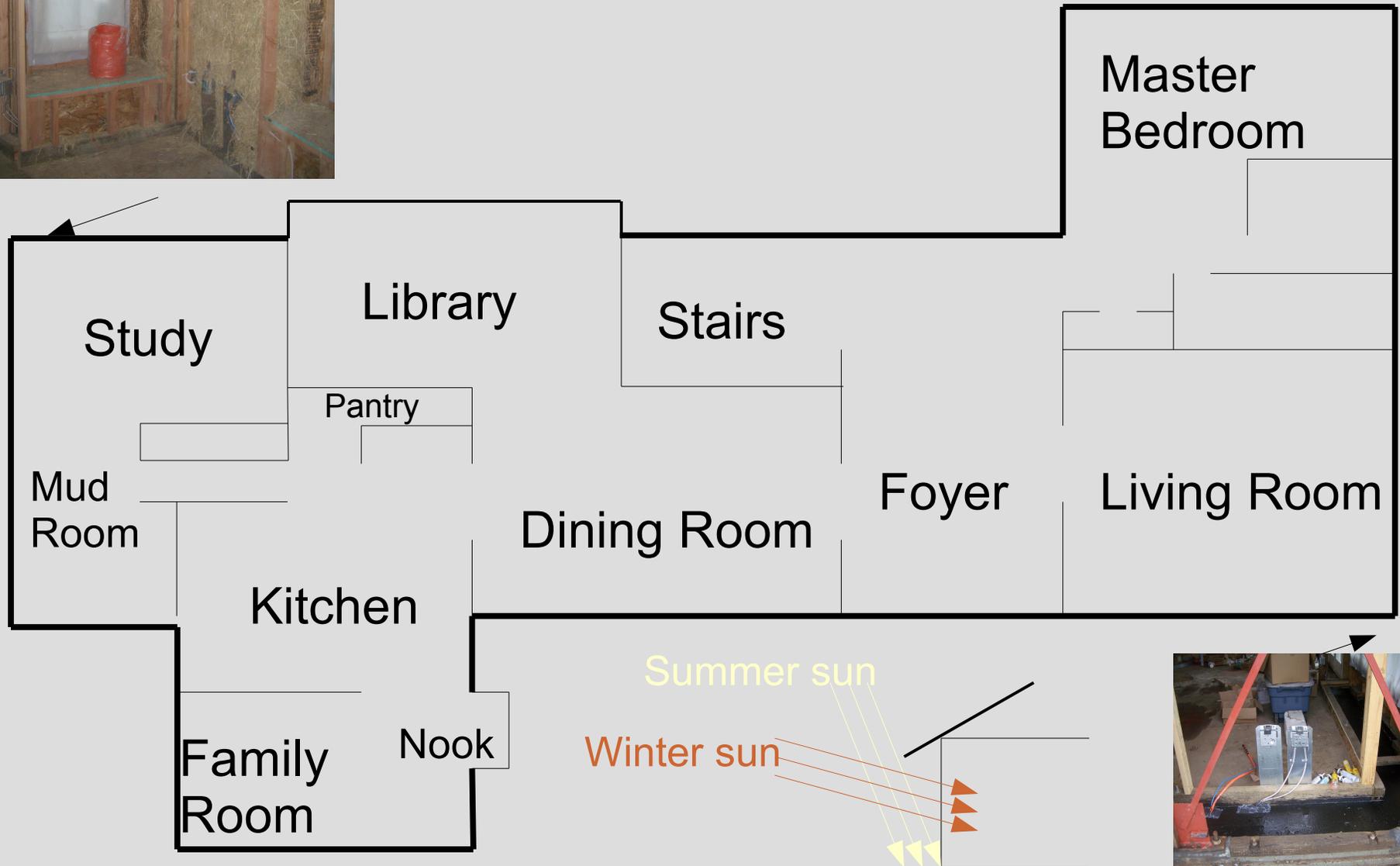
- Photovoltaics
 - Barn (crystalline)
inverters/batteries in barn
 - House south roof (thin-film amorphous)
inverters in basement
 - House flat roof (crystalline)
inverters in basement
 - Hope to generate more than we use in a year
 - Some battery storage
 - 17,257 peak watts
 - 80KWh per day this past summer
- Passive Solar
 - Straw insulation
 - High thermal mass
Concrete, tile, plaster, etc.
 - Winter sun helps heat the house
 - Crawl space helps cool house
- Secondary heat
 - Radiant floors
 - Electric heat pump in basement
 - Domestic hot water is heat pump too

Our Solar Straw-Bale Home

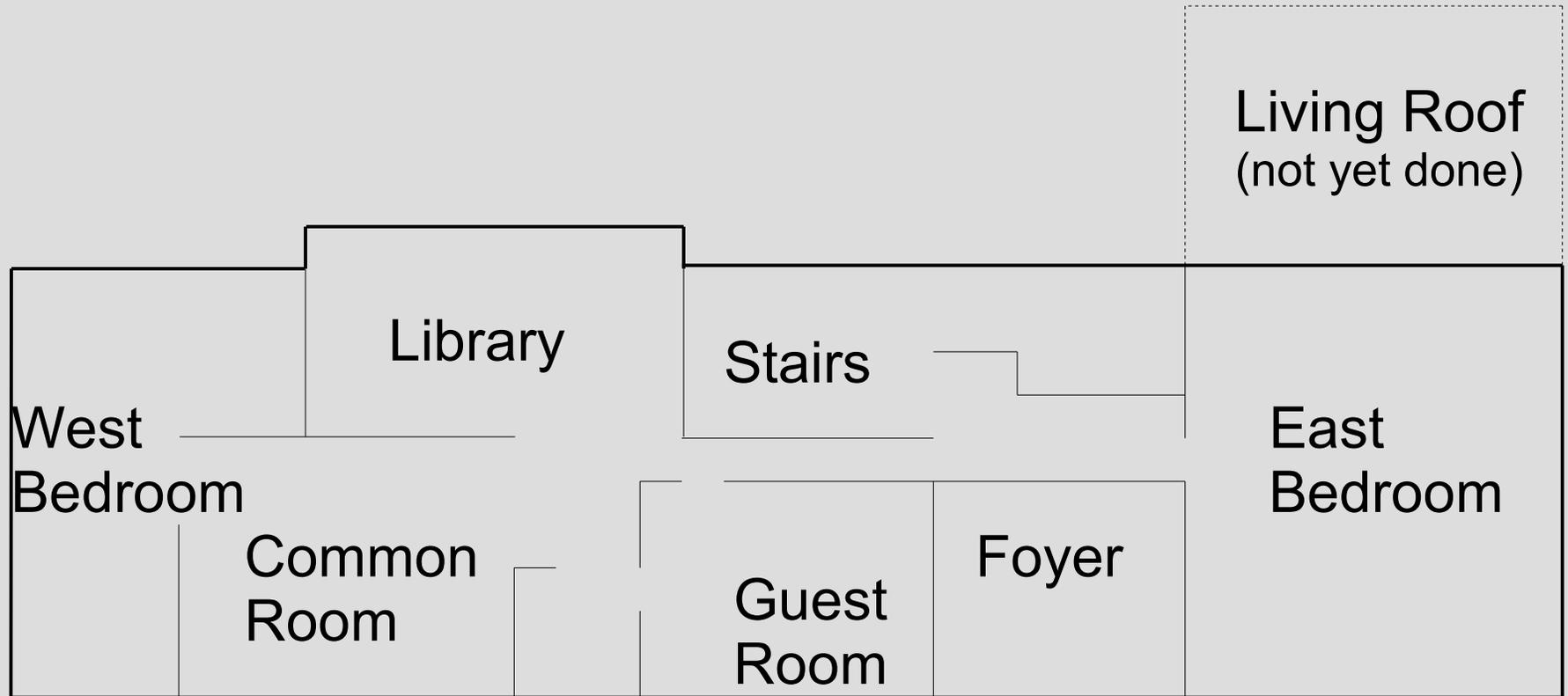
(Green Construction Methods & Materials)

- Deconstruction of old house, sale of materials
- Flyash in concrete
- Use of recycled wood to make roof joists
- Significant use of FSC certified framing lumber
- Insulation
 - Straw bale
 - Cotton batts
 - Cellulose
- Bamboo flooring in basement

First Floor Plan



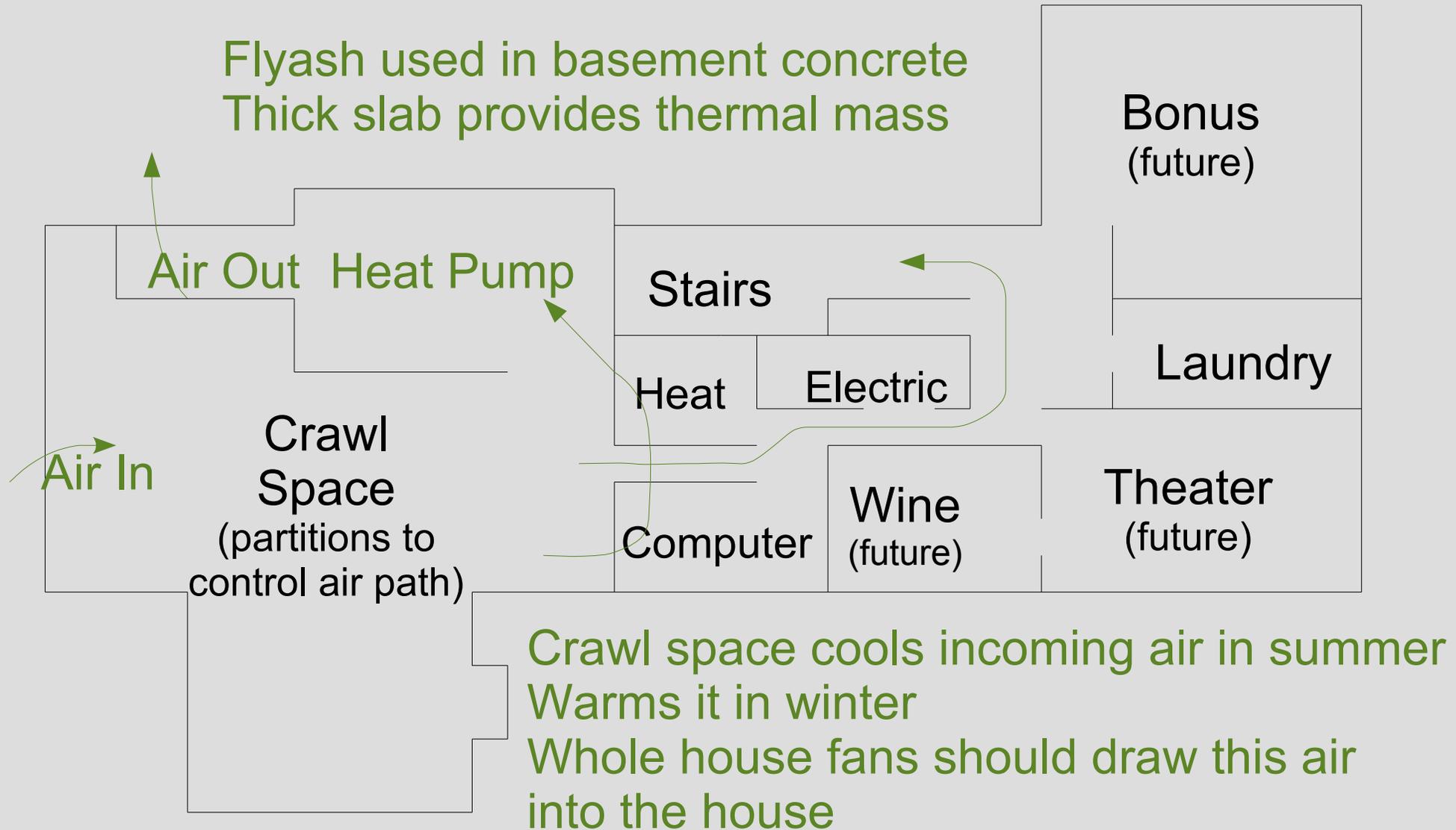
Second Floor Plan



Living Roof
(not yet done)

Living roofs will be covered with soil
and planted with sedums

Basement Floor Plan



Fossil Fuel Mitigation

- Remaining fossil fuel uses
 - Propane for cooktop (small)
 - Propane for space heaters in case of extended power outage (tiny)
 - Occasional gasoline car use (trips > 100 miles)
Most car travel doing in battery electric vehicles
 - Airplane travel (huge)
 - Indirect use (purchases)
- Mitigation strategy:
Purchase carbon offsets (e.g. wind credits)
- See
 - <http://green-e.org/>
 - <http://tinyurl.com/nvbhw>

For more information on our home: <http://www.kilee.us/tour/>

FAQs

- How well does the passive solar work?
 - Unfortunately, we don't have much data yet. Check our website in a year...
- How many sqft is the home?
 - 5000-7000 depending on how you measure
- What does your PV system cost?
 - Wrong question. You should size a system based on your usage. Figure around \$6/Watt after rebates.
- Why is your PV system so big?
 - Though our appliances and lighting is efficient, we have a lot of them, and we substituted electric heat pumps for natural gas. Our battery electric vehicles use about 23% of the power we generate (but we buy almost no gas).
- Why do you emphasize elimination of fossil fuels?
 - Global warming is the most serious threat we face. Fossil fuel use is simply not an option for anyone who cares about the Earth. The only safe amount is zero.