



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)

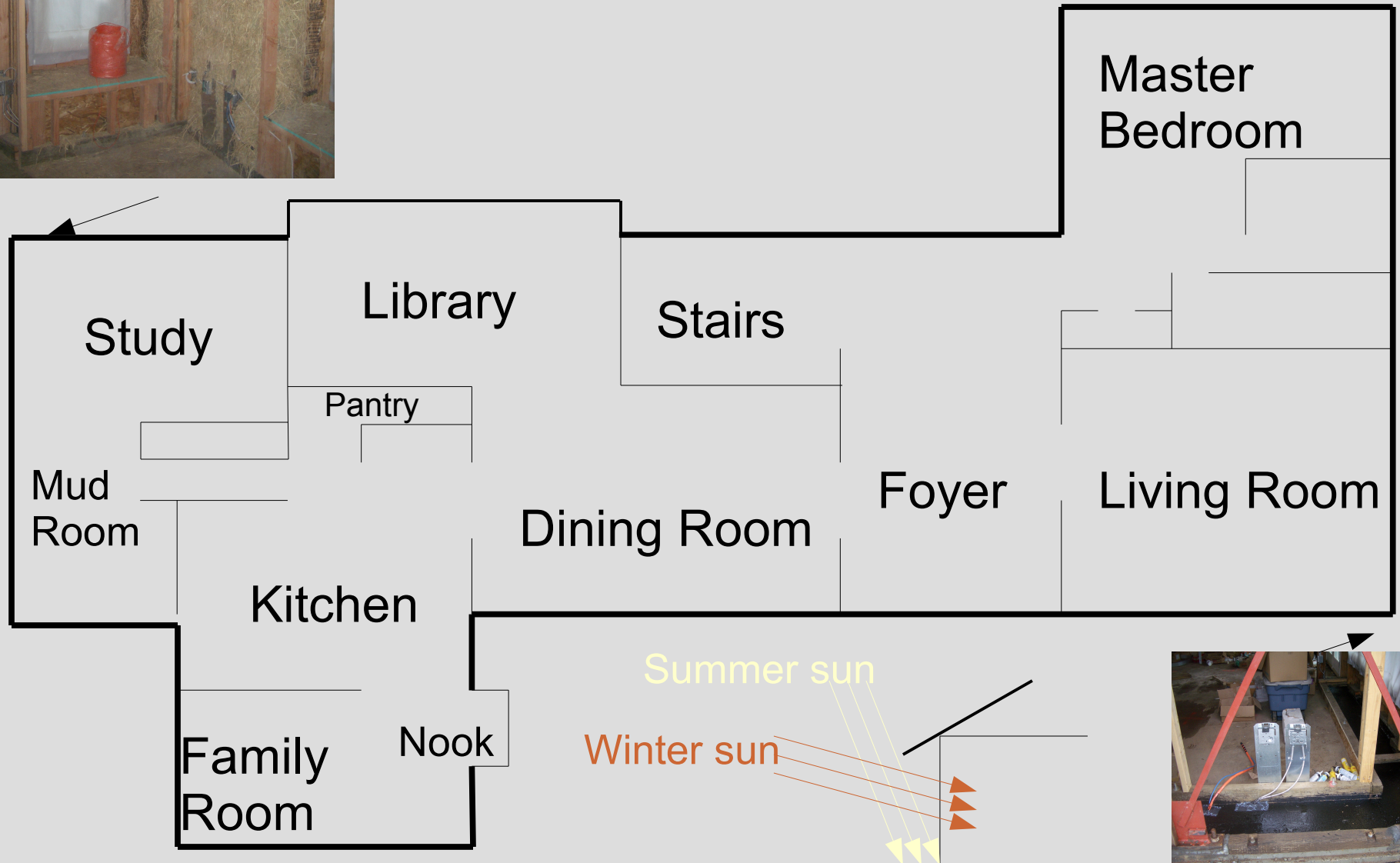
- Photovoltaics
 - Barn (crystalline)
inverters/batteries in barn
 - House south roof (thin-film amorphous)
inverters in basement
 - House flat roof (crystalline)
inverters in basement
 - Hope to generate more than we use in a year
 - Some battery storage
 - 17,257 peak watts
 - 80KWh per day this past 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

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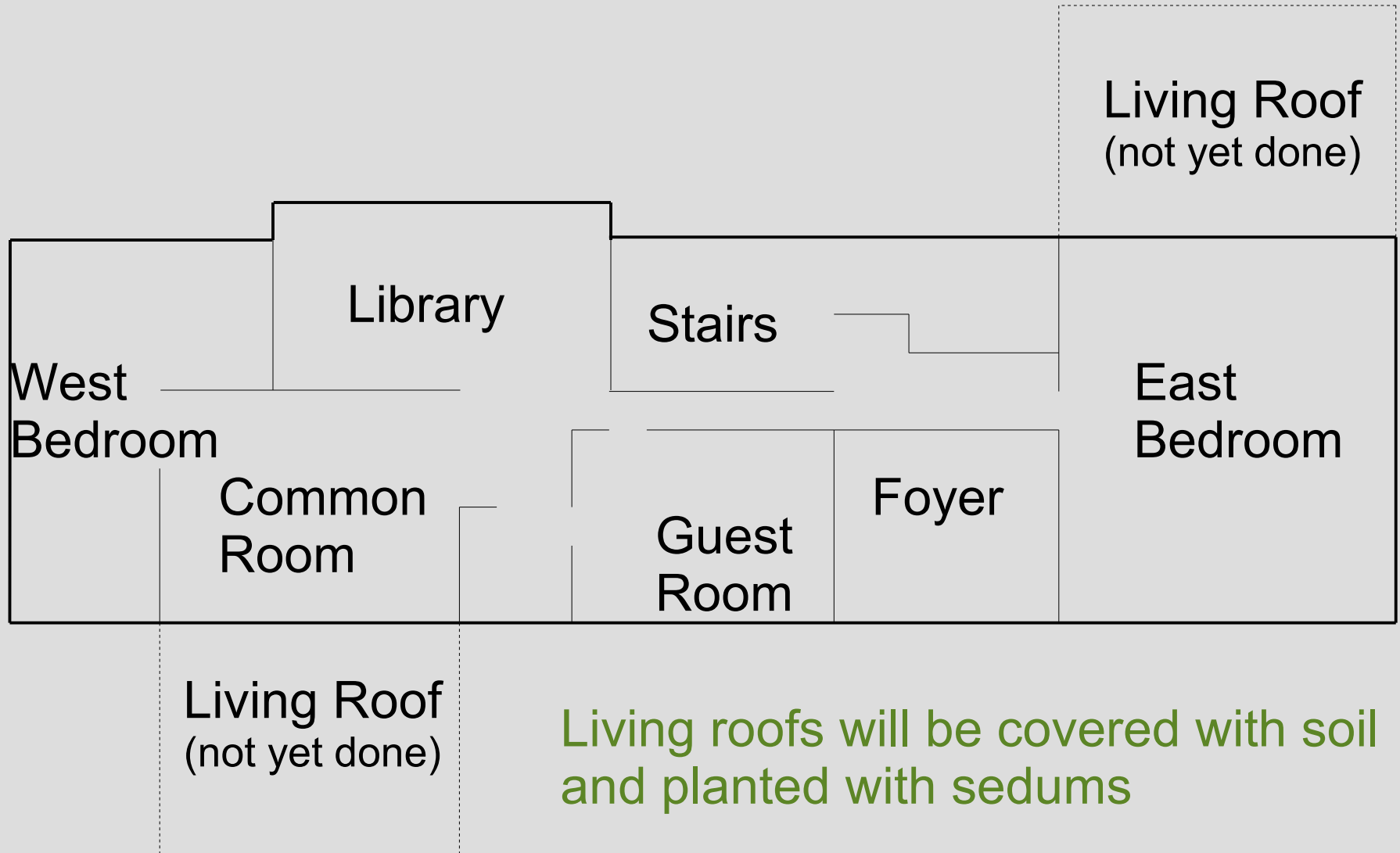
(Green Construction Methods & Materials)

- 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

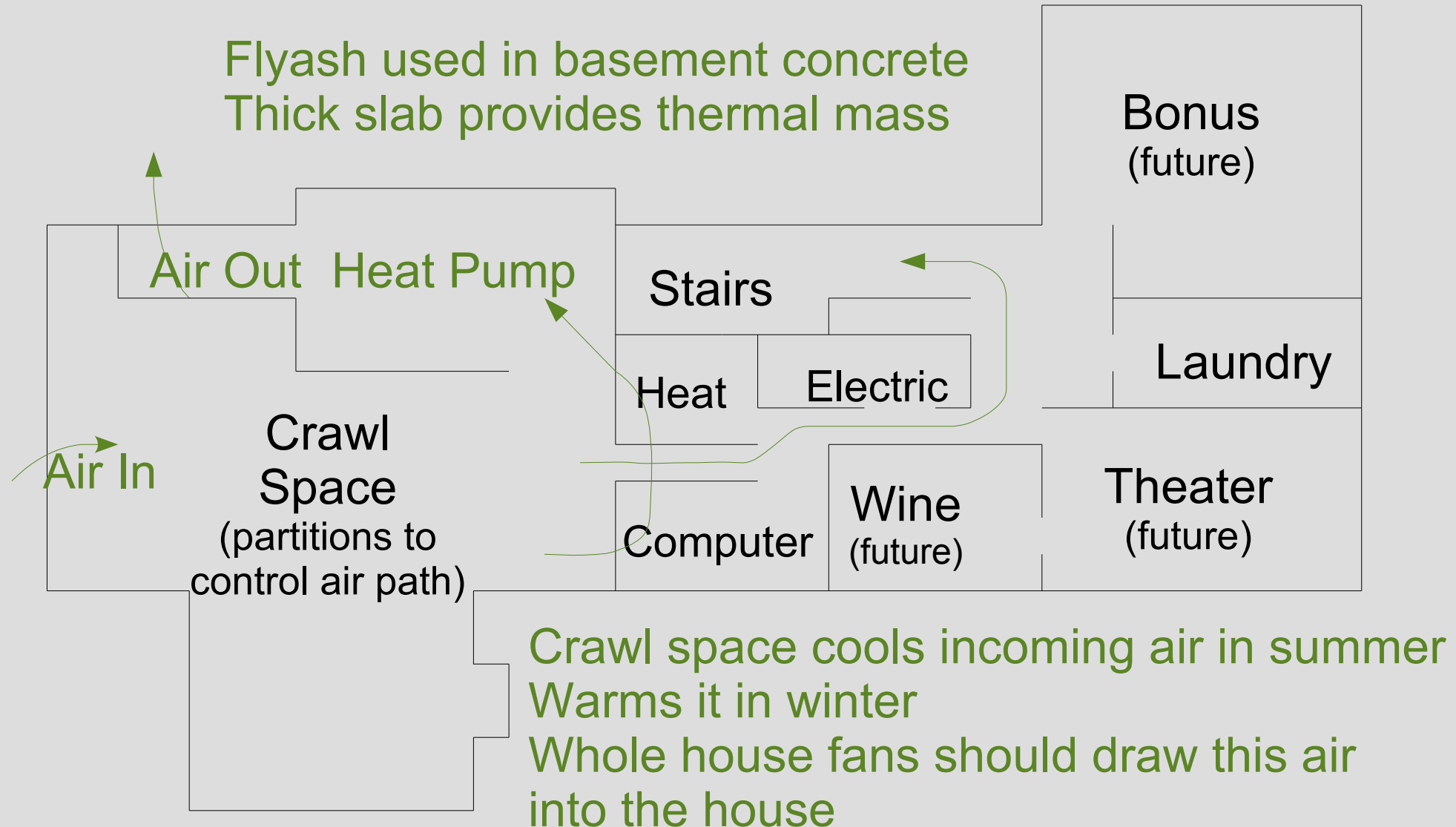
First Floor Plan



Second Floor Plan



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.