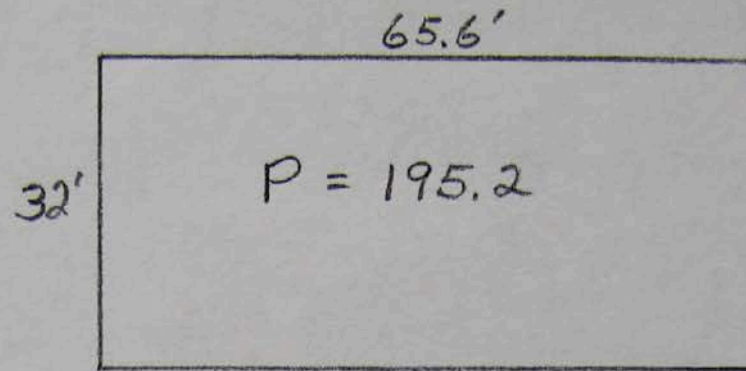




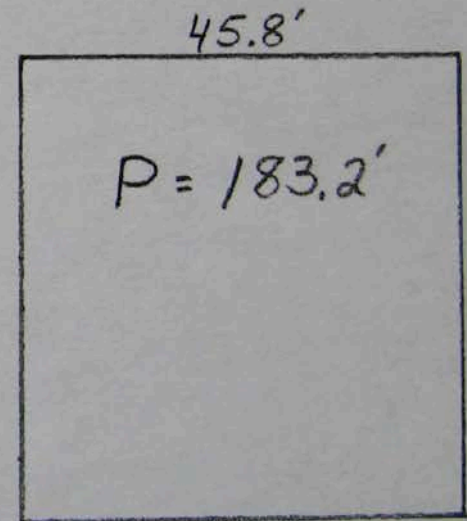
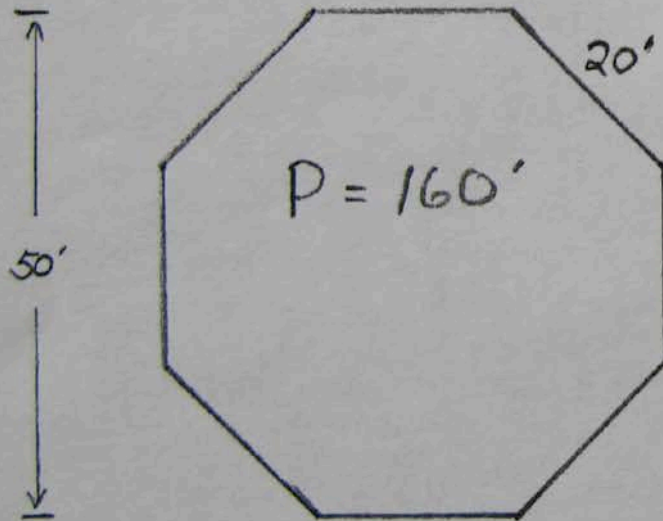
Sunset Roost



The Dream



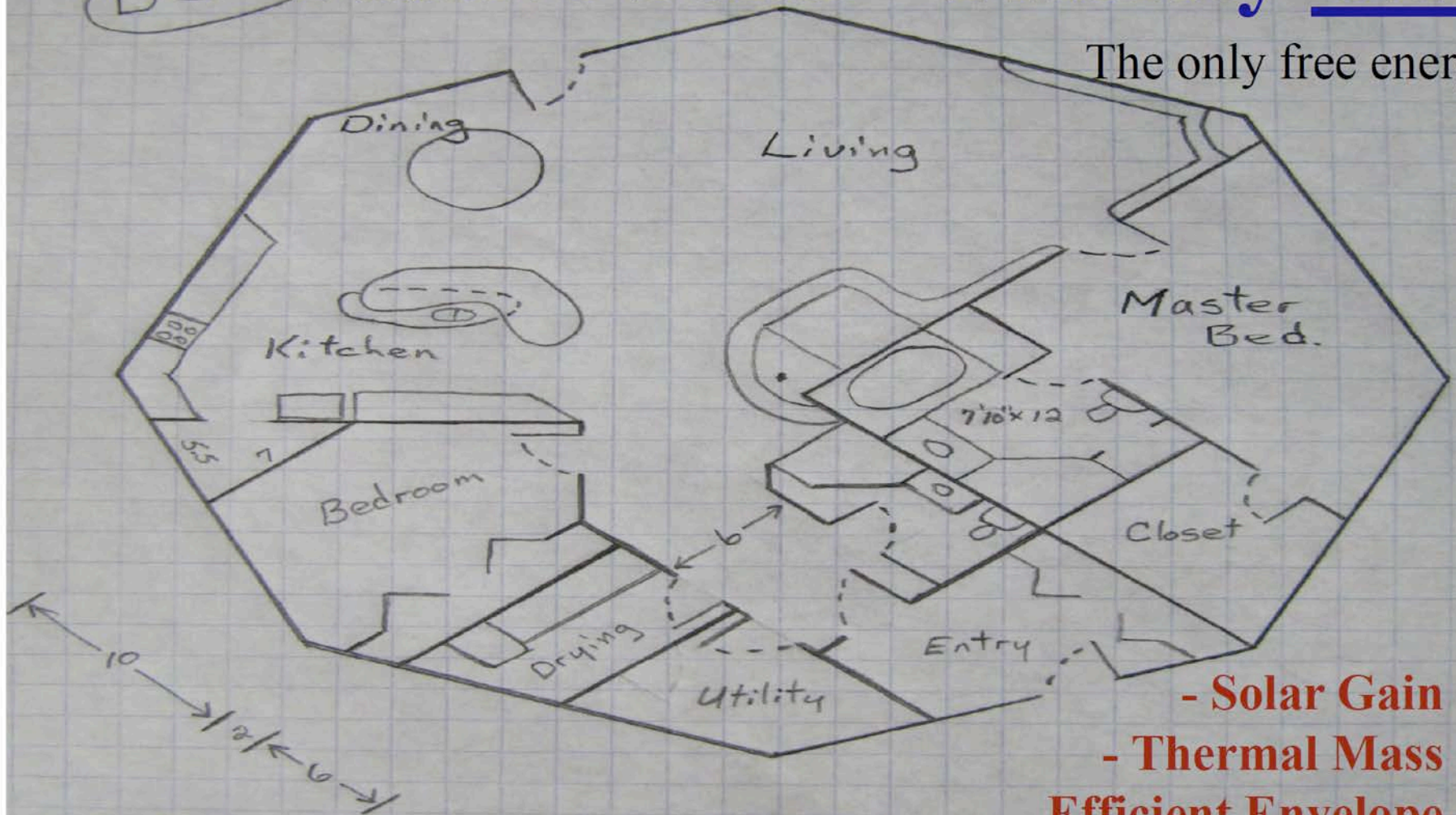
The Design



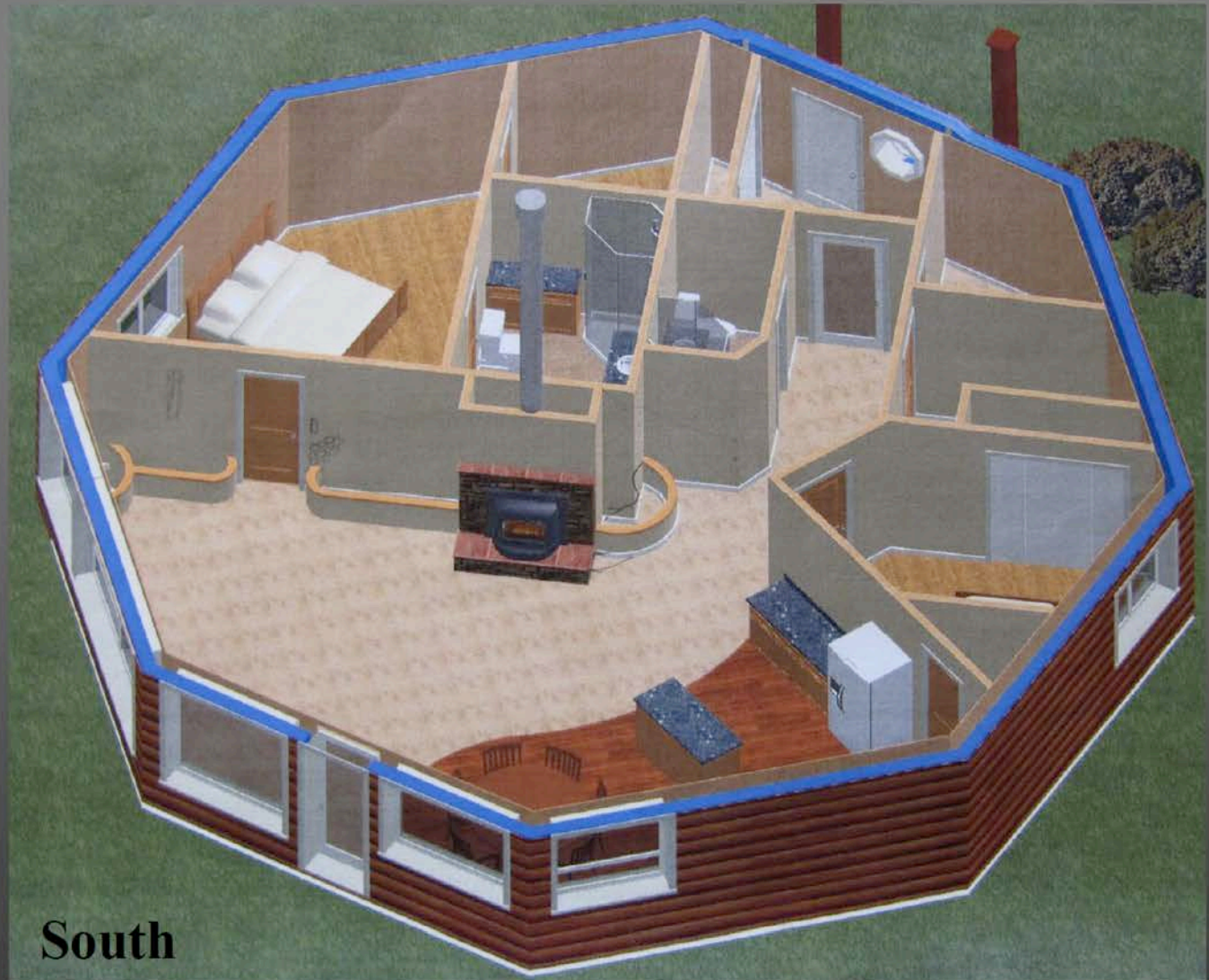
$P = \text{Perimeter}$

Passive Solar - Priority One

The only free energy



Solar Gain



South

Zero Space Heat Required

March 6 thru October 10

Thermal Mass

Concrete Slab
Stone Work
- Planters
- Benches
- Masonry Heater



Efficient Envelope

Air Tight
No Thermal Bridges
R65



Scissor-truss Roof

24" Cellulose

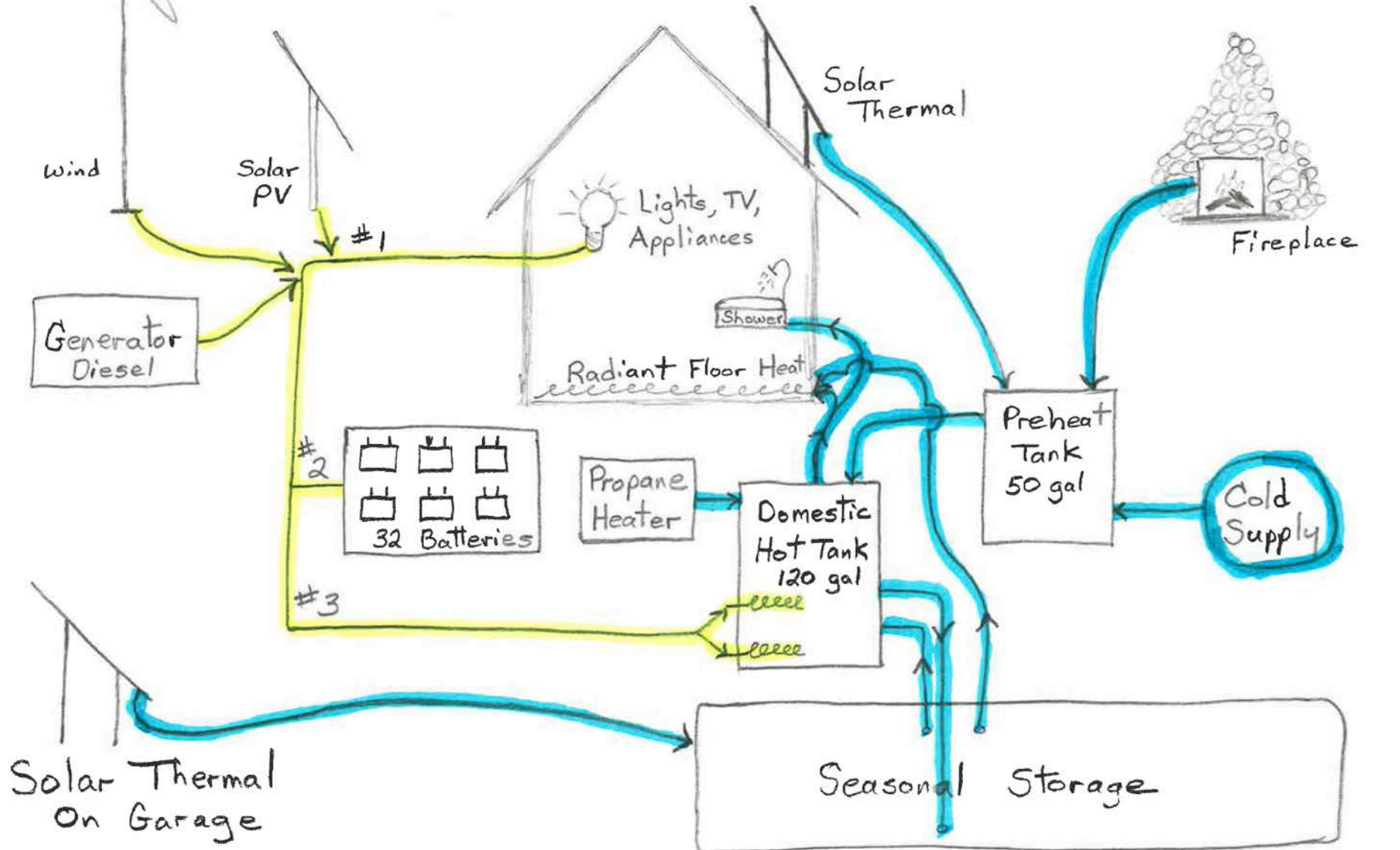


10" EPS Foam under slab

#1. Passive Solar Design

#2. Renewable Energy

- a.) solar gain
- b.) thermal mass storage
- c.) efficient envelope



Hot Tank

Dump Heat { On 175 (A,B,C, bottom feed)
Off 160

Add Heat { On 116 (A,B,C, top feed)
Off 122
IF seasonal > 125
top

Bosch
on "E" 112
off 118

Wind + PV
> 195 off
< 190 on

Domestic

Solar Therm. #1
roof top

Hot Tank

Preheat
40-180

Fireplace

on 130
off 110

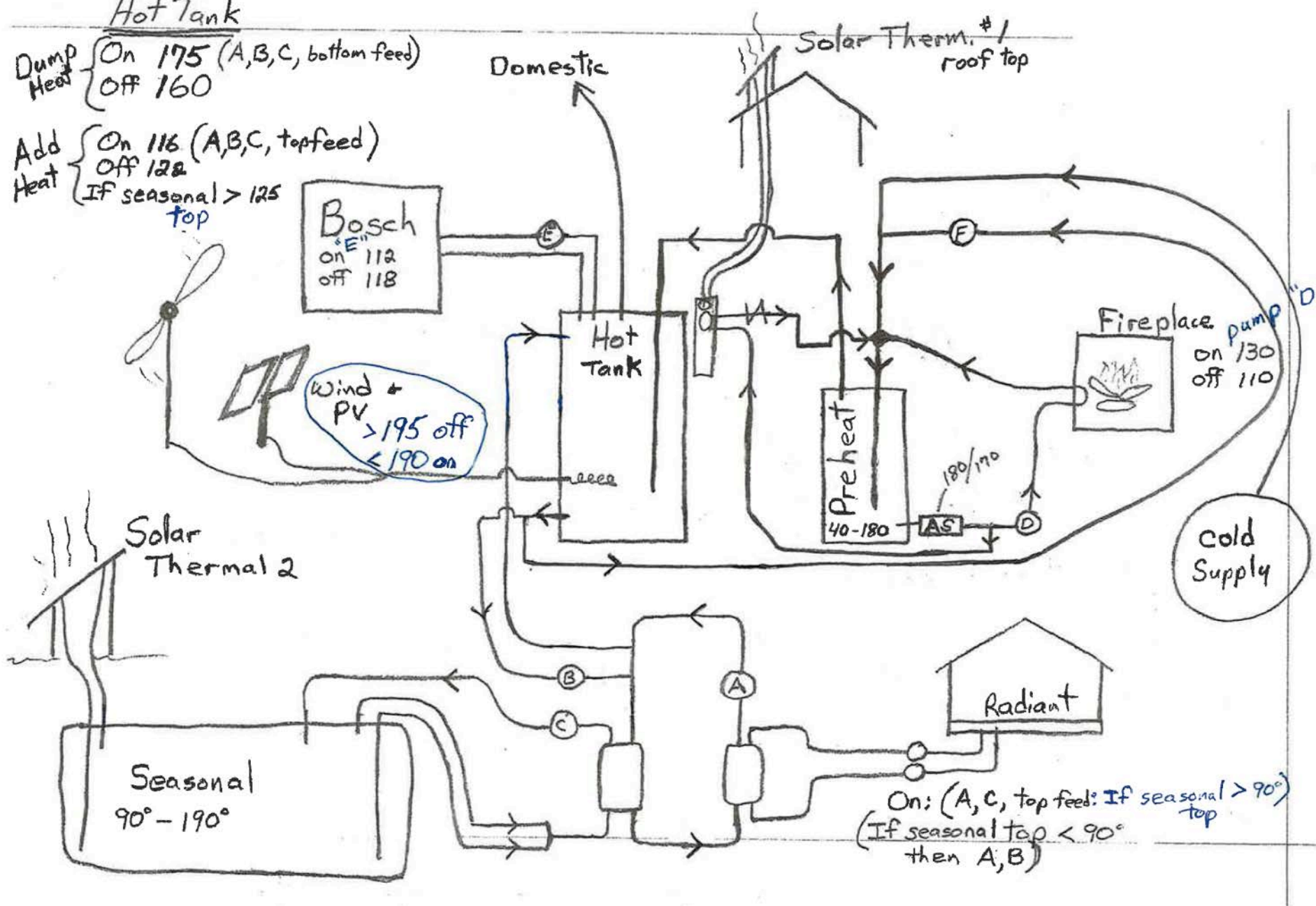
Cold Supply

Solar Thermal 2

Seasonal
90° - 190°

Radiant

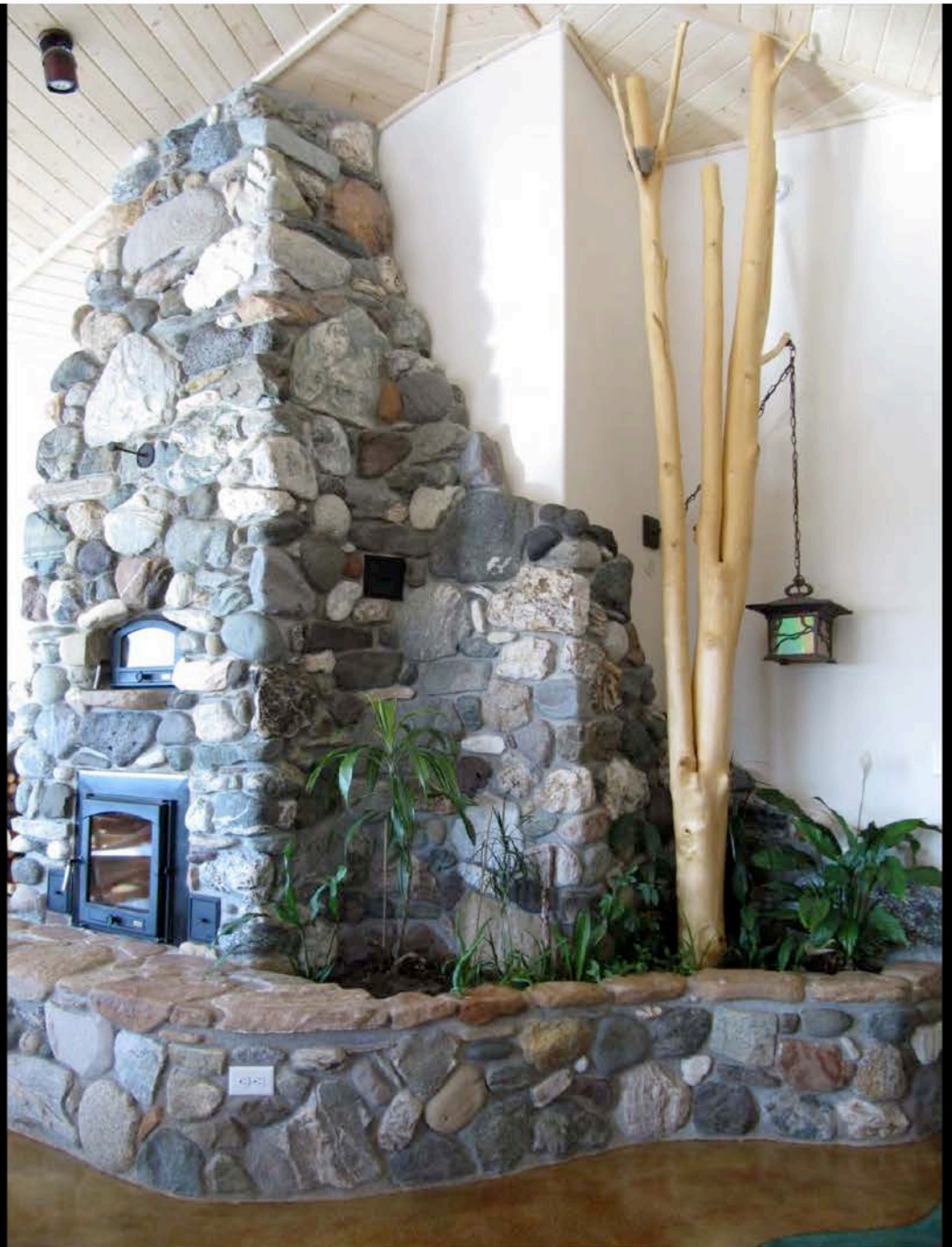
On: (A, C, top feed: IF seasonal > 90°
(If seasonal top < 90°
then A, B)



Utility Room



Masonry Heater



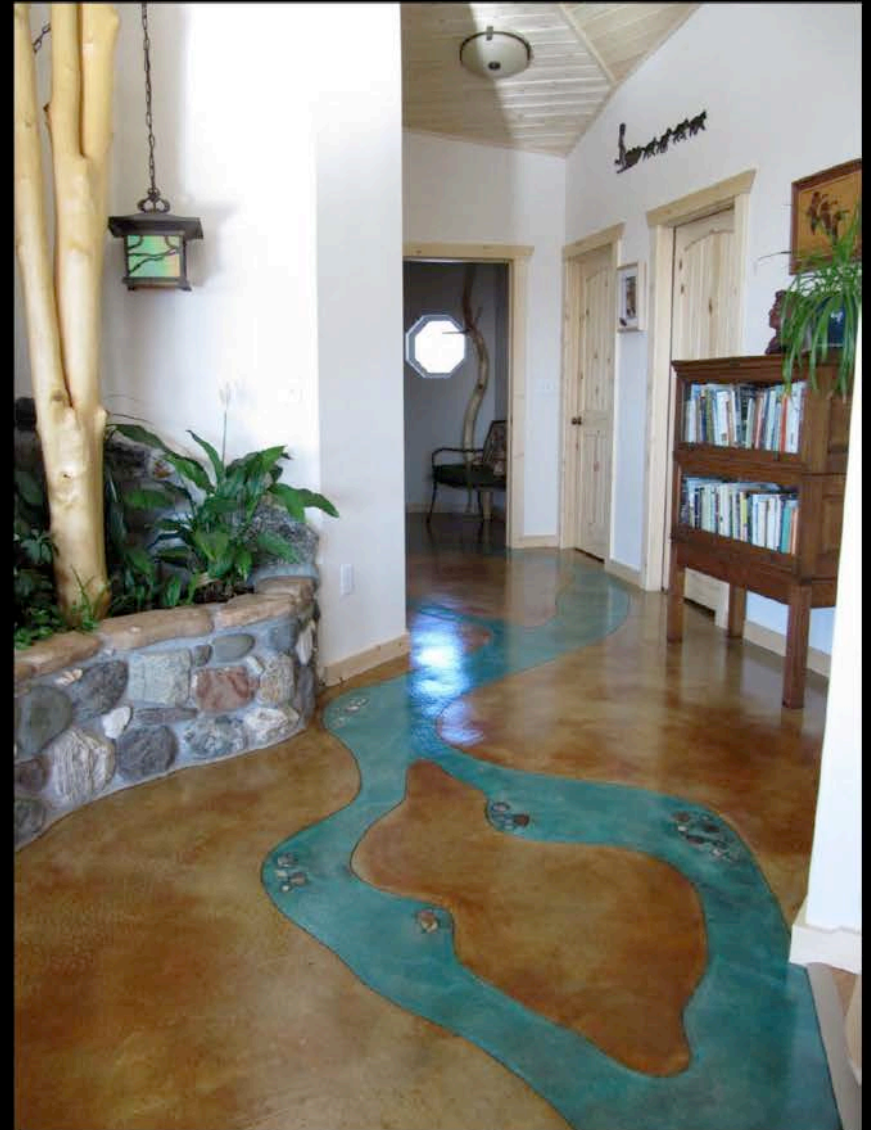




Cabinets, Drawer Pulls & Backsplash



Planters & Rivers



Master Bath





Guest 3/4 Bath

Dual flush toilet



Total Annual Energy Demand

(Two bedrooms, 1860 sq. ft., three people)

- 1.5 cords of wood (space heat and domestic water)
- 18 gallons of diesel (electric generator)
- 160 gallons of propane cooking, refrigeration and domestic hot water)



Efficient, Sustainable & Comfortable

- Efficient does NOT mean Spartan
- Extreme efficiency can create extreme comfort
- Sustainable is kind to the environment and your wallet
- Every house and house site offers unique potential for optimal energy solutions
- A home is a balance of energy systems



A photograph of a sunset over a mountain range. The sky is filled with vibrant orange and yellow clouds. In the foreground, the dark silhouettes of evergreen trees are visible against the bright sky. A large mountain peak is silhouetted in the middle ground.

Sunset Roost

Thank You