



## **BETH & BILL'S ECOLOGICAL FEATURES**

Takoma Park, MD

### **Notes on Our Home**

We built this home for our family, and to offer to the community. The large front room, our Gallery, is offered to local groups, such as the Corn Coop (local corn stove users, to which we belong) and local artists for openings. We explored many Ecological and/or Sustainable building practices, and we open our home to anyone wanting to see how these practices can be implemented.

We are **Bill Hutchins**, founder of Helicon Works, Architecture and Education, and **Beth Knox**, founder of Crossings, a home funeral and green burial resource center.

### **Site Selected**

- Renovated and added onto an existing house within the established built environment.
- We live a block from Metro, and use it, greatly limiting our driving.

### **Site Work**

- Minimal disturbance of site during construction.
- Erosion control.
- Rigorous tree protection, including aeration of the root system.
- Site work includes native and woodland plants (no grass) and storm water mgt. features (we're down-slope from many backyards).
- Retention pond, wetlands/bog, rain garden, permeable pavers and filtration ditch in driveway.

### **Design Principles**

- Very beautiful, soulful, alive, playful natural building, in dialogue with a modern aesthetic.
- Designed with passive solar considerations, while needing to respect the urban fabric (especially as in the Historic District).
- Built small while feeling large -  
Main house is 2100 sq.ft., for two adults and three children, two at-home businesses, and a gallery/meeting space offered to the community.
- Basement apartment - seeking max. density appropriate for our community.

### **Energy**

- Solar PV (electricity).
- We buy all wind-credits for the rest of our electricity.
- Biodiesel fueled radiant floor heat (in basement apartment and Gallery), domestic hot water, and we have our own gas station, filling our diesel cars

with biodiesel.

- Corn stove for 90% of heat for the main house (\$300 heating bill for winter; burns without CO<sup>2</sup> emissions).
- All energy-star rated appliances (at the least).
- ERV system (energy recovery ventilation).

### **Water Efficiency**

- High-efficiency fixtures.
- Rainwater harvesting (cisterns).

### **Indoor Air Quality**

- No or Low VOC materials and finishes.
- Excellent fresh air ventilation.

### **Materials and Resources**

- Straw bale, with earthen and/or lime plaster, at back half, and as in the Historic District, front half built in (playful) keeping of original bungalow, with
- Exterior siding/trim from Citilogs (logged with horses, selectively).
- Living roofs, by DC Greenworks.
- Other roofs - very long-lasting Galvalume standing seam.
- Many salvaged materials (a lot of which came from The Community Forklift) -  
Most framing lumber (and other wood), all windows and doors, Plumbing fixtures, stair railings, stone terraces, Silestone fragments (from dumpster raiding!), used for mosaics on walls, showers, etc., and neighborhood 'it's-on-the-curb' wood, shelves, etc..
- Other wood from local sustainable sources.
- No or low-voc finishes, paints, Wheatboard for cabinets, etc.
- Furniture and furnishings from local craftsman or fair-trade dealers (most!....many are family pieces, and some are too fun to worry about!).

### **Community Involvement**

- Hiring local high school and college students home for summer, and other local crews, workers.
- Built via community workdays - many volunteers from throughout the region gave a day's labor in exchange for learning about natural building.