

# Sustainability:

*“A means of configuring civilization and human activity so that society, its members and its economies are able to meet their needs and express their greatest potential In the present, while preserving biodiversity and natural ecosystems, planning and acting for the ability to maintain these ideals for future generations.”*

While this definition is a bit long-winded, it essentially says that “sustainability” includes both physical and non-physical – or “quality of life” aspects – and needs to be achieved with what comes to our site naturally ... 100%.

When I began the Garden Atrium project, I listed what I saw as “dimensions” or aspects of sustainability that needed to be addressed. Next: those dimensions

# Dimensions 2000

**Heating**

**Air Quality**

**Cooling**

**Land Use**

**Electricity**

**Recreation**

**Water**

For each dimension, we had to create a Net Zero condition:

# **NET ZERO**

- **Add needs**
- **Reduce where possible**
- **Design for 100%**
- **Provide storage**

For heating, for example, we use “direct gain passive solar.” First, we insulate and seal the home to minimize heat loss. Then we increased the south-facing skylight so that the amount of insolation equals the heat loss. The “Garden Atrium” is technically a heat sink for storing excess daytime heat to keep the home warm at night.

The same process is used for electricity, water, and cooling. Air quality is achieved with broad-leaved plants that soak up CO<sub>2</sub> and increase O<sub>2</sub>; Garden Atriums have the same CO<sub>2</sub> levels as outdoors, and much higher O<sub>2</sub> levels.

Conservation districting maximizes use of land. Following are some indoor and outdoor photographs.









The first Garden Atrium opened June 1<sup>st</sup>, 2002. Over 11,000 have visited. In a way, it's a classroom for visitors, as they can see and experience the home and its features.

The Garden Atrium development has also been a laboratory for me, in helping me experience what really works or doesn't.

Since then, I've engaged in continuing research into what "sustainable living" is. Following are dimensions I added to the list in 2010:

# Dimensions for 2011

- **Food**
- **Waste management**
- **Transportation**
- **Governance**
- **Sense of community**
- **Affordability**
- **Fitness**
- **Education & Culture**
- **Trade & Currency**
- **Quality of Life**

Using this expanded set of dimensions, here is a preliminary vision of what my next “model for a sustainable community.”

It includes what we’ve done at Garden Atriums and goes further. For example, I believe “food” will be the most critical factor in sustainability; the next development needs to be Net Zero in that regard..

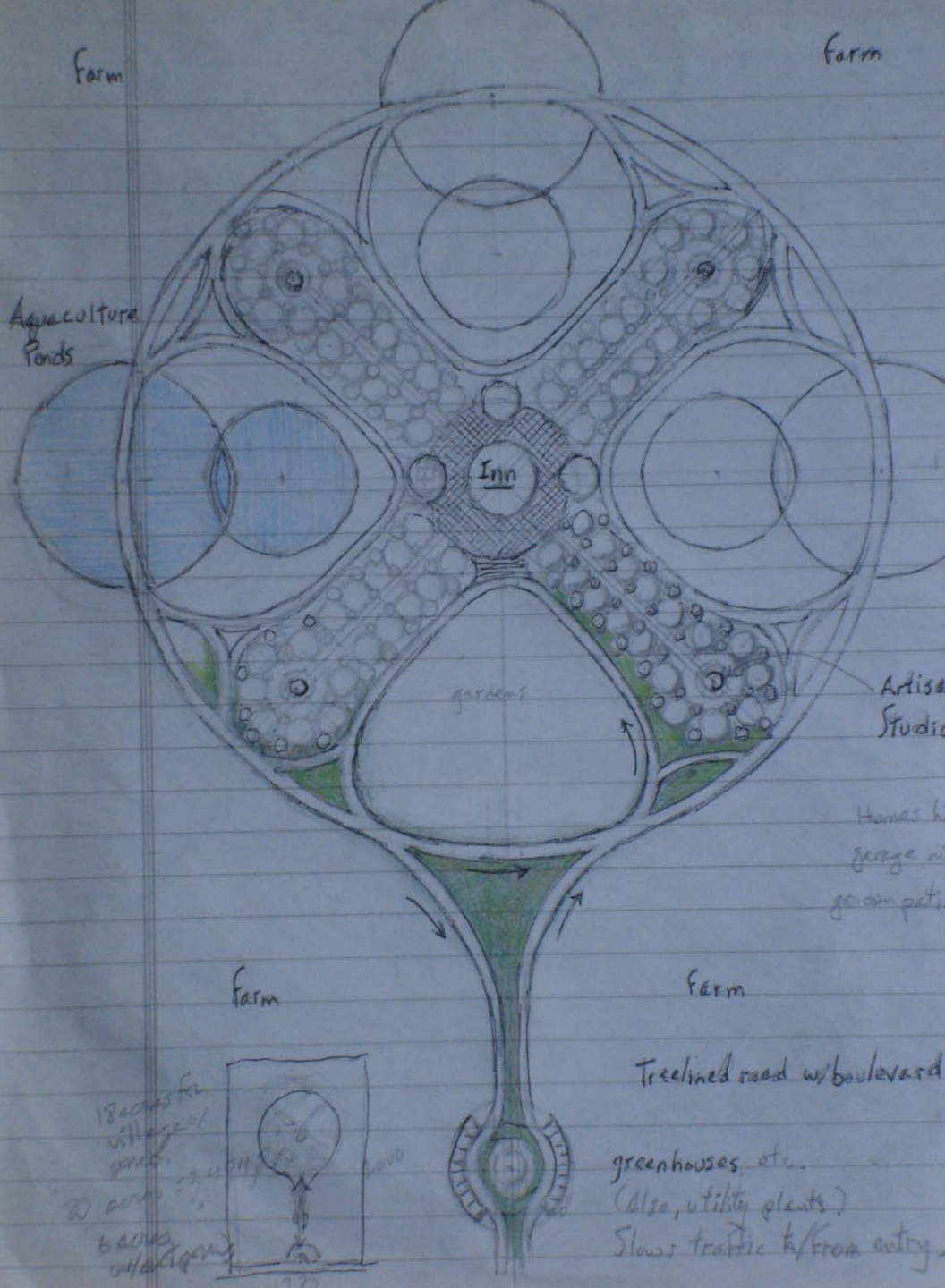
Our intent is not to build a million homes, or thousands of developments, but to create a positive model of how well we can live with the Earth ... as we enjoy an even better quality of life experience.

At some point, large-scale builders and developers might learn from these efforts and replicate them ... to achieve the numbers we need to make a real difference.

Farm

Farm

Aquaculture Ponds



Artisan Studios

Homes w/ garage or garden path.

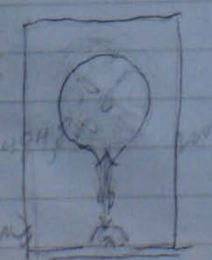
Farm

Farm

Treelined road w/ boulevard

greenhouses, etc.  
(also, utility plants)  
Slows traffic to/from entry.

18 acres for village/pond.  
20 acres for gardens  
6 acres w/ utility plants



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