

# A new vision for feeding ourselves and how we live and play...

In a traditional subdivision, only a small percentage of the actual land area is taken up with buildings and roads...the rest is left to public and private outdoor space. This "space amenity" consumes water, labor and land - without providing economic return or contributing to essential human needs.

## This is a luxury we can no longer afford

Agriburbia integrates natural agriculture practices with land development best-practices, policy, and lasting financial viability where food production becomes an intrinsic element in the community design, social network, and lasting value of the neighborhood.

Design focuses on integrating healthy, local food production within new developments and on otherwise under-utilized land within or near urban areas.

Agriburbia is about re-thinking and re-defining how we use land and water and how and where we grow food.

## Trans-Disciplinary Nature (Economics)

- ◇ **WHAT** do we need to eat? (Health/Nutrition)
- ◇ **WHERE** do we Eat it? (Geography)... then...
- ◇ How do we get **LAND** there? (Business/Real Estate/Design)
- ◇ How do we get **WATER** there? (Design/Engineering)
- ◇ How do we get **LABOR** there? (Business/Law)
- ◇ How do we **GROW** it there? (Agriculture/Agronomy)



## The Question Before Us...



Sub-surface resources are dwindling...

We are entering the first period in history since the beginning of the industrial revolution that the land surface of the planet must provide all of the resources for basic human needs:

Food - Shelter - Energy

Competition for land uses will become fierce

## Agriburbia Principles...



- ◇ **No Net Loss of agricultural value** or revenue ("Green Fields" development), or
- ◇ **Production of a significant portion of dietary requirements (up to 50%)** grown within or in the immediate surrounding area of the community
- ◇ **Provide commercially viable opportunities** for enhanced **self-sufficiency and local market growing**
- ◇ **Integrate Sustainable Energy Practices** including solar, wind, geothermal and others,
- ◇ **Incorporate established financial mechanisms** such as Metropolitan Districts and Community Associations, to build and manage both traditional infrastructure (streets, water, sewer) and agricultural infrastructure (irrigation, machinery).

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## Community Food Fraction™



- ◊ How many calories does your community consume?
- ◊ How many calories does your community produce?
- ◊ How much food could you produce if needed and what kind? (What do your codes look like?)
- ◊ How many jobs are related to food production? Do you have a grain mill?

Agriburbia utilizes a calorie based accounting model that plans for and projects regional caloric food needs.

We've spent the last 100 years zoning ourselves out of agriculture....

## Agriburbia Land Use Types:

- ◊ Civic Farming
  - Commonly owned parcels
  - Managed by District or Community Association
  - Professionally Operated (Farm Contract)
  - Export and/or CSA crops
- ◊ Steward Farming
  - Privately Owned
  - Managed by District or Community Association
  - Professionally Operated (Farm Contract)
  - Part of CSA
- ◊ Private Farming
  - Privately Owned
  - Personal owner/operator
  - Not part of CSA

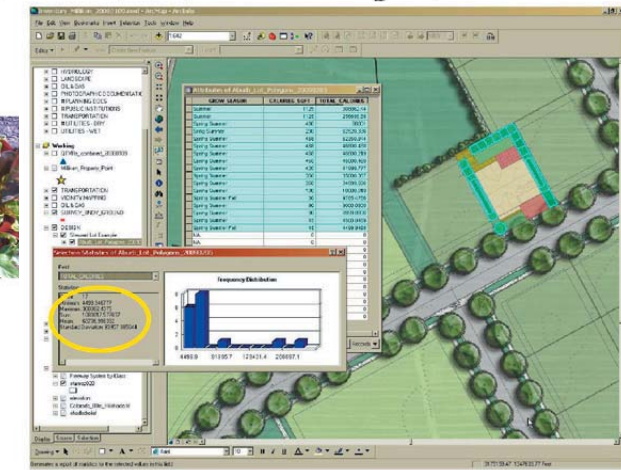


## RESEARCH AGENDA

- Comparative Agricultural Geography
- Food Security Planning
- Community Food Fraction™
- Irrigation and Water Security
- Agricultural Infrastructure
- Carbon Consumption Modeling



## Carbon Database: Counting Calories

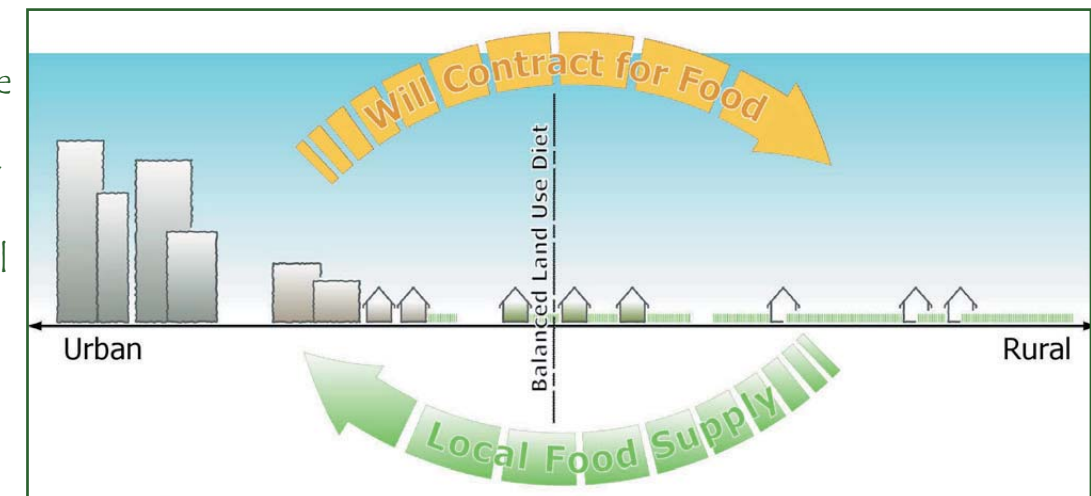


An Agriburbia program is based on a Metabolic Agronomic Model – optimizing yield and revenue from every square foot. Commercial 'Civic' farms provide consistent, marketable produce for the development; homeowners have the option to share-crop their back yard through a Steward Farm program. Optional for every homeowner, the plots are tended by farm service professionals (think lawn service companies.)

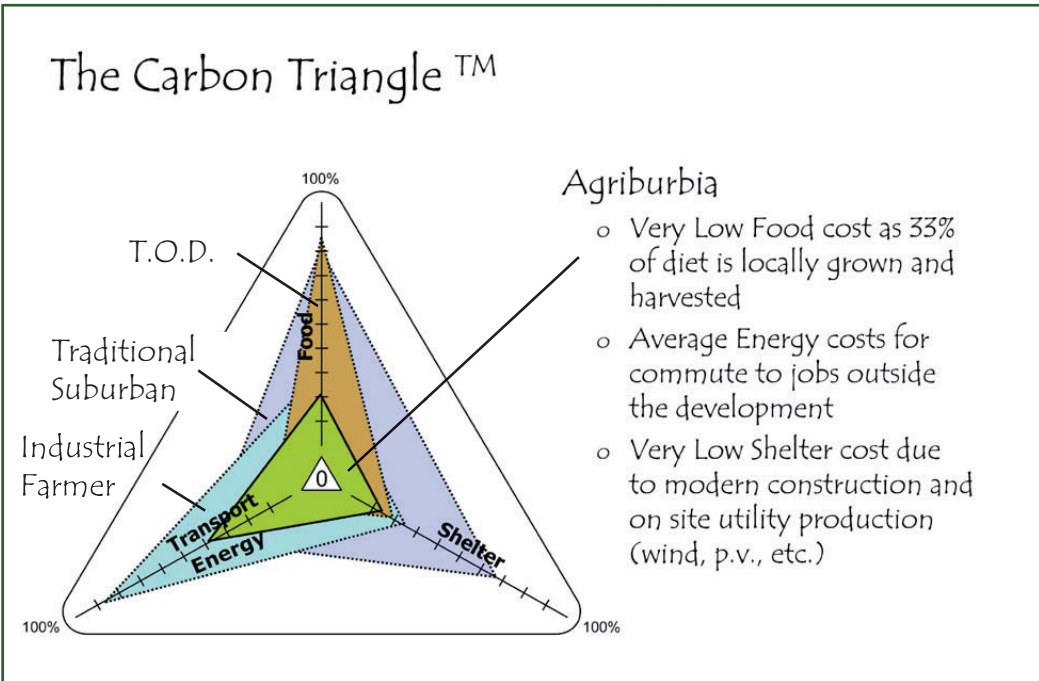
The Agriburbia movement is a combination of on-going research, new methodology to track and quantify progress, and on-the-ground applications from large scale entitlement projects to retrofitting under-utilized private yards and municipal open space.

We've spent the last 100 years zoning ourselves out of agriculture—we need to zone ourselves back in. This means modification of standards and guidelines in the community codes, regulations and HOA bylaws where necessary, as well as development of municipal districts that promote agriculture, food production, alternative energy sources, and other sustainable concepts.

....we need to Zone ourselves back IN



THE AGRIBURBIA TRANSECT demonstrates the sustainable interdependency of rural and suburban areas, where land is more plentiful, and urban areas with less cultivatable land but more people to feed. Imagine "Agriburbia Belts" surrounding urban centers across the country providing less-travelled and nutritionally loaded food!

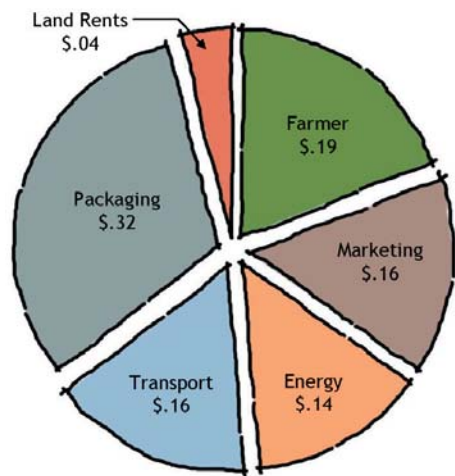


- Agriburbia**
- Very Low Food cost as 33% of diet is locally grown and harvested
  - Average Energy costs for commute to jobs outside the development
  - Very Low Shelter cost due to modern construction and on site utility production (wind, p.v., etc.)

THE CARBON TRIANGLE is a ternary diagram measuring three distinct variables. The smaller the area, the lower the "foot print."

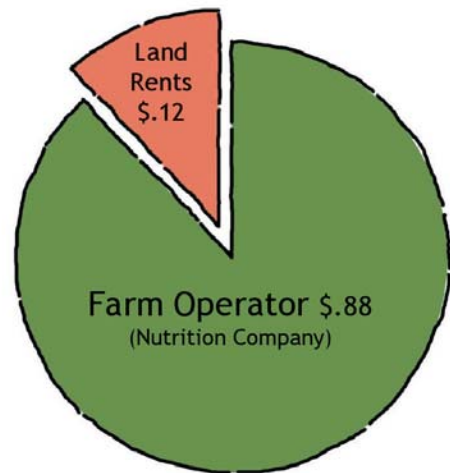


## Agricultural Infrastructure (Existing Supply Chain)



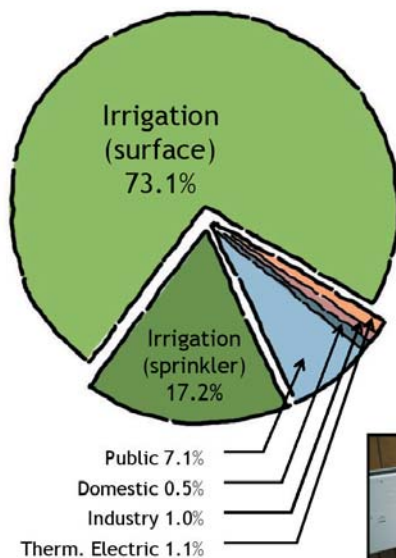
- Food Distributors Control Supply Chain
- Food producers receive less than 1/5 of every dollar
- Less than 1.5% of the population are farmers
- Classic Distribution Model and Development Infrastructure is Antiquated and Vulnerable (weather, security, safety, etc.)

## Agricultural Infrastructure (Future Supply Chain)



- Food Producers Control Supply Chain
- Land Owners Receive More Income/Rent
- Localized Production is More Robust Delivery Model
- Future Nutrition Model Requires Alternative Development Infrastructure (Agriburbia)
- Micro Farming Creates More Jobs!

## Agricultural Infrastructure (Water)



- Which Uses Would You Pursue if You Wanted to Save Large Amounts of Water?
- Calories Per Acre/Foot



## Example Agriburbia Project... Summary



259.7 Acres total Civic and Steward Farm Lands

49.7% of previously tilled land can still be in production with high yielding intensive vegetable and perennial crops and export crops

Net agricultural value:  
 -Civic Farm \$906,048  
 -Steward Farm \$1,176,120  
 \$2,082,168

1/3 of typical agricultural water usage



FINANCIALLY SUSTAINABLE: Initially for the developer and eventually the homeowners through greatly minimized HOA dues and/or lower grocery bills. From a developer's point of view, this concept:

- Smooths Revenue Curves and helps absorption
- Can provide a return on infrastructure even before the sale of a single lot
- Offers a profitable option for developers holding land waiting for a better market

Farmers becoming today's new rock stars

LIFESTYLE: Local food, higher nutrients, and sustainable living appeals to a wide demographic.

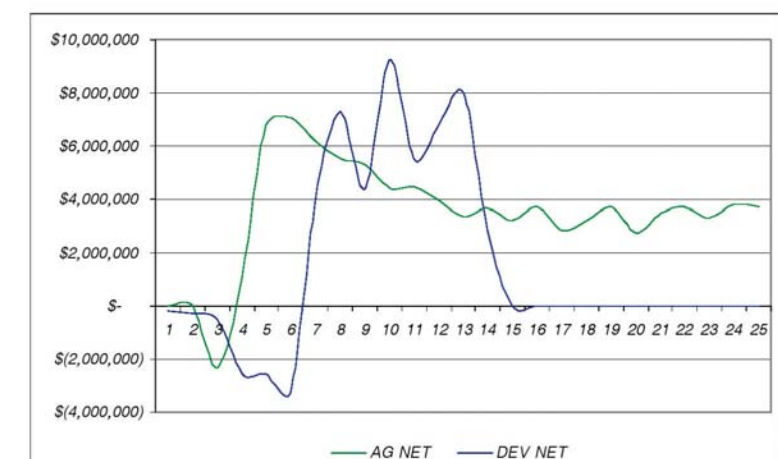


## Fixing today's broken corporate agriculture system

The current corporate agriculture system is broken— food highly engineered to travel thousands of miles in the dark but bereft of nutrients and taste; huge machines dependent on expensive fossil fuels and vast expanses of land far away from consumers; largest percentage of the economy going to packaging/distribution while the farmer scrambles every year to break even.

Bringing food production closer to consumers, cultivating interstitial spaces and integrating bio-intensive agriculture in new housing developments is highly sustainable and will make farmers the new rock stars. Two full time farmers will be created for every 3 acres; the food system becomes sustainable regardless of fuel costs or availability; and we all eat much better food---

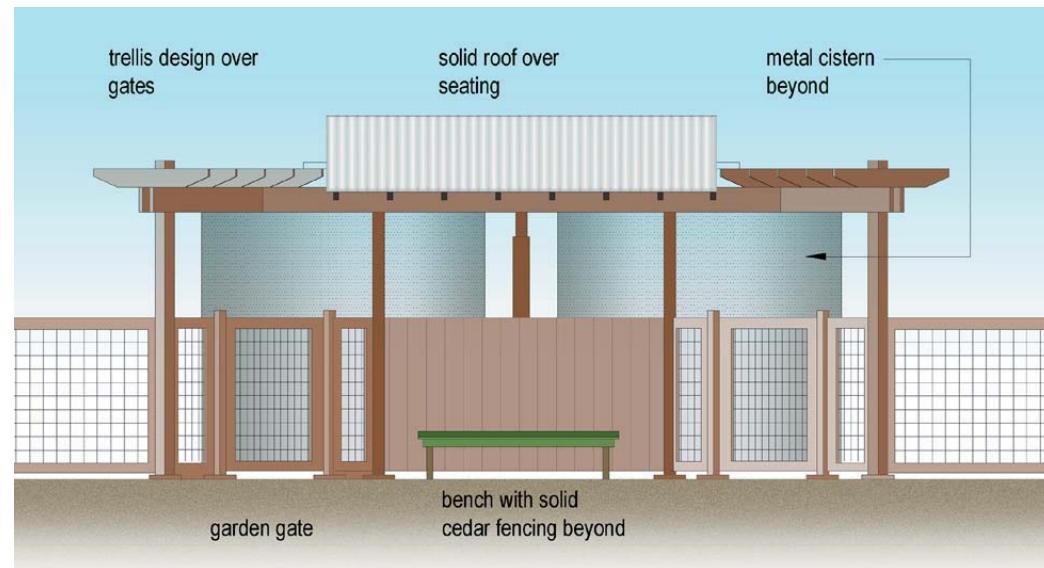
Proforma: Net Agriculture + Development







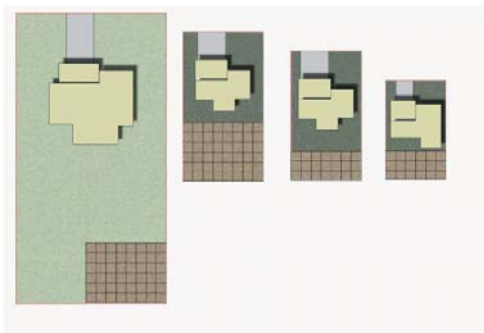
Agriculture, 'AG', Alleys provide discreet access for Steward Lot farmers. These AG Alleys are integrated with the overall trail network resulting in a recreational trail system suitable for (and encouraging) the ultimate exercise regimen! The backyard becomes the social milieu where real interaction with neighbors happens and relationships are built



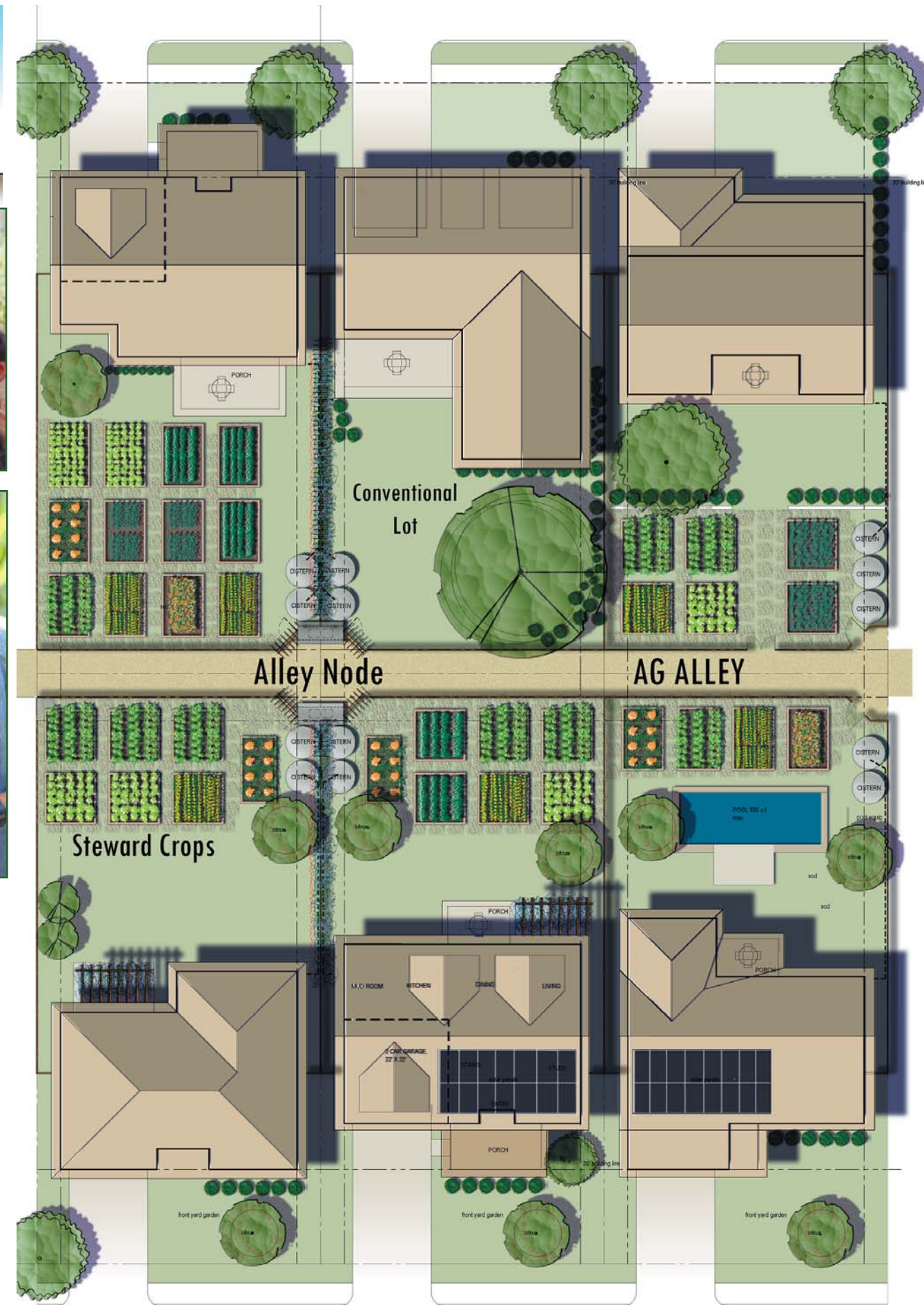
Agriburbia is mixed use by necessity—farming, sales, homes, consumption. We live together and produce food together. This is not co-housing but a sustainable economic model for generations to come.



STEWARD LOT OPTIONS



- ◆ Small, Medium, Large Lot options
- ◆ 10' x 10' planting module



COMMUNITY





**LOCAL GROWN VEGETABLES**  
Naturally cultivated, may be consumed locally or sold at farmers market.

**STEWARDS LOTS (all Lots)**  
Professionally farmed back yards at Owner's Choice (crop may be consumed or contribute to Farmer's Market Sales).

**FARMERS MARKET SPACES & SUSTAINABILITY EDUCATION CENTER**  
Cultivation & Cooking Classes, Food Storage & Sales. Leaseable classroom facilities. Leaseable sales space for local growers and farmers.

**Commercial Lots**



As professional farmers, suburbanites, and city dweller, we need to work together to use our resources as wisely as possible... land, water, and human ingenuity ...to prosper in the coming days



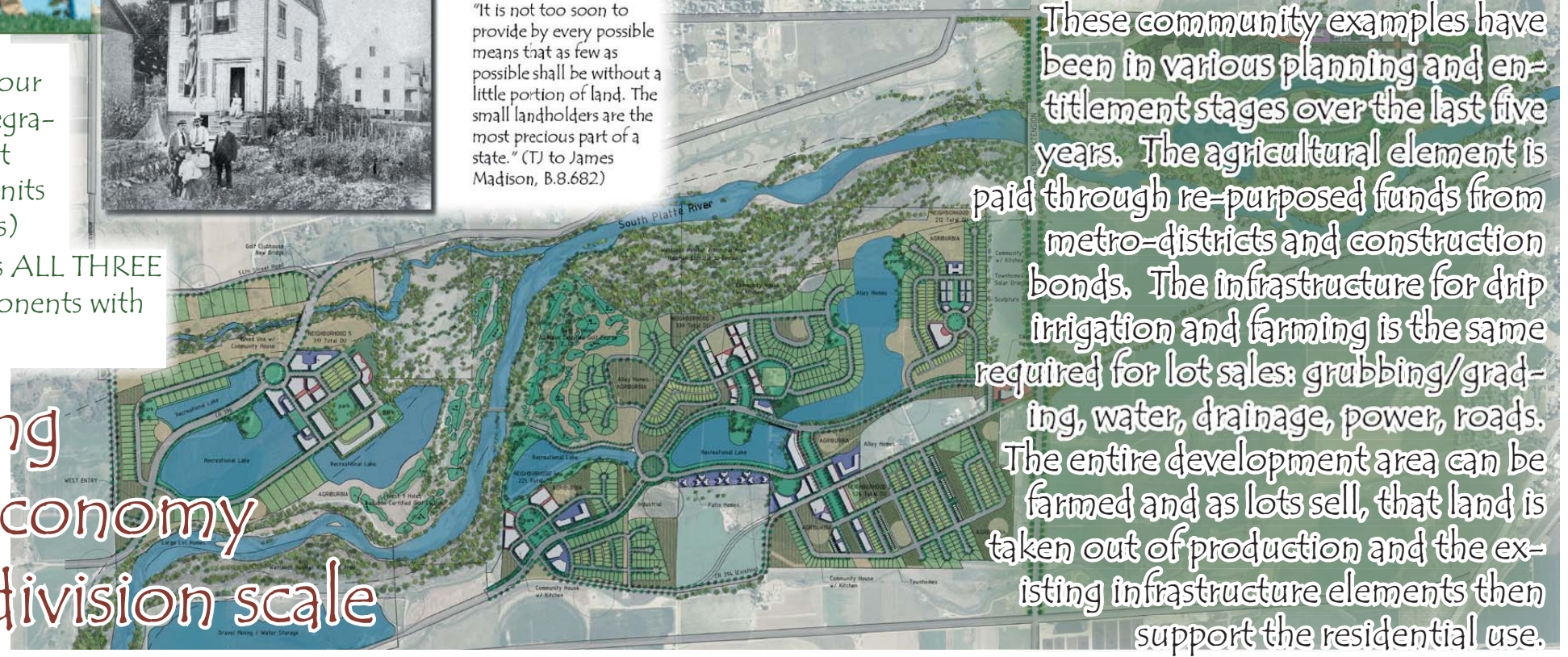
We must measure our habitation and integration with the planet using much finer units (square feet v. acres)  
We need to address ALL THREE human need components with every decision



1785 Oct. 28.  
"It is not too soon to provide by every possible means that as few as possible shall be without a little portion of land. The small landholders are the most precious part of a state." (T) to James Madison, B.8.682)



A thriving micro-economy at a subdivision scale



These community examples have been in various planning and entitlement stages over the last five years. The agricultural element is paid through re-purposed funds from metro-districts and construction bonds. The infrastructure for drip irrigation and farming is the same required for lot sales: grubbing/grading, water, drainage, power, roads. The entire development area can be farmed and as lots sell, that land is taken out of production and the existing infrastructure elements then support the residential use.

ONE PRIZE

Building Infrastructure for the Next Generation of Farming : **AGRIBURBIA™**

PROPERTY