What Design Elements (Systems) Make Urban Agriculture Work
Healthy Soil + Clean Water + Equitable Food Systems = Healthy People & Healthy Communities & Healthy Planet

Compost Dance!
SOIL FACTS

Malnutrition begins with soil.

Approx 30-50% of the planet’s healthy soil has been depleted, through farming practices or erosion.

It takes mother nature 300-1000 years to make one inch of topsoil through natural processes. We can do it much faster, and we need to.
Industrial Food System Design has been under the assumption that we have unlimited fresh water.

- 3% of water is fresh
- 2% is locked up in glaciers & ice caps
- 1% is available for human use, ~80% of that is used in industry

30-40% of energy usage in a typical American city is used to push water around.

Capture Rainwater as a Design Element!
Current Food System has been designed on cheap oil

1 barrel of oil = 42 gallons

42 gallons = 25,000 embodied man-hours of energy

Which equals 12 people working 40 hours a week, 50 weeks per year.
It is alive.

It is messy.

Horticulture is the slowest of all the performing arts.
Community Based Projects
(Community gardens, Food for donation)
• Grass roots
• Poorly funded
• Community based design
• Community based resource development
• Approx $1000/100SF garden plot for well done infrastructure

Economic Development Based Projects
(Small Urban Farms & Farmers Markets)
• Food as Economic Development
• Markets as Community & Economic Development
• Substantial Investment from an Individual or Group

City of Richmond
People will take Ownership
We need to be Persistence

Diabetes
Heart Disease
Obesity

BREAKING NEWS! Old terrible grocery store to be transformed into a dialysis center
Volunteers = Subsidies
Urban Livestock

GOATS!

CHICKENS!

BEES!

WORMS!
Make it convenient & build great sheds
9th & B URBAN FARM
Permaculture Design Principles

**Observe and interact** - By taking the time to engage with nature we can design solutions that suit our particular situation.

**Catch and store energy** - By developing systems that collect resources when they are abundant, we can use them in times of need.

**Obtain a yield** - Ensure that you are getting truly useful rewards as part of the work that you are doing.

**Apply self-regulation and accept feedback** - We need to discourage inappropriate activity to ensure that systems can continue to function well.

**Use and value renewable resources and services** - Make the best use of nature's abundance to reduce our consumptive behaviour and dependence on non-renewable resources.

**Produce no waste** - By valuing and making use of all the resources that are available to us, nothing goes to waste.

**Design from patterns to details** - By stepping back, we can observe patterns in nature and society. These can form the backbone of our designs, with the details filled in as we go.

**Integrate rather than segregate** - By putting the right things in the right place, relationships develop between those things and they work together to support each other.

**Use small and slow solutions** - Small and slow systems are easier to maintain than big ones, making better use of local resources and producing more sustainable outcomes.

**Use and value diversity** - Diversity reduces vulnerability to a variety of threats and takes advantage of the unique nature of the environment in which it resides.

**Use edges and value the marginal** - The interface between things is where the most interesting events take place. These are often the most valuable, diverse and productive elements in the system.

**Creatively use and respond to change** - We can have a positive impact on inevitable change by carefully observing, and then intervening at the right time.
Individuals seeking healthy food contribute more to agricultural reform than do governments responsible for maintaining long-term agriculture capacity.

*David Montgomery, geologist & author, *Dirt, The Erosion of Civilizations*
Linking agriculture & ecology, linking urban & rural

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Urban Agriculture Design Elements

CNU 19
Madison
11 June 04

Stephen A. Mouzon, AIA CNU LEED
The New Urban Guild
Miami Beach, Florida, USA
Food from the Grocery Store

★ Most of it also requires a Passport

★ 1,500 Miles Traveled

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Food Security?

★ Exchange Rates
★ Political Issues
★ Agribusiness

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Industrial Economics Require Bad-Neighbor Agriculture

★ Chemical Fertilizer
★ Crop-Dusting
★ Fouled Runoff
★ CAFO

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Good-Neighbor Agriculture

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Man-Hour vs. Land Area Efficiency

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Efficiency of the Farmer on a Tractor?

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What's Being Forgotten

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Calorie Inefficiency

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EXPORTING the GUILT

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WHAT IT TAKES TO STAY ALIVE

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Unlocking the Mystery of True Sustainability

Stephen A. Mouzon
The Guild Foundation Press
Miami

Foreword by
Robert F. Kennedy, Jr.
THE MORAL IMPERATIVE

★ Food Security
★ Value of Long View
★ Adjacency to Nature
★ Local Food
★ Local Cuisine
★ Land Trust Tax Credits
★ Secure Edge

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PLACES
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Places

Buildings
PLACES
BUILDINGS
NOURISHABLE
THE ORIGINAL GREEN
The Original Green Nourishable Accessible Buildings

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The Original Green

PLACES

nourishable

BUILDINGS

lovable

ACCESSIBLE

SECURABLE
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P L A C E S

Nourishable
Accessible
Securable

L O V A B L E
D U R A B L E
F L E X I B L E
B U I L D I N G S
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PLACES

NOURISHABLE
ACCESSIBLE
SERVICEABLE
SECURABLE

BUILDINGS

LOVABLE
DURABLE
FLEXIBLE
NOURISHABLE PLACES

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Oppportunistic

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SCALES OF AGRICULTURE

★ Employing Farm
★ Family Farm
★ Allotment Garden
★ Edge Yard Garden
★ Courtyard Garden
★ Roof Garden
★ Arbor Garden
★ Wall Garden
★ Balcony Garden
★ Window Garden

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- Culinary School
- Restaurant
- Farmers' Market
- Cottage Industries

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