

CNU19
6.5.2011
Madison



What Design Elements (Systems)
Make Urban Agriculture Work



Compost Dance!

Healthy Soil
+
Clean Water
+
Equitable Food
Systems
=
Healthy People
&
Healthy Communities
&
Healthy Planet

SOIL FACTS

Malnutrition begins with soil.

Approx 30-50% of the planets 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.



Worm
Compost

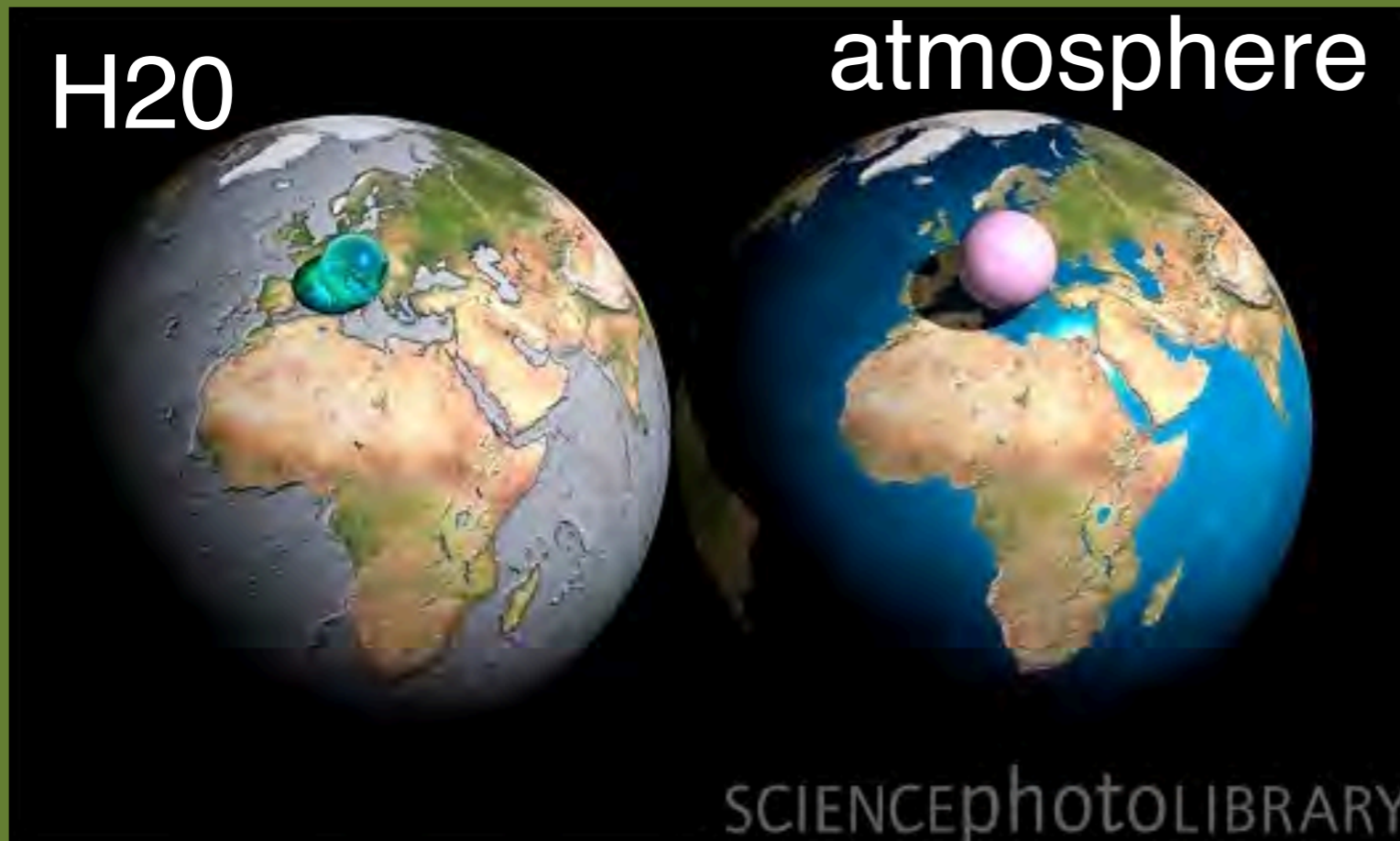


Hot Compost



Slow Compost

Industrial Food System Design has been under the assumption that we have unlimited fresh water.



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

- 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

**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.

A lush green garden with climbing plants on trellises. In the background, a white van is parked on a grassy area. The scene is filled with vibrant green foliage and some yellow flowers.

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

<http://www.richmondgov.com/CommunityGarden/index.aspx>



People will take Ownership



Productive



We need to be Persistence



Diabetes
Heart Disease
Obesity

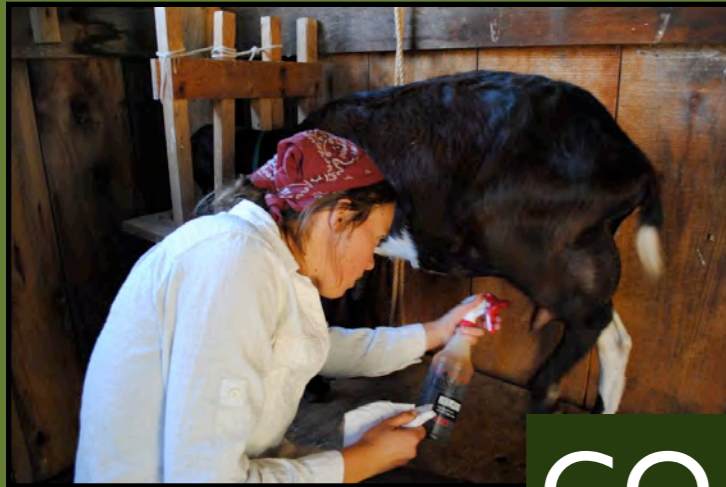


BREAKING NEWS! Old terrible grocery store to be transformed into a dialysis center

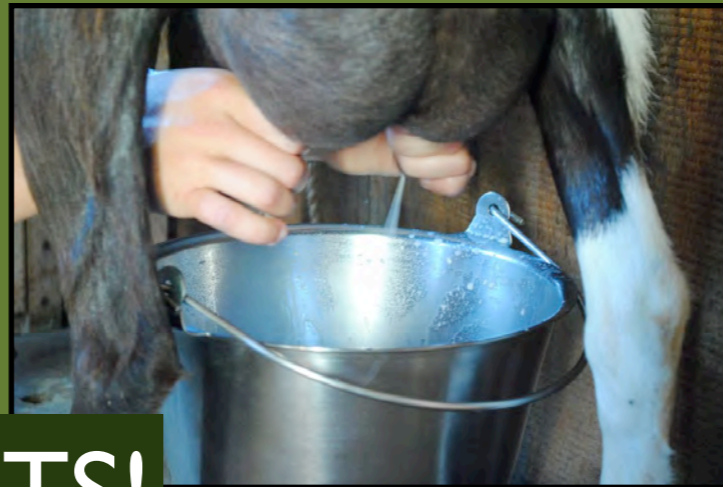
Volunteers = Subsidies



Urban Livestock



GOATS!



CHICKENS!



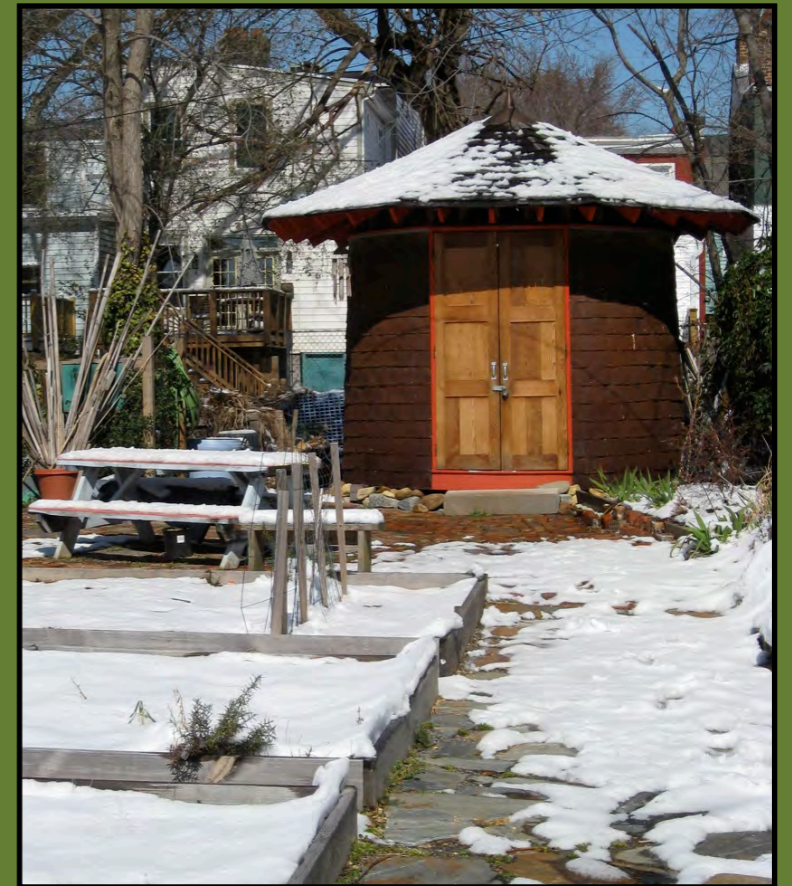
BEEES!

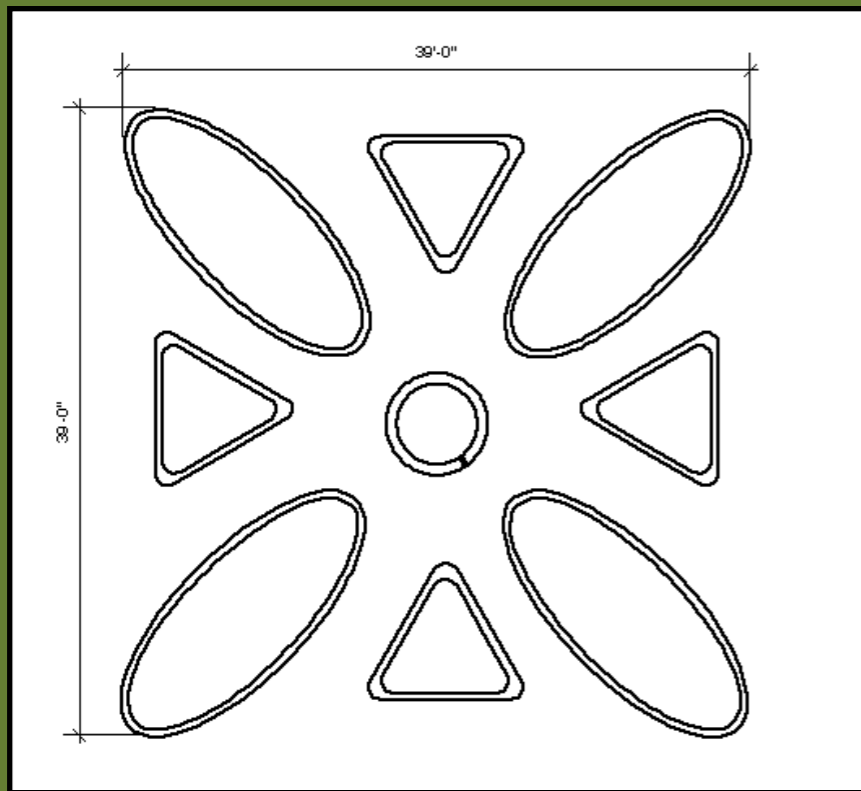


WORMS!



Make it
convenient
& build
great sheds





FULTON HILL NEIGHBORHOOD RESOURCE CENTER LEARNING GARDEN



9th & B URBAN FARM



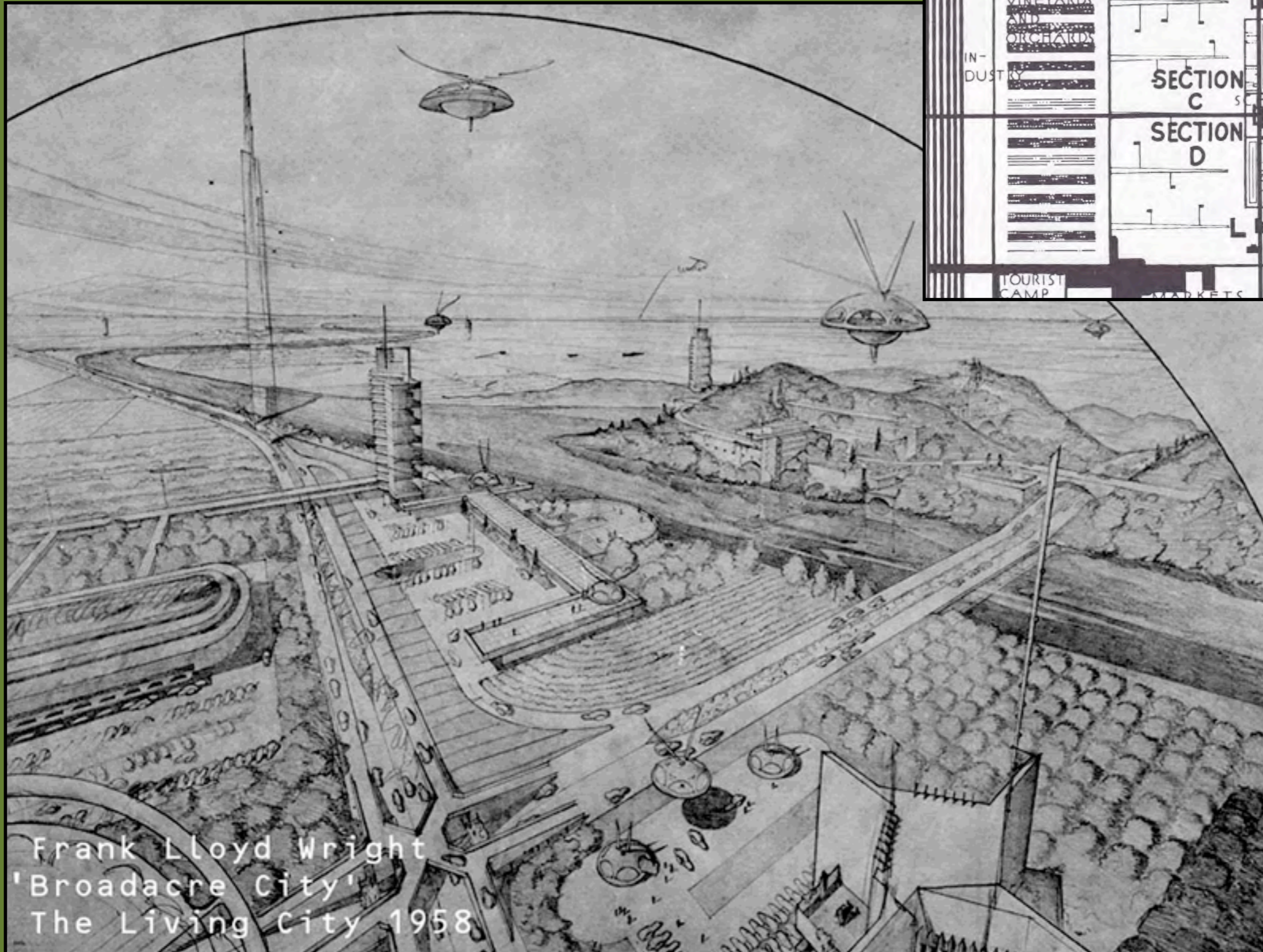
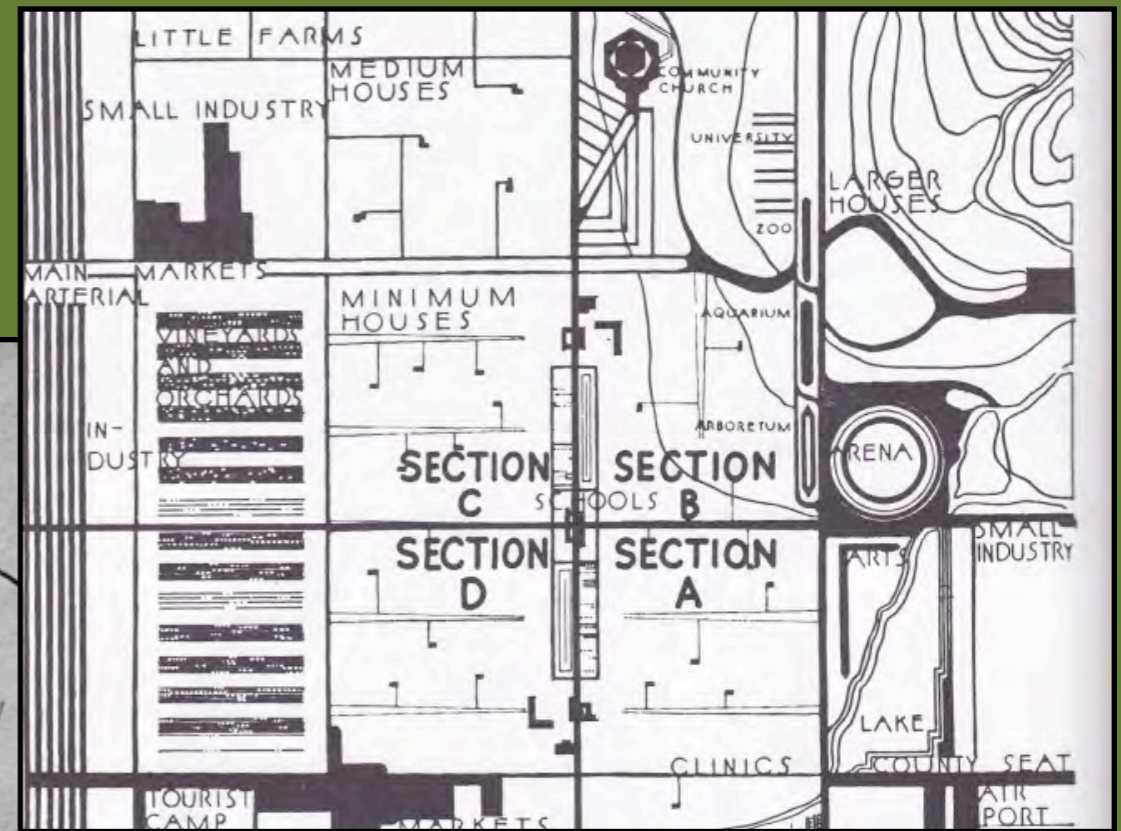
Public Space



Pleasure



Broadacre City, FLW



Frank Lloyd Wright
'Broadacre City'
The Living City 1958

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.

OUR COMPANY OUR FOOD OUR COMMITMENT RSS FEED

Food you love

At ConAgra Foods®, we're proud that the food we make can be found in 97% of America's households. From Orville Redenbacher's® popcorn at family movie night to DAVID® Seeds at the baseball game, we're proud to make the food you love. [View Video](#)



OUR BRANDS: 

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



Lisa Taranto, Program Director
Allegheny Mountain School/Route 250 Project
lisa@route250project.org

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



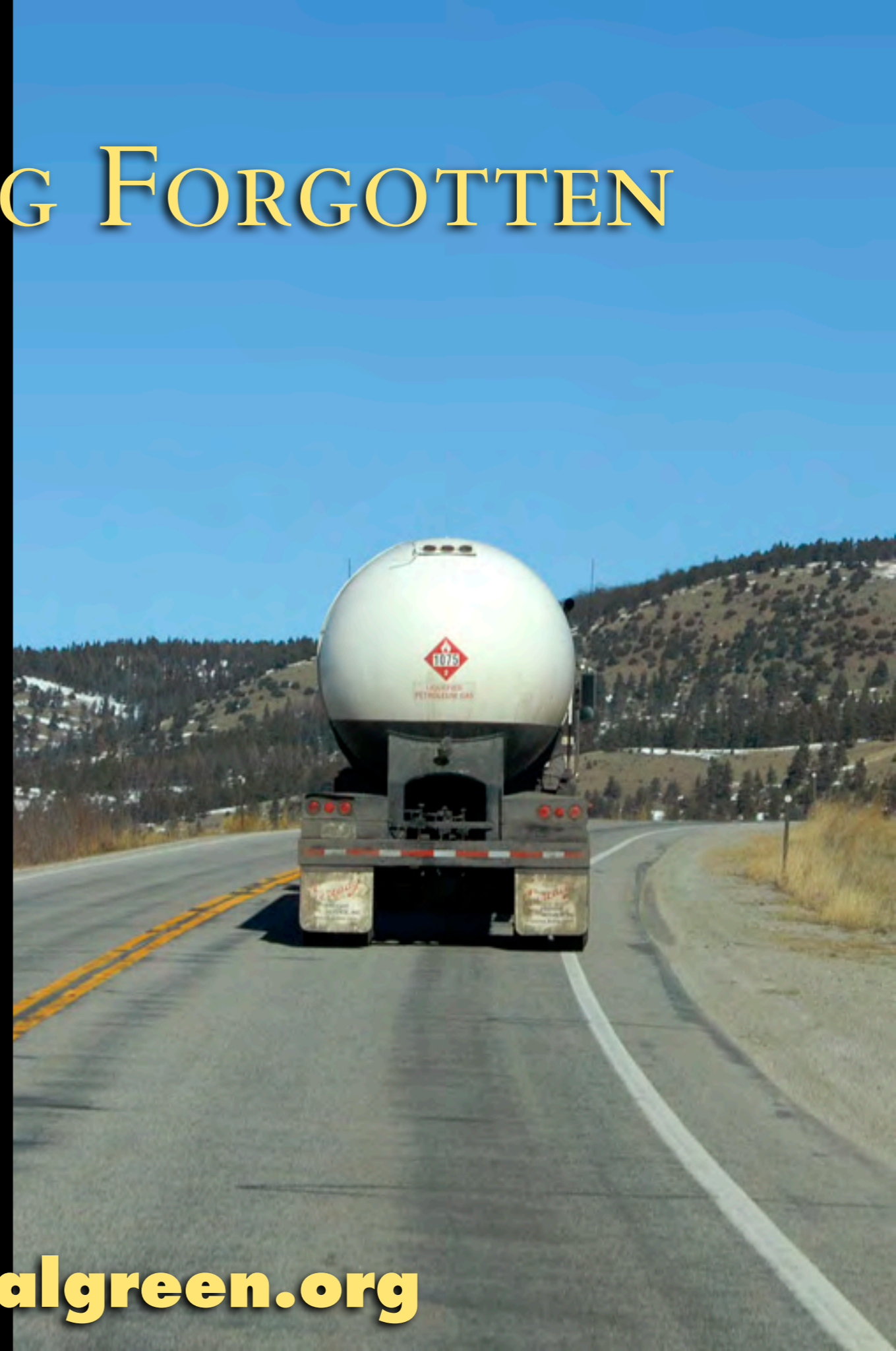
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EFFICIENCY *of the*
FARMER *on a* TRACTOR?



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WHAT'S BEING FORGOTTEN



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CALORIE INEFFICIENCY



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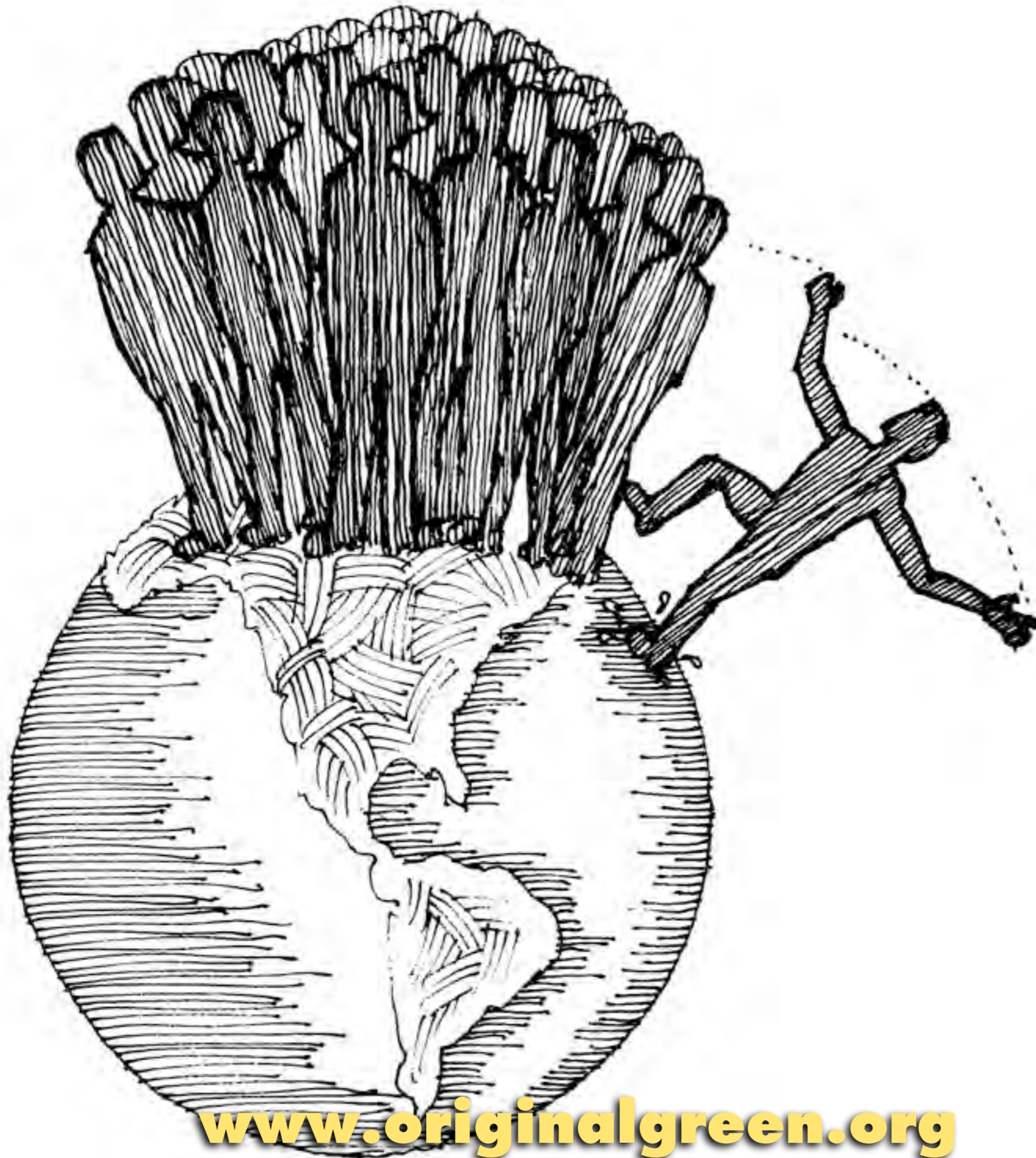
EXPORTING *the* GUILT



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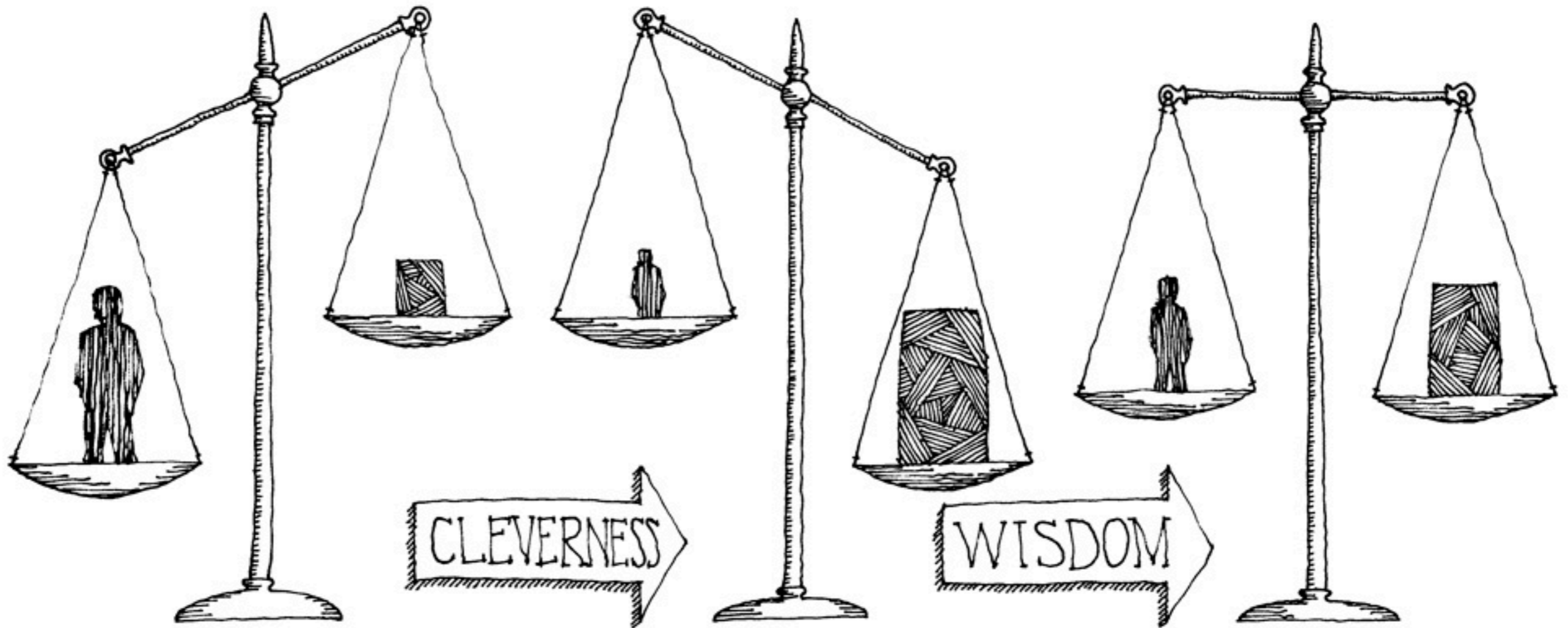


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WHAT *it* TAKES *to* STAY ALIVE



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the ORIGINAL GREEN



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MICRON

the ORIGINAL GREEN UNLOCKING *the* MYSTERY of TRUE SUSTAINABILITY

the
**ORIGINAL
GREEN**

UNLOCKING *the* MYSTERY of TRUE SUSTAINABILITY

STEPHEN A. MOUZON
*The Guild Foundation Press
Miami*

Foreword by
ROBERT F. KENNEDY, JR.

NEW
GREEN
GUILD
FOUNDATION

UNIVERSITY
OF
FLORIDA
PRESS

ROBERT F. KENNEDY, JR.
Foreword by

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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THE ORIGINAL GREEN

THE ORIGINAL GREEN



THE ORIGINAL GREEN

PLACES



THE ORIGINAL GREEN

P L A C E S

B U I L D I N G S



THE ORIGINAL GREEN

NOURISHABLE

PLACES

BUILDINGS



A street scene in a village with stone buildings, parked cars, and a person walking a dog. The scene is captured in a slightly desaturated, vintage style. The buildings are multi-story with stone facades and gabled roofs. A person is walking a dog on the sidewalk. There are several cars parked along the street. The overall atmosphere is quiet and scenic.

THE ORIGINAL GREEN

NOURISHABLE

ACCESSIBLE

PLACES

BUILDINGS

A street scene in a village with stone buildings, parked cars, and a person walking a dog. The scene is set in a narrow street with traditional stone buildings on either side. A person is walking a dog on the right side of the street. There are several cars parked along the side of the road. The overall atmosphere is peaceful and scenic.

THE ORIGINAL GREEN

S NOURISHABLE

E ACCESSIBLE

L SECURABLE

P L A C E

S B U I L D I N G S

THE ORIGINAL GREEN

NOURISHABLE LOVABLES

ACCESSIBLE

SECURABLE

PLACES

BUILDINGS

THE ORIGINAL GREEN

NOURISHABLE LOVABLE

ACCESSIBLE DURABLE

SECURABLE

PLACES

BUILDINGS



THE ORIGINAL GREEN

NOURISHABLE LOVABLES

ACCESSIBLE DURABLE

FLEXIBLE

SECURABLE

PLACES

BUILDINGS



THE ORIGINAL GREEN

S NOURISHABLE L O V A B L E **S**

E ACCESSIBLE D U R A B L E **E**

A SERVICEABLE F L E X I B L E **A**

L SECURABLE **L**

P **P**

THE ORIGINAL GREEN

S NOURISHABLE L O V A B L E **S**
E ACCESSIBLE D U R A B L E **E**
C SERVICEABLE F L E X I B L E **C**
A SECURABLE F R U G A L **A**
L **L**
R **B**

An aerial photograph of a hillside town. The foreground is dominated by terraced vineyards with stone walls. The middle ground shows a cluster of buildings, including a prominent large stone tower with a central archway. The background shows more buildings on the hillside under a clear sky.

NOURISHABLE PLACES

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TIGHTLY-EMBEDDED

An aerial photograph of a hillside town, likely in Italy, showing terraced vineyards with green netting, a castle on a hilltop, and various buildings. The text 'TIGHTLY-EMBEDDED' is overlaid in a large, yellow, serif font at the top.

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OPPORTUNISTIC

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SLOPE-ADAPTABLE

An aerial photograph of a coastal town built on a steep, green hillside. The town features numerous buildings with red-tiled roofs and is surrounded by terraced vineyards. Some of the vineyard plots are covered with green netting. The town is situated near a coastline with a sandy beach and turquoise water. The background shows a large, rugged mountain range under a clear sky.

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MULTI-LAYERED



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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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An aerial photograph of a rural landscape. The terrain consists of rolling hills covered in golden-brown fields, likely harvested crops. Numerous round hay bales are scattered across the fields. A dense line of green trees runs across the middle ground, separating the foreground from the background. The lighting suggests late afternoon or early morning, with long shadows and warm tones. The text 'EMPLOYING FARM' is overlaid in a large, yellow, serif font across the upper portion of the image.

EMPLOYING FARM

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FAMILY FARM

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ALLOTMENT GARDEN



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EDGE YARD (FRONT YARD) GARDEN



COURTYARD GARDEN

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ROOF *or* TERRACE GARDEN



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ARBOR GARDEN

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A photograph of a wall garden. A stone wall is covered with several orange trees trained against it. The trees are lush green and bear several ripe, orange fruits. The text "WALL GARDEN" is overlaid in a gold, serif font across the top center of the image. At the bottom center, the website address "www.originalgreen.org" is displayed in a bold, gold, sans-serif font.

WALL GARDEN

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BALCONY GARDEN

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WINDOW GARDEN



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A photograph of a brick building with green shutters and a window, with a vine-covered trellis above. The scene is set in a courtyard with a brick wall, a window with green shutters, and a doorway with green shutters. A vine-covered trellis arches over the doorway. A small tree in a white pot sits on the brick-paved ground. In the background, a brick wall and a metal railing are visible.

LOVABLE BUILDINGS

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*Habersham
Community
Garden*

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THE AGRICULTURAL AESTHETIC

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A vibrant rooftop garden scene featuring a variety of green plants, including a central tree with light-colored branches, a large bush of purple flowers, and several yellow and blue flowers in the foreground. A stone path winds through the garden, and a modern building with large windows is visible in the background. The word "PLANTS" is overlaid in a large, yellow, serif font in the upper center of the image.

PLANTS

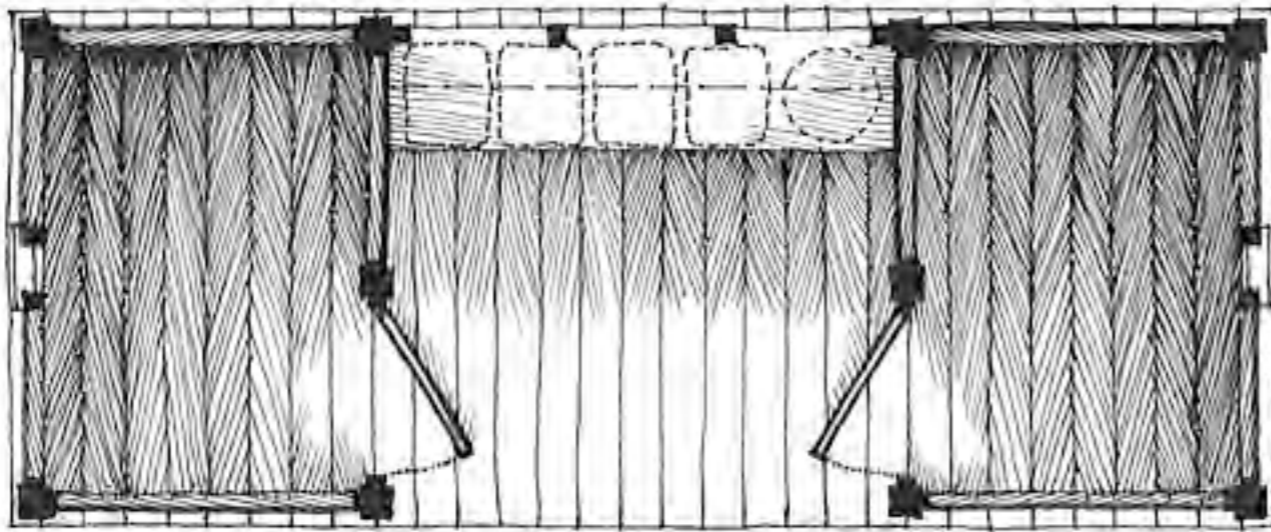
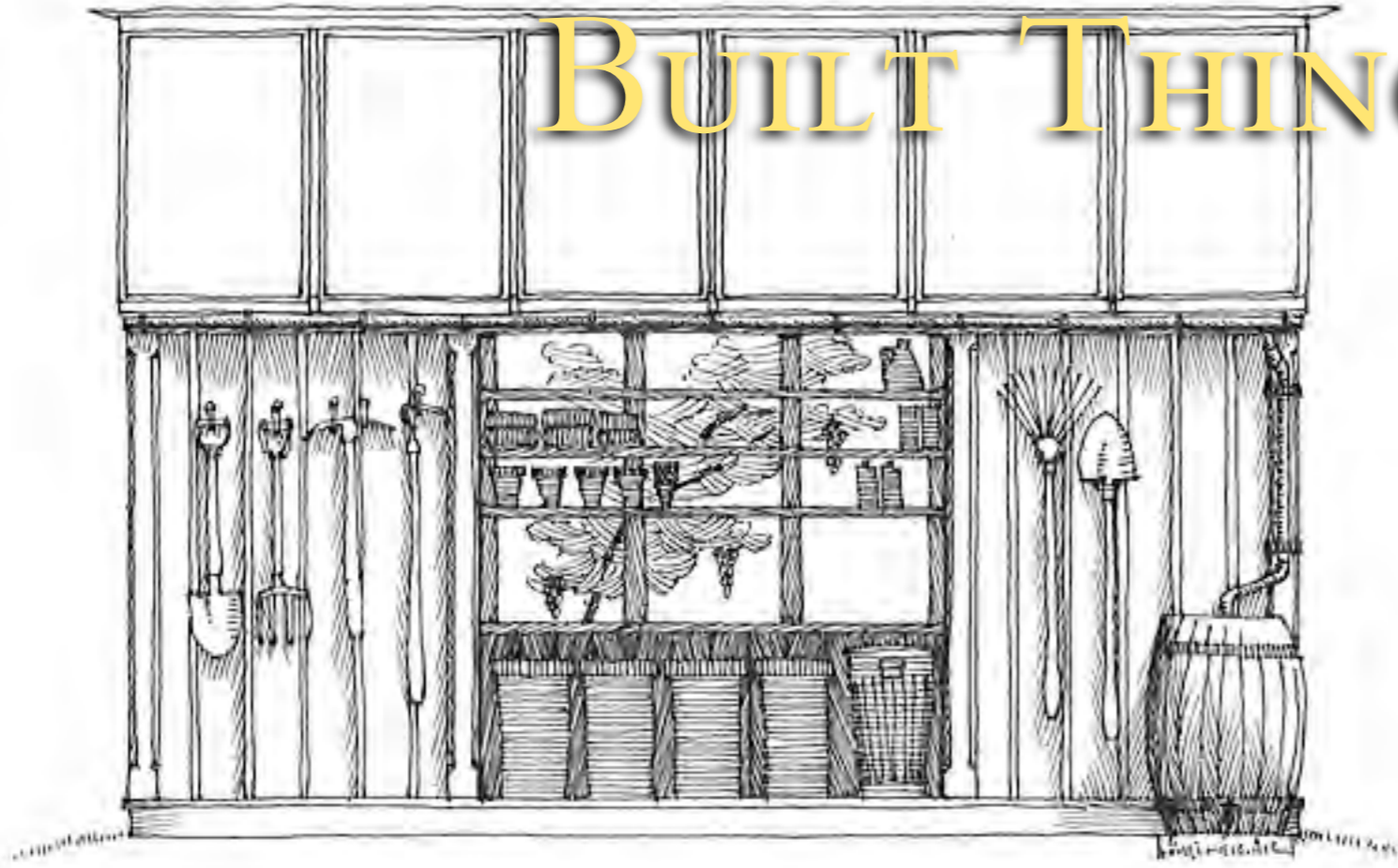
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ANIMALS



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BUILT THINGS

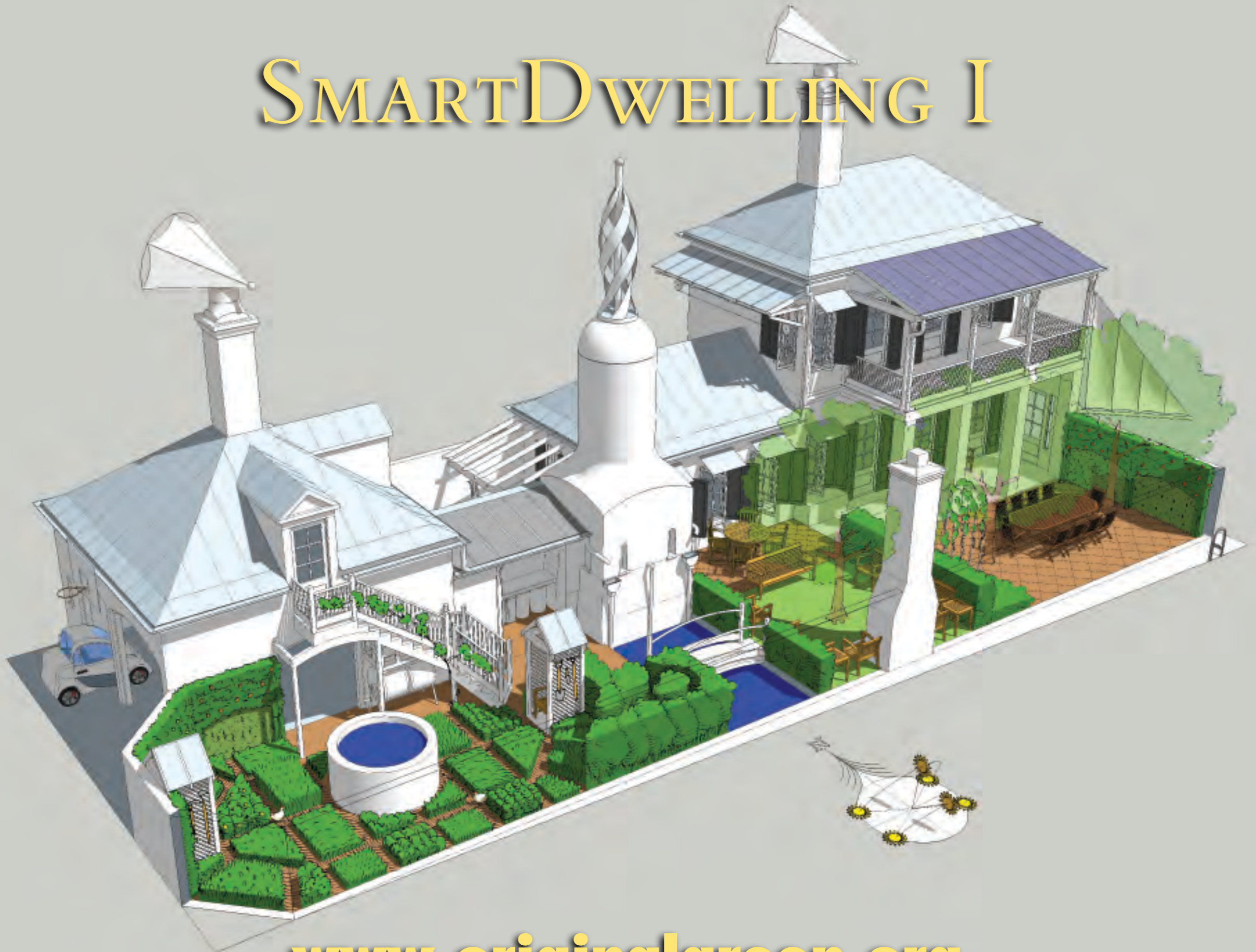


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PLANTS

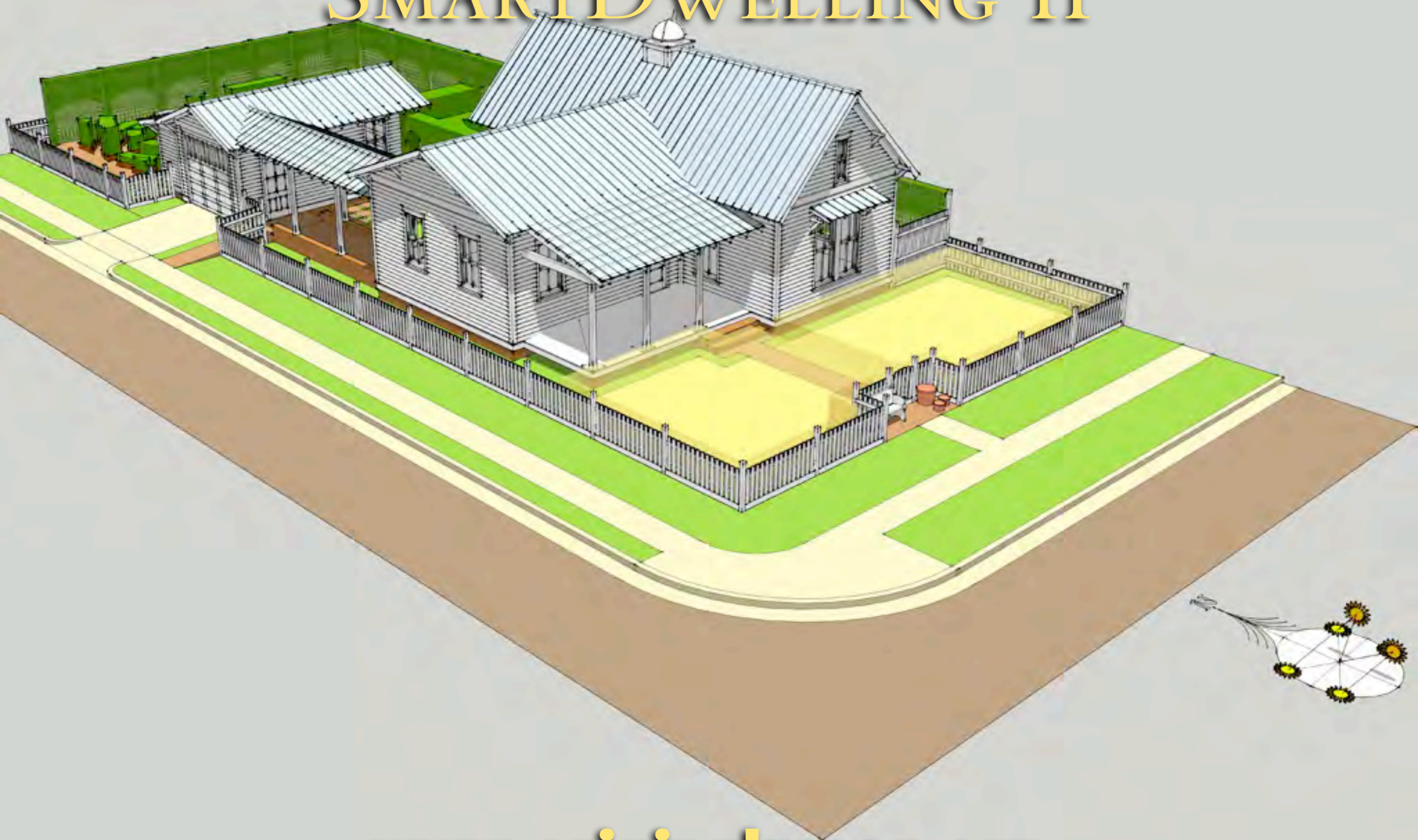
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SMART DWELLING I



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SMART DWELLING II



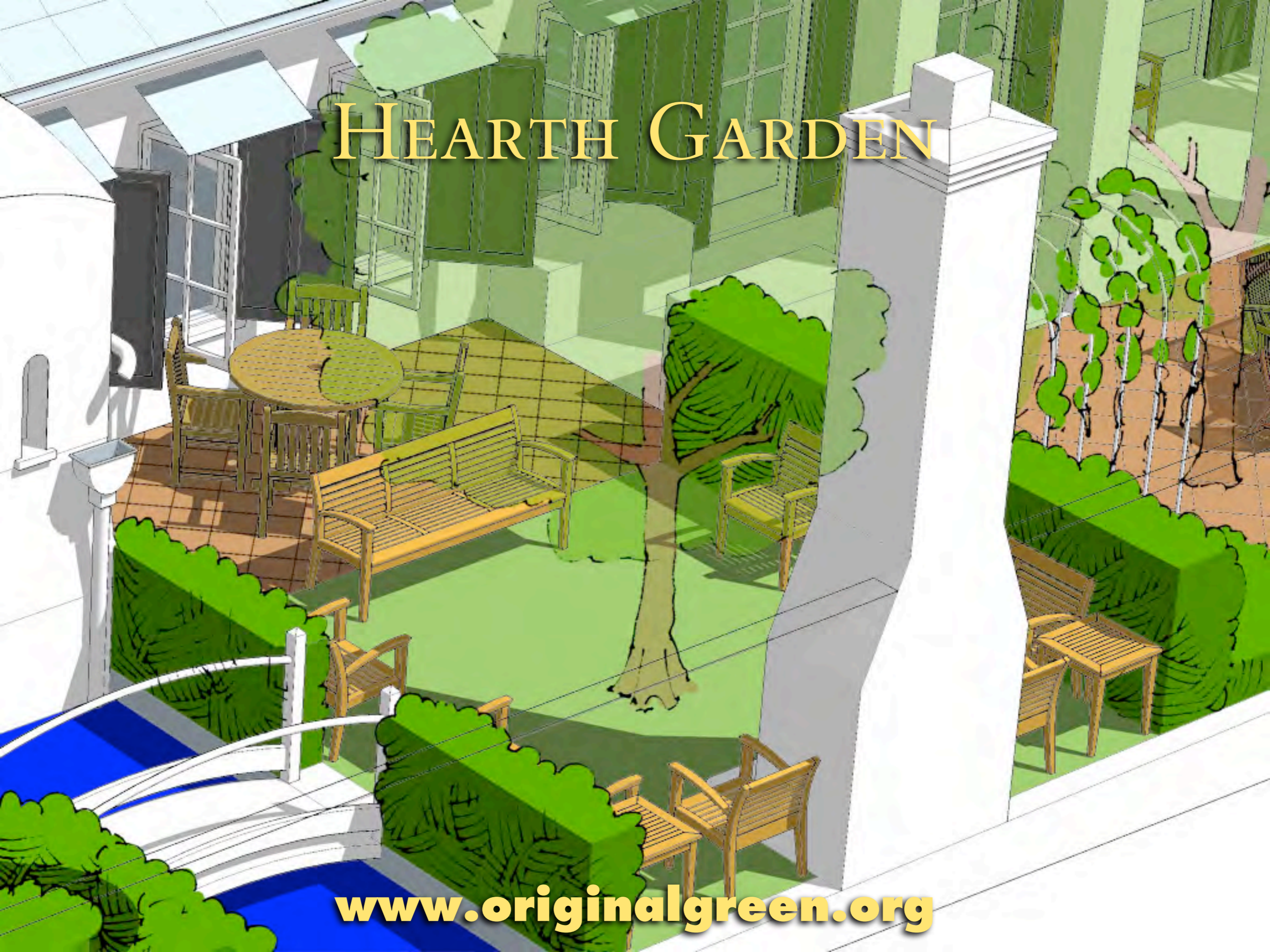
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FOOTPRINT *of the* GARDEN



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HEARTH GARDEN



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KITCHEN GARDEN



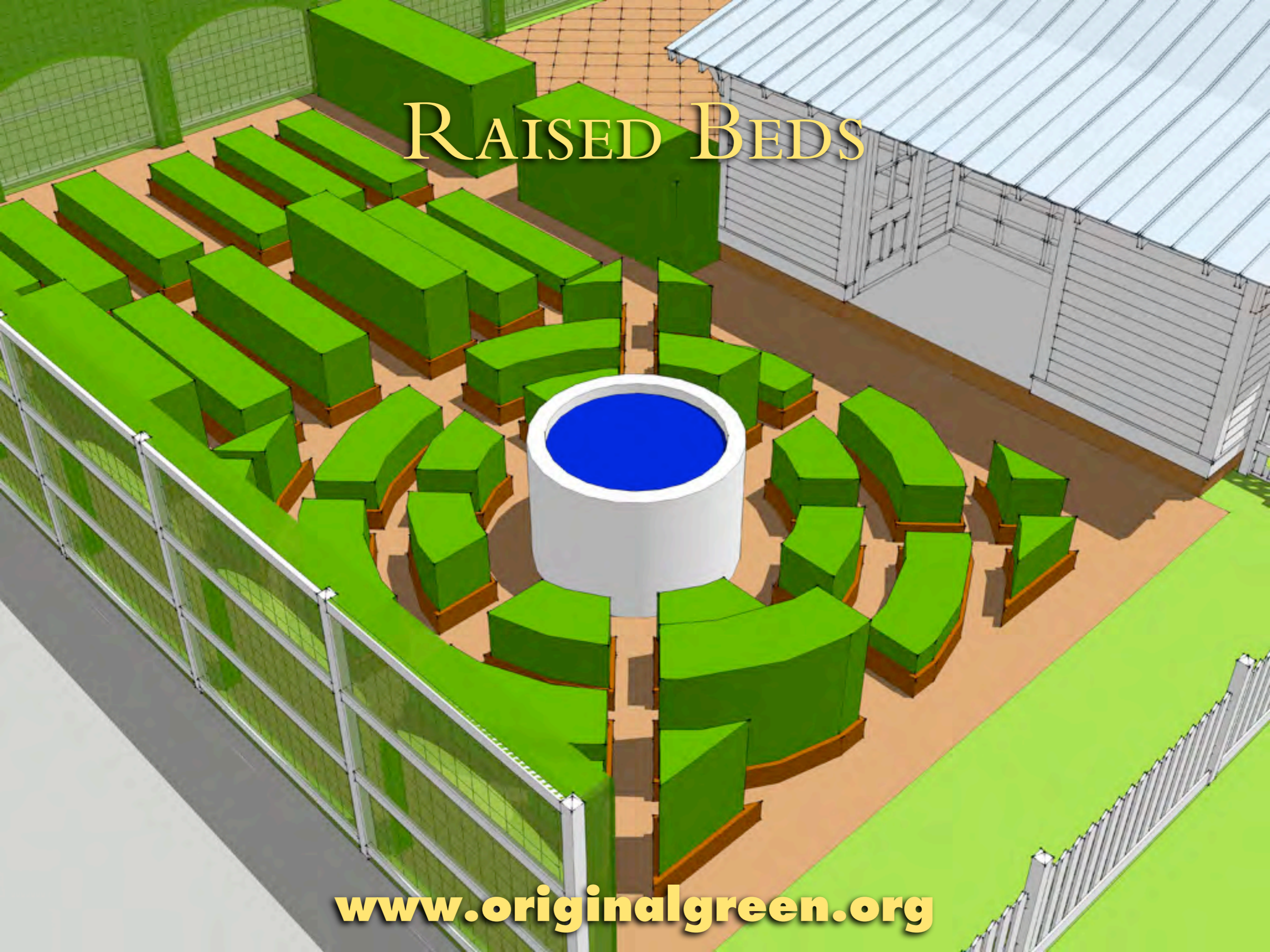
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TOWER of WIND and WATER



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RAISED BEDS



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GREEN FENCE



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GREEN WALL

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ORCHARD SIDNEYARD



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CHICKENS



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WHEAT LAWN



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BLACKBERRY TUNNEL



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A 3D architectural rendering of a maze. The maze is constructed from thick, green, rectangular blocks that form a complex, winding path. The path starts from the bottom left and winds through several turns, ending towards the top right. The maze is set on a light brown, sandy ground. In the background, there is a tall, modern building with a grid-like facade. The sky is a pale blue. The overall style is clean and modern.

BLUEBERRY MAZE

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ANIMALS



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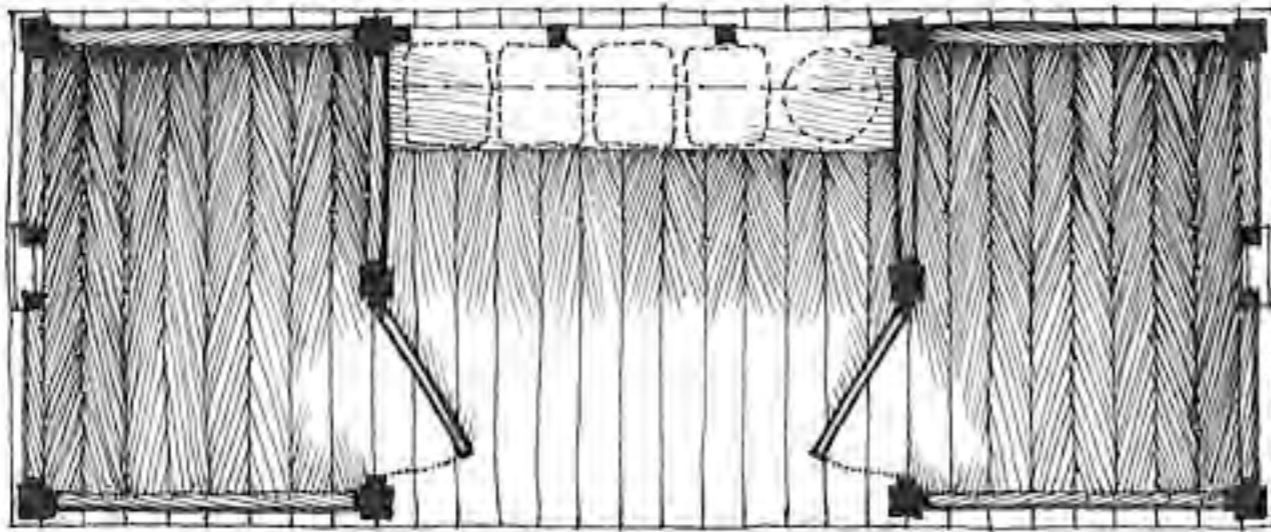
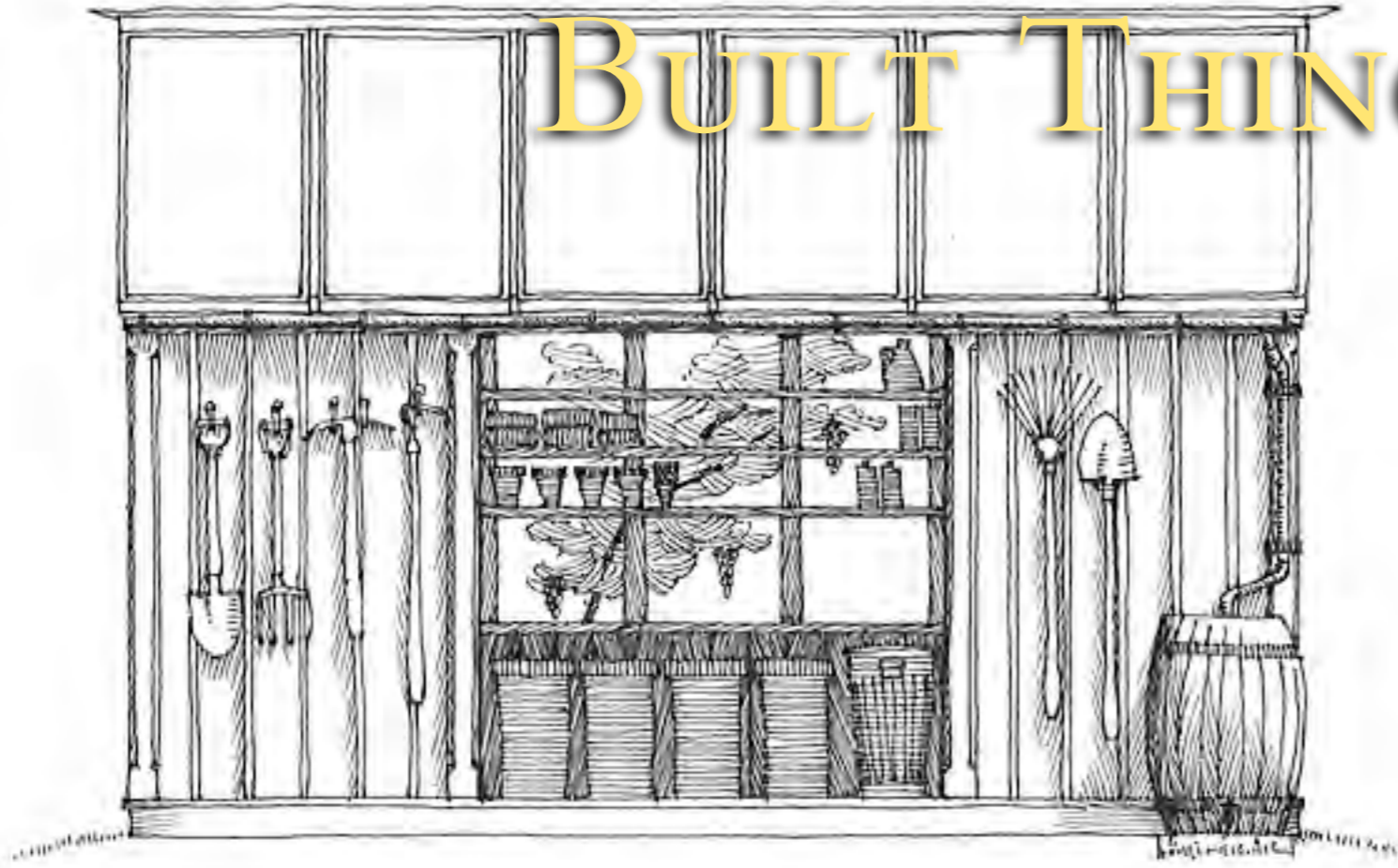
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TILAPIA TANK

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BUILT THINGS





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A 3D architectural rendering of a chicken coop's interior. The scene features a wooden staircase with a railing leading to an upper level. In the foreground, a white wheelbarrow is positioned on a brown floor. To the left, there is a doorway with a window. The background shows a wooden wall with a window. The overall style is clean and modern.

CHICKENS *and* COMPOST

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MORNING PAVILION

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FARMER'S MARKET



AGRICULTURAL PRECINCT

★ AGRICULTURAL INSTITUTE

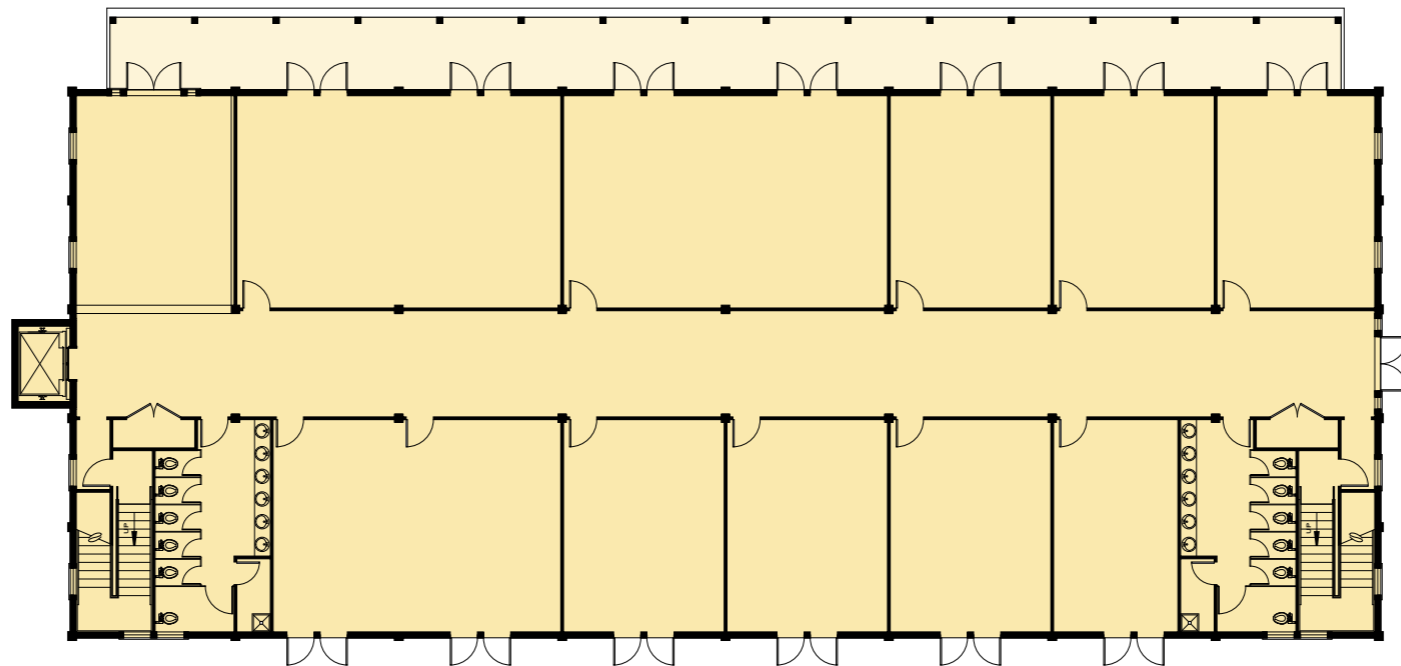
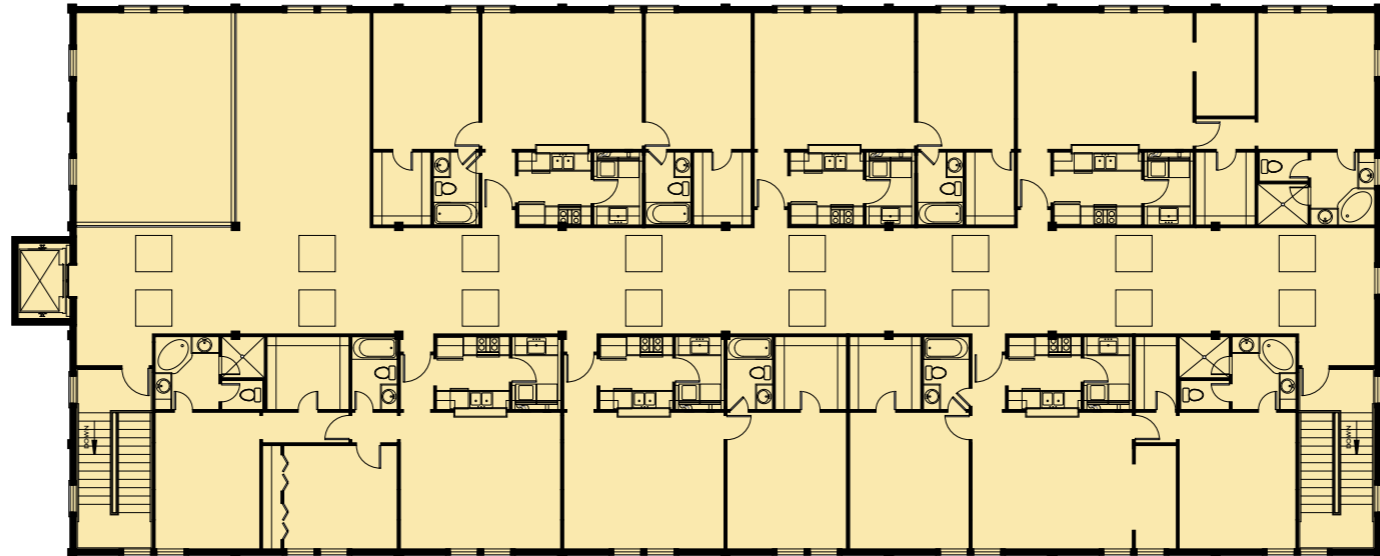
★ CULINARY SCHOOL

★ RESTAURANT

★ FARMERS' MARKET

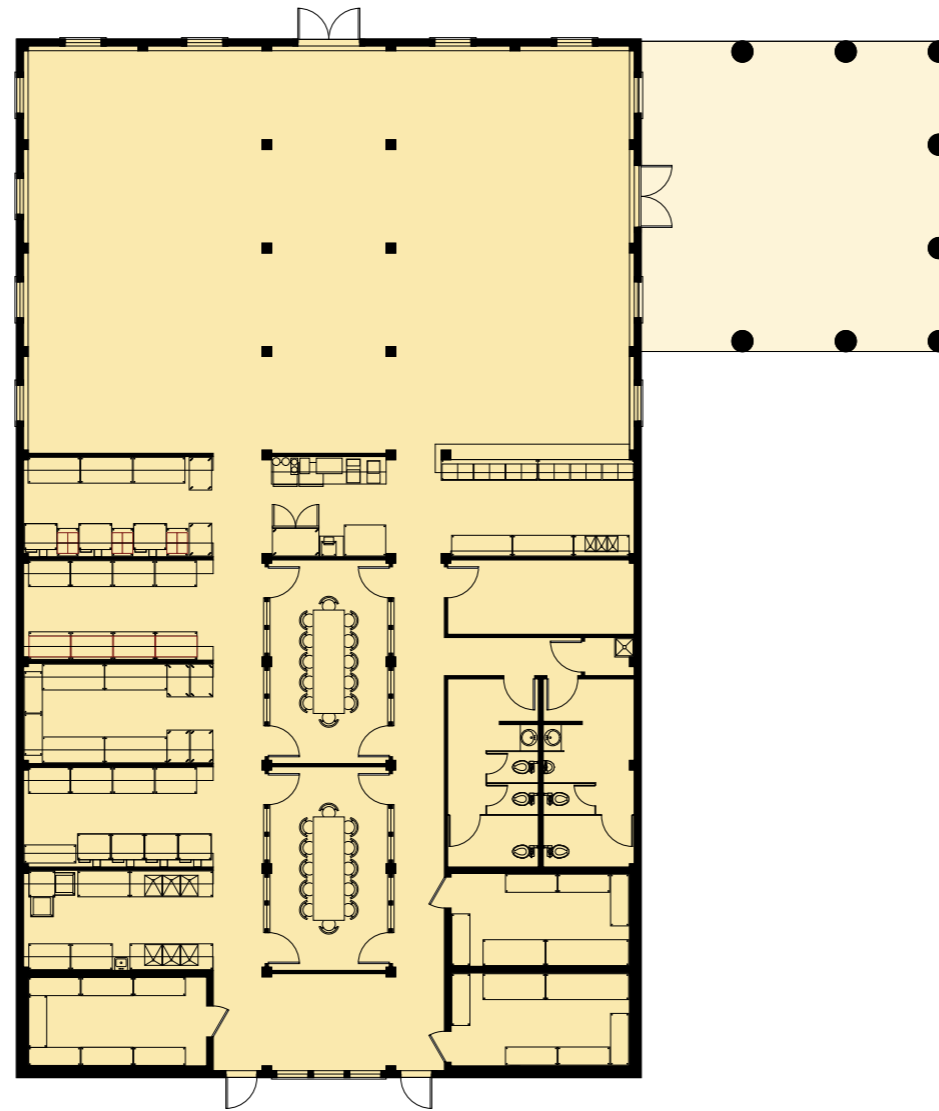
★ COTTAGE INDUSTRIES

AGRICULTURAL INSTITUTE



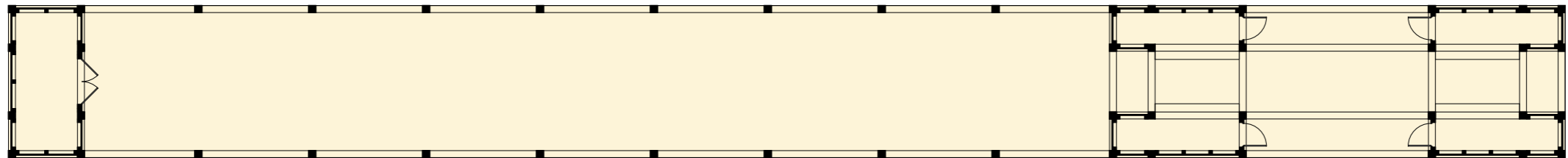
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CULINARY SCHOOL & RESTAURANT



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FARMERS' MARKET





the

Original

G R E E N

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