

New Orleans

Smart Organic Farmers Network (SOFN)



*Give a man a fish and he'll eat for the day...
Teach a man to raise fish, fruits and vegetables
he'll feed his entire community...*

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Table of Contents

Background Information

- 1- Assumptions, Challenges and the IDEA
- 2- Aquaponics System

Design

- 4- Plans
- 5- 3D Drawings

Smart Organic Farmers Network (SOFN)

- 8- Mission statement
- 9- Organization structure
- 10- Economic potential

Statement of Intent

Since Hurricane Katrina in the 2005, many homes in low income neighborhoods have yet to be rebuilt and lay vacant. Many have not returned to New Orleans since the devastation due to financial barriers, high-crime and real anxieties of another natural disaster. **The intent of Smart Organic Farmers Network model Homes is to** provide a new model of transitional housing that enables new generations of low income families both rural and urban to prosper into ownership of a highly efficient organic food production business.

Our primary goal is to:

- Provide access to fresh, healthy, local, and affordable food in underserved areas, “food deserts”
- Employ and Train no and low-income families
- Transition Section 8 residents towards home ownership
- Build upon New Orleans tradition of renowned cuisine
- Provide a self-sustained building structure that can withstand category 5 wind storms, tornados and recurring floods.

Participants of Rural and Urban farm homes will be a part of the **Smart Organic Farm Network** that will work with farmers providing them with technical support, help connect them to distributors, restaurants, hotels, and casinos. The **SOFN** will also have a role in the construction and management of the properties.

Assumptions for both rural and urban farmers

- Typical New Orleans lot 30'x 120'
- Targeted demographic is small low-income families, likely single mother families and homeless veterans
- Another flood will happen soon
- With a safer place to live former residents will move back

Challenges

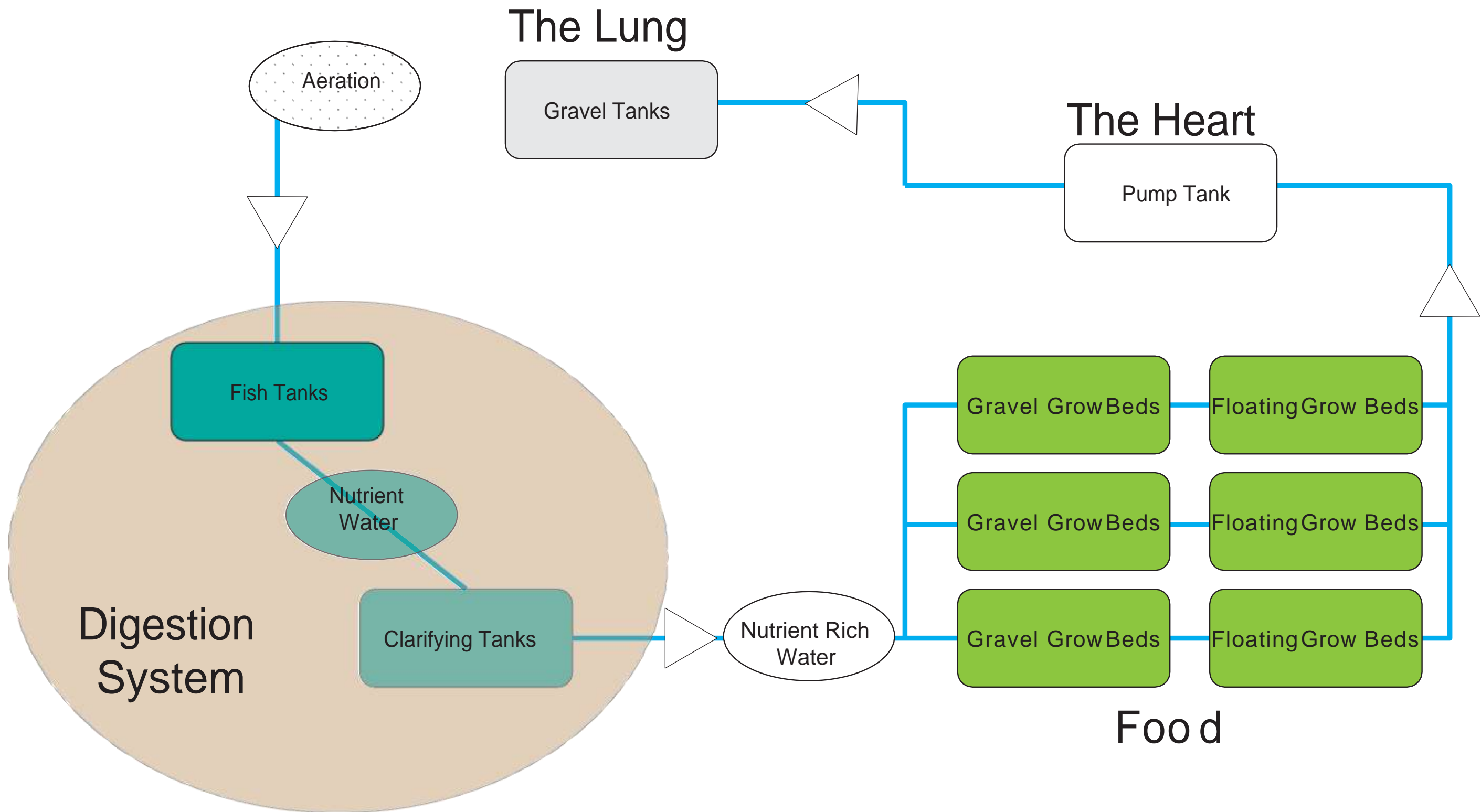
- Tornado, Hurricanes, tropical storms and potential flooding
- Zoning may not allow commercial farming in certain areas

IDEA

Provide a modest 600 sq. ft., 2 bedroom 1.5 bath LEED certified house coupled with an 25'x 50'-100' aquaponics green house and fish tanks. Aquaponics is a highly efficient and effective method of growing food within a limited space. With the aquaponics system the Rural and Urban farming operation can go commercial selling not only vegetables but crawfish, fish, shrimp and other sources of protein.

By providing a house and green house to low-income families, they have a safe place to live, work and play. Overtime they have the opportunity to buy their home and farm business and home and advance beyond dependency on government welfare programs.

Beyond a home, our organization ensures the families success by training and providing continuing technical support to beginning farmers. The Smart Organic Farmers Network will operate like a Community Supportive Agriculture (CSA) Program and supply a range of organic vegetables, fruit and dry goods to local families, fresh markets, restaurants and grocery stores like Whole Foods.



The pump moves the water, the gravel tanks aerate the water for the fish and plants, then the fish provide nutrients into the water for the plants. The water is then pumped back into the gravel tanks and the cycle begins again, without any chemical fertilizers.

Organic Aquaponics System

This method of food production utilizes a symbiotic relationship of fish, livestock, aquatic plants, fruits and vegetables. Benefits of this cyclic al system include:

- Year-round production (makes money)
- No chemical fertilizers (saves money)
- Crop/food diversity (healthier diets)
- Produces its own organic fertilizers and insecticides
- Uses Solar energy



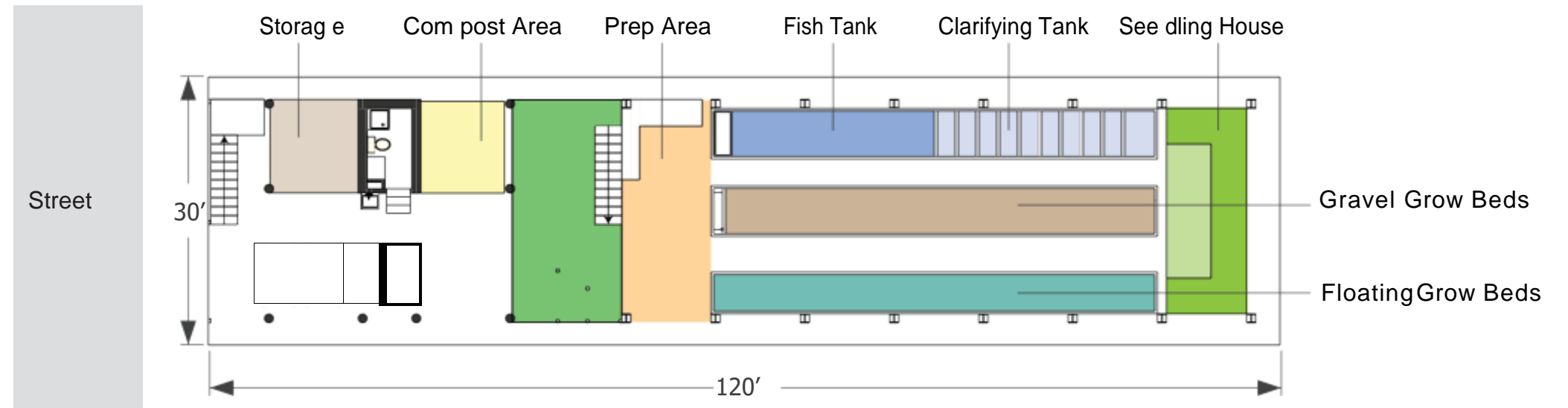
Design

The design of the house is a model for how aquaponics agriculture can be adapted to the any Louisiana neighborhood, environment and climate.

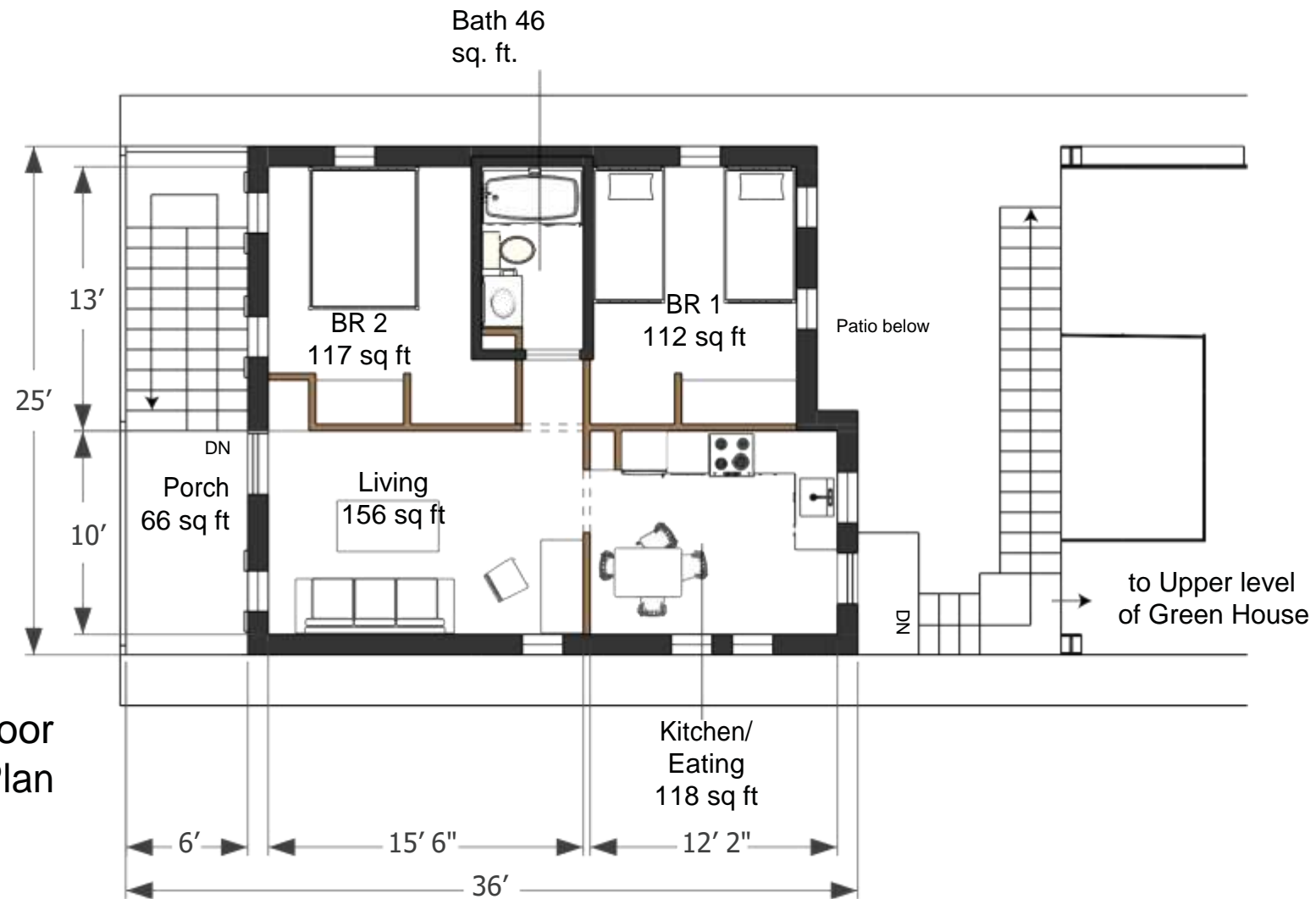
Key Features:

- Raised off the ground more than 10' with service and storage underneath
- Porch blends in with typical New Orleans residential housing.
- Bathroom acts as a safe room in an natural disaster event
- Every room receives daylight and ventilation from two sides, reducing energy loads

Once a family owns and operates the farm, a family has a place to live and eat, regardless of global recessions.

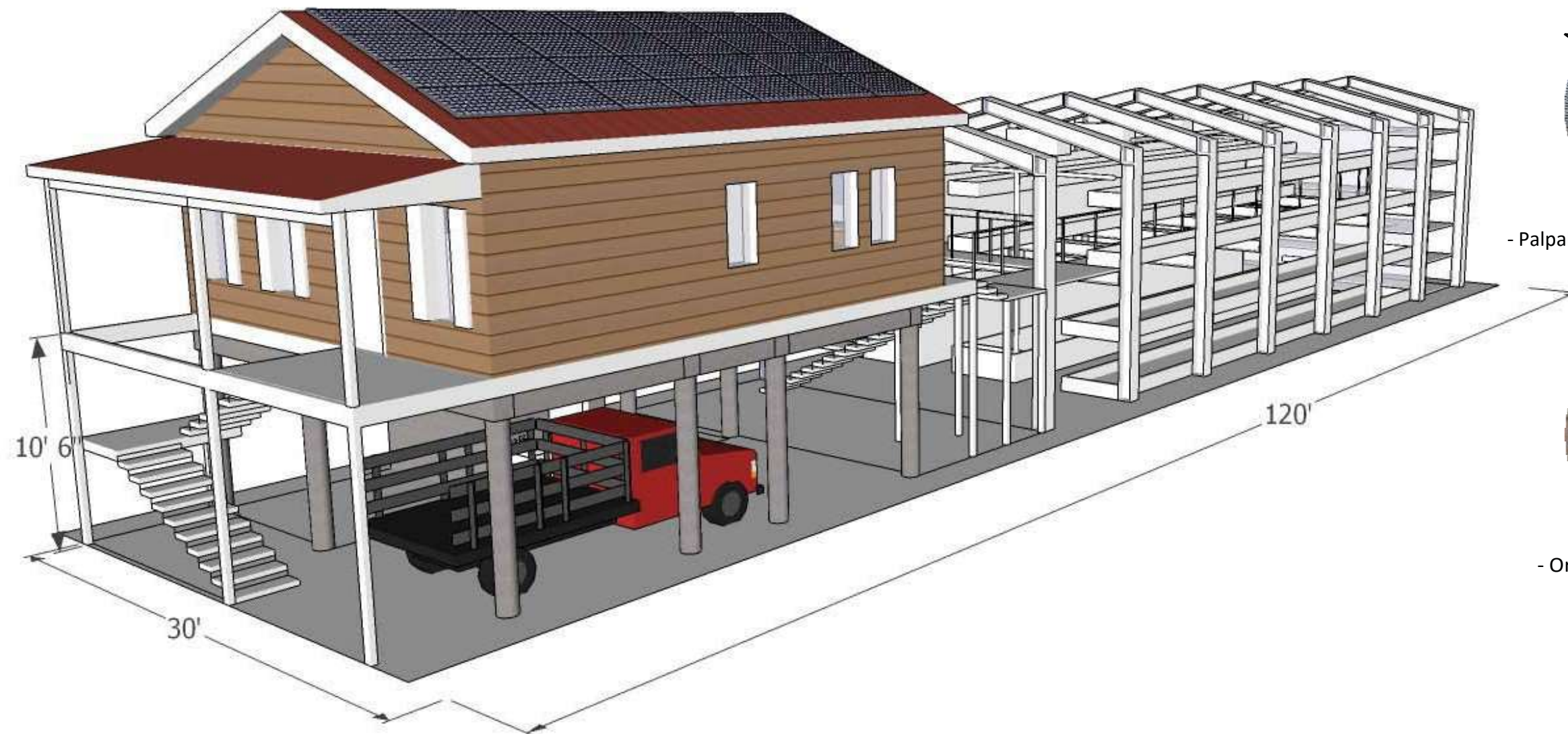


Ground Floor Site Plan



First Floor House Plan

2BR 1.5 BTH
588 sq. ft.



Thin film Solar Photo voltaic

- Durable, high temperature tolerance



New Orleans Architecture

- Palpable aesthetics to local residents



Aquaponic Green House

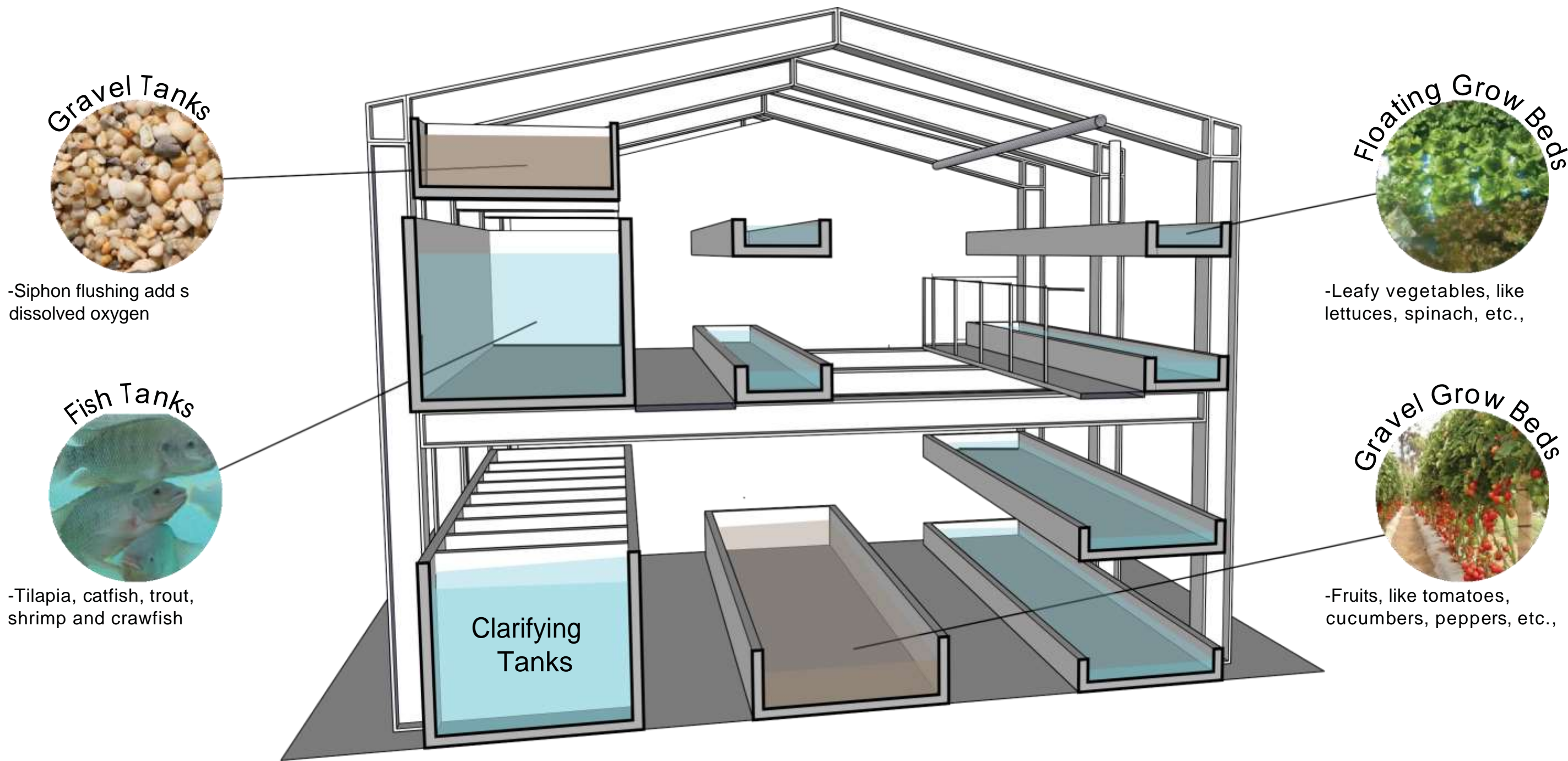
- Organic Vegetables and Fish



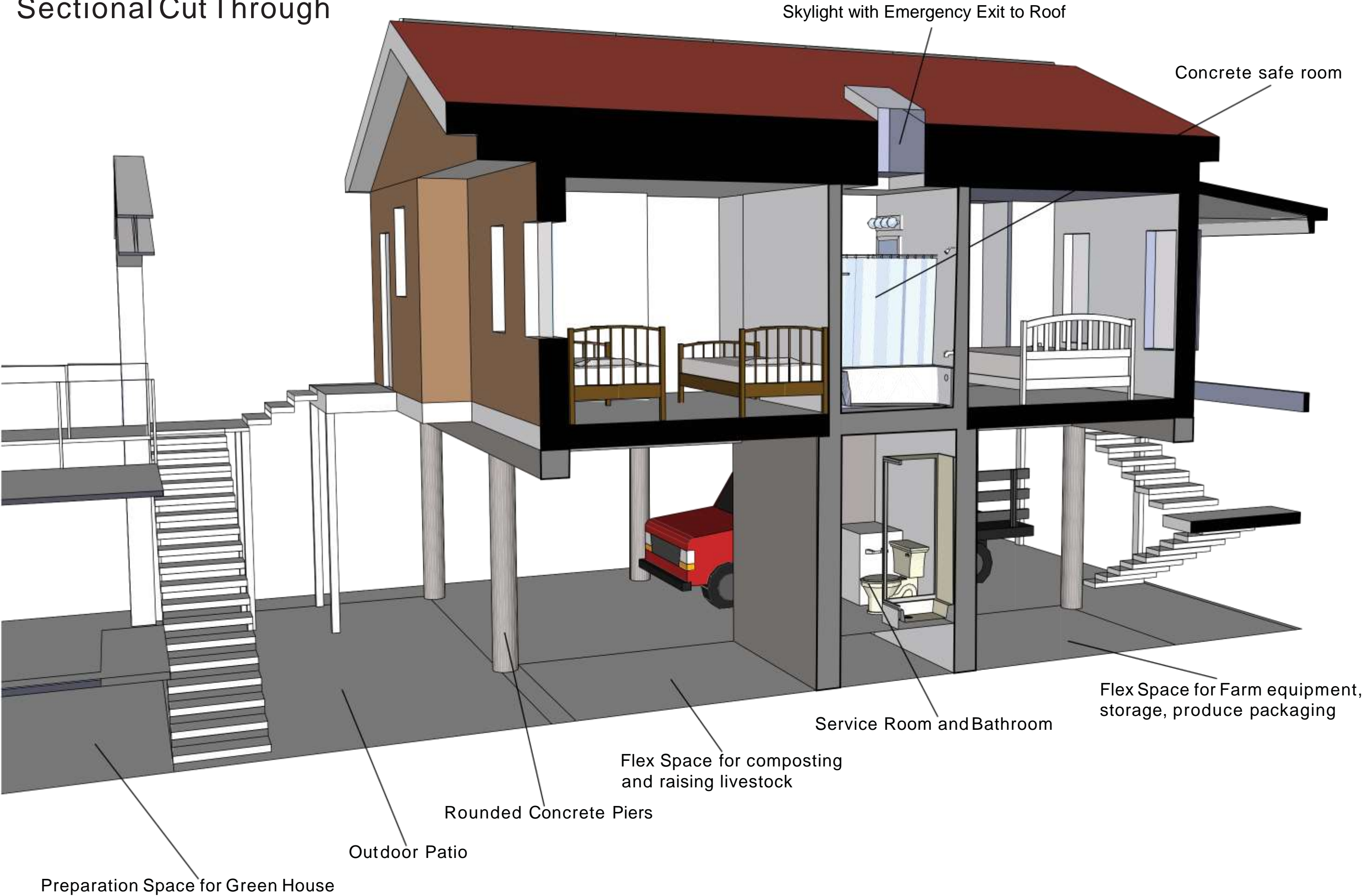
Chicken Pen

- Organic Compost, Eggs and Chickens

Aquaponics Green House



Sectional Cut Through





The Smart Organic Farmers Network (SOFN)

The Smart Organic Farmers Network's role will be oversee construction from beginning to end, manage the properties until occupants can buy their homes, provide distribution services and support to Rural and Urban Farmers. These homes are targeted to select welfare families and homeless veterans willing to learn and adopt a self-sufficient and sustainable career in agriculture.

Through construction, management and support of these Farm Homes, the SOFN offer numerous benefits to many groups:

Benefits to the Governments:

- Increases employment and home ownership, thus increases local, state and federal tax base
- Reduces welfare dependency and expenditures
- Green gas reduction—local production and distribution.

Benefits to the Farmer:

- Reduce logistics cost to participating farmers
- Technical support and maintenance
- Training to gain and maintain Organic Certification
- Financial independence

Benefits for Community:

- Access to healthier and affordable food
- Rural and Urban locations ideal for Youth programs

Organization

Roles

Duties

Smart Organic
Farmers Network

Design/Build

House

Aquaponic
System

Management

Properties

Distribution

Support

Maintenance

Education/
Training

Organic
Certification

Individual Farmer’s Finances

Requirement	24 RaÕ	\$
Target	low- income	
Funding	personal; government; UN; private donors	
Production capacity (heads of lettuce/ 6 wks)	11520	7920
Space (sq. ft.)	1200	
Water source	garden hose	
Water requirement (gallons)	3000	45
Closed system		
Tanks	24RaÕs (4x8x1), 1FT (4x8x3), 1 CI, 1 FlushT	8890
Piping	Water hoses, PVC pipes	750
Pumps	4 pumps (1 solar 1 wind)	2500
Initial Raw material		
Fingerlings	600	500
Seed	5,000 (added to running cost)	
Boards (2X8)	48	1152
Other animals		
Pots	15000 2inch net pots	1500
liner	24(6x10); 2(8x12)	1500
Coconut fiber	8x50 lb bails	400
Installation time (days)	30	
Installation, supervision & training		3500
System fee		6000
packaging material		1500
Investment (\$)		28237
Ongoing RM		300
Manpower		
Space (sq. ft.)	1200	1200
Water usage/month	7-14 g/day	13.5
Power/month	20 kW pump (\$2/day)	7.5
Maintenance		150
Technical Support	24/7	0
Distribution	CSA (support 100 families; 1 family basket/wk.)	0
packaging	organically grown;	
packaging material	re-usable baskets	250
Running Cost (\$)		1921
Profit/month \$		5999
Profit/from fish	300/month at \$3	900
Total Profit/month \$		6899
First 3 months profit		8820
Needed Funding to start	Investment + 3 month running cost	34000
Total funding		34000
From donor		30600
From farmer		3400

MODEL	0	Month1	Month2	Month3	Month4	Month5	Month6	Month7	Month8	Month9	Month10	Month11	Month12
B24	-36379.2	9828	9828	9828	6899	6899	6899	6899	6899	6899	6899	6899	6899
		-26551.2	-16723.2	-6895.2	3.8	6902.8	13801.8	20700.8	27599.8	34498.8	41397.8	48296.8	55195.8
		Month13	Month14	Month15	Month16	Month17	Month18	Month19	Month20	Month21	Month22	Month23	Month24
		6899	6899	6899	6899	6899	6899	6899	6899	6899	6899	6899	6899
		62094.8	68993.8	75892.8	82791.8	89690.8	96589.8	103488.8	110387.8	117286.8	124185.8	131084.8	137983.8
		Month25	Month26	Month27	Month28	Month29	Month30	Month31	Month32	Month33	Month34	Month35	Month36
		6899	6899	6899	6899	6899	6899	6899	6899	6899	6899	6899	6899
		144882.8	151781.8	158680.8	165579.8	172478.8	179377.8	186276.8	193175.8	200074.8	206973.8	213872.8	220771.8
		Month37	Month38	Month39	Month40	Month41	Month42	Month43	Month44	Month45	Month46	Month47	Month48
		6899	6899	6899	6899	6899	6899	6899	6899	6899	6899	6899	6899
		227670.8	234569.8	241468.8	248367.8	255266.8	262165.8	269064.8	275963.8	282862.8	289761.8	296660.8	303559.8

YR1

YR2

YR3

YR4

Smart Organic Farmers Network Finances

Distribution			Comments	
Number of Farmers	100			
Profit Percent	30.00%		Must be at least 6.7% to exceed breakeven	
Monthly Volumes (75% of production off-take per farmer)	5,760			
Unit Price (\$)	1.25		price sold to retailer	
Price paid to farmer (\$)	0.88			
Total Monthly Sales	720,000			
Monthly Profit estimate (\$)	216,000			
Annual Gross Profit (\$)	2,592,000			
Number of heads to be handled per day	19,200		To reduce the logistics this should be collected from as few farmers as possible per trip	
Heads/ Crate	12			
Number of crates per day (12x16x6.5)	1,600			
Cost per crate (\$)	0.85			
Annual cost of crates	484,160			
Space in cubic inches	1,996,800		Conversion from cubic inches to cubic feet	
Space in cubic feet	1,156		1000	0.5787
Van size in cubic feet	336			
Van cost per year (incl. Driver + fuel)	40,000			
Quality Control	-		use driver for quality control	
NET Profit (\$)	2,067,840			

		lettuce/crate						
	2,067,840	8	9	10	11	12	13	14
Profit Margin	5%	(334,240)	(253,547)	(188,992)	(136,175)	(92,160)	(54,917)	(22,994)
	10%	97,760	178,453	243,008	295,825	339,840	377,083	409,006
	11%	184,160	264,853	329,408	382,225	426,240	463,483	495,406
	12%	270,560	351,253	415,808	468,625	512,640	549,883	581,806
	15%	529,760	610,453	675,008	727,825	771,840	809,083	841,006
	20%	961,760	1,042,453	1,107,008	1,159,825	1,203,840	1,241,083	1,273,006
	25%	1,393,760	1,474,453	1,539,008	1,591,825	1,635,840	1,673,083	1,705,006
	30%	1,825,760	1,906,453	1,971,008	2,023,825	2,067,840	2,105,083	2,137,006
	31%	1,912,160	1,992,853	2,057,408	2,110,225	2,154,240	2,191,483	2,223,406
	32%	1,998,560	2,079,253	2,143,808	2,196,625	2,240,640	2,277,883	2,309,806
	33%	2,084,960	2,165,653	2,230,208	2,283,025	2,327,040	2,364,283	2,396,206