

Modern Permaculture



Between The Plate And The Planet

Design Thesis
Kyle Lunke

Problem Statement

In the United States today, are there concerns with the way food is grown, prepared, and eaten?

Yes

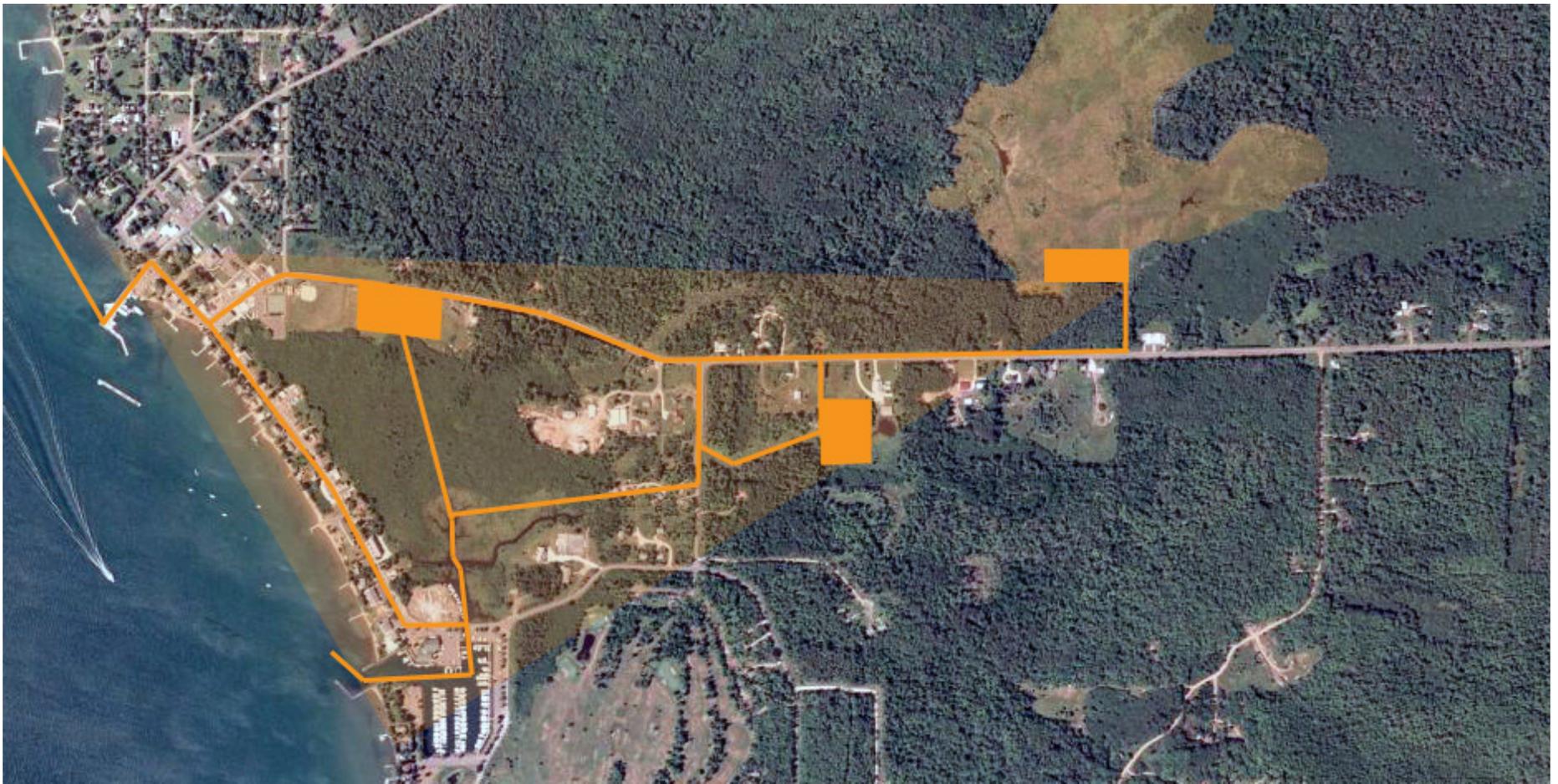
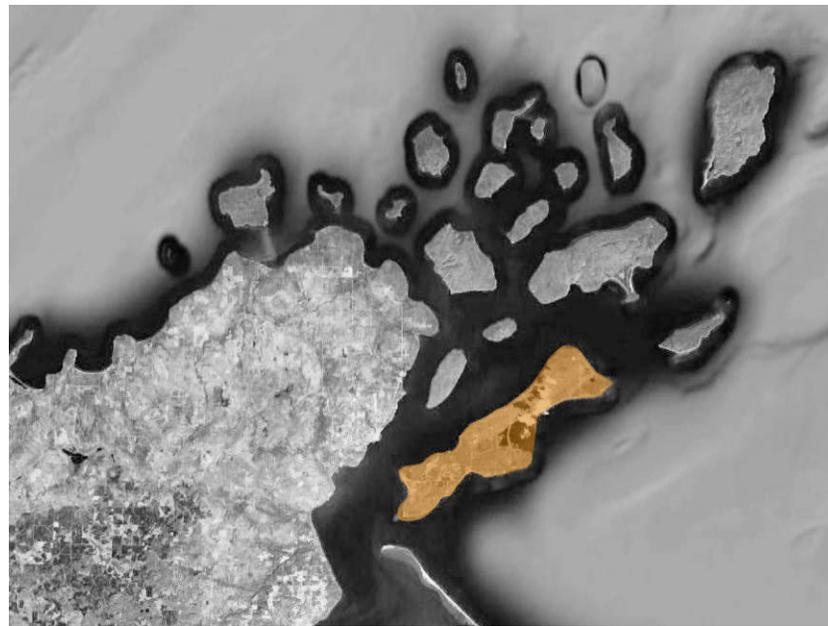
Industrial agribusiness farming

Unsustainable – Will not be able to sustain life for future generations

- Pollution (chemicals – pesticides, herbicides, synthetic fertilizer, etc..
odor pollution-manure, transportation of food (use of fossil fuels))
- exploiting natural resources
- Soil erosion
- Irrigation use
- Destroying the ecological balance of the area
- Reduction of biodiversity (monocultures)
- Unhealthy food

Site

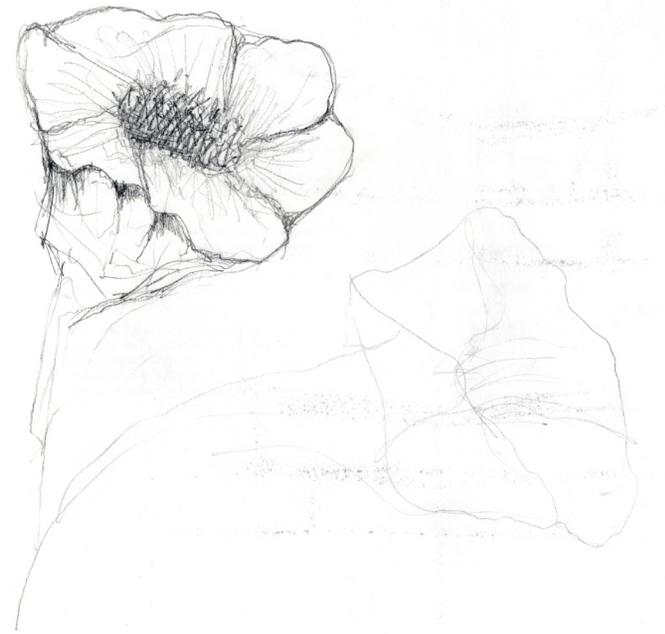
Madeline Island, WI



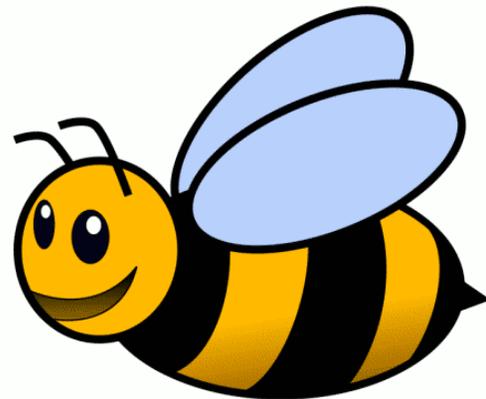


Design Inspiration

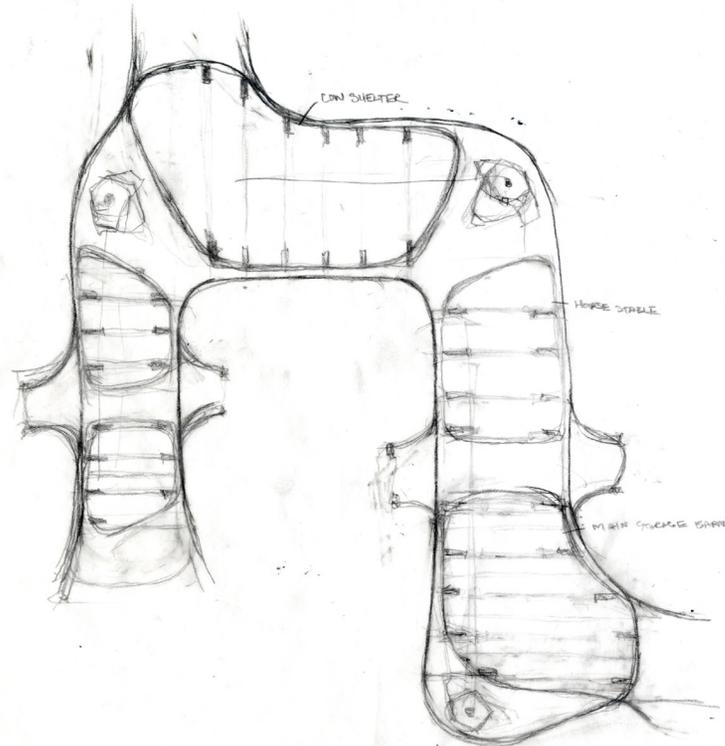
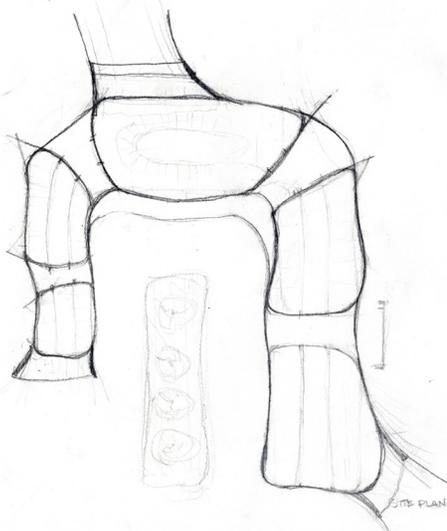
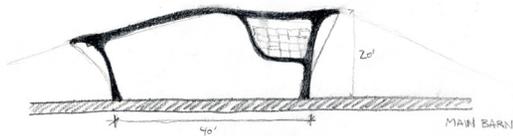
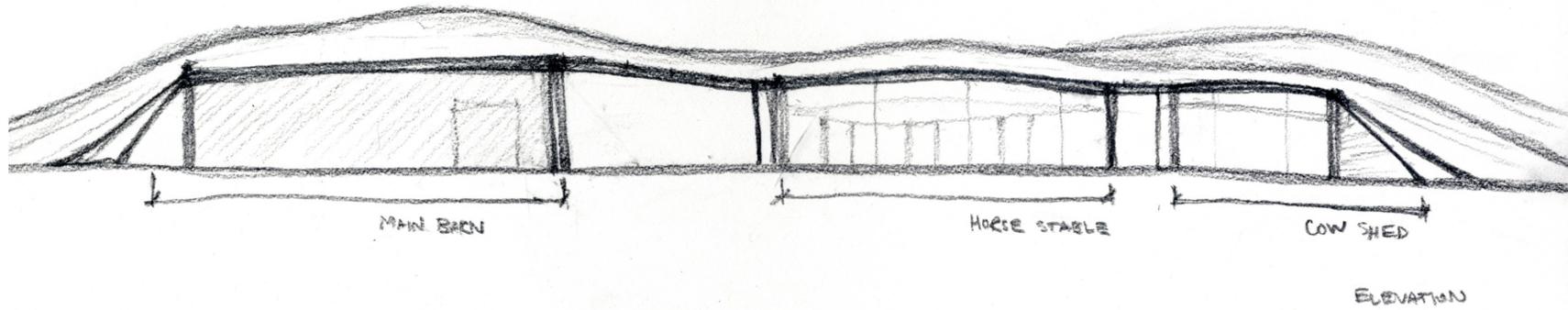


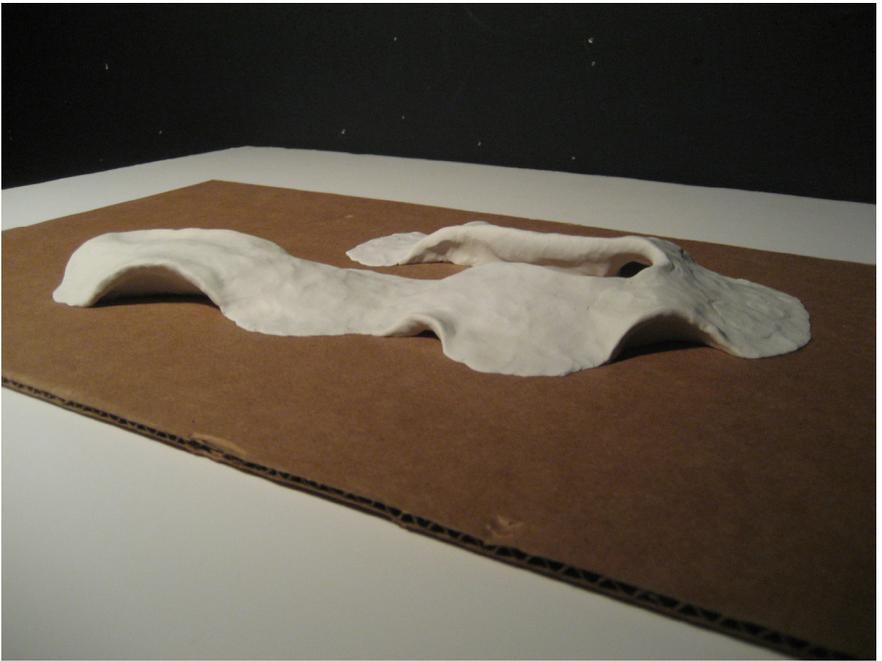


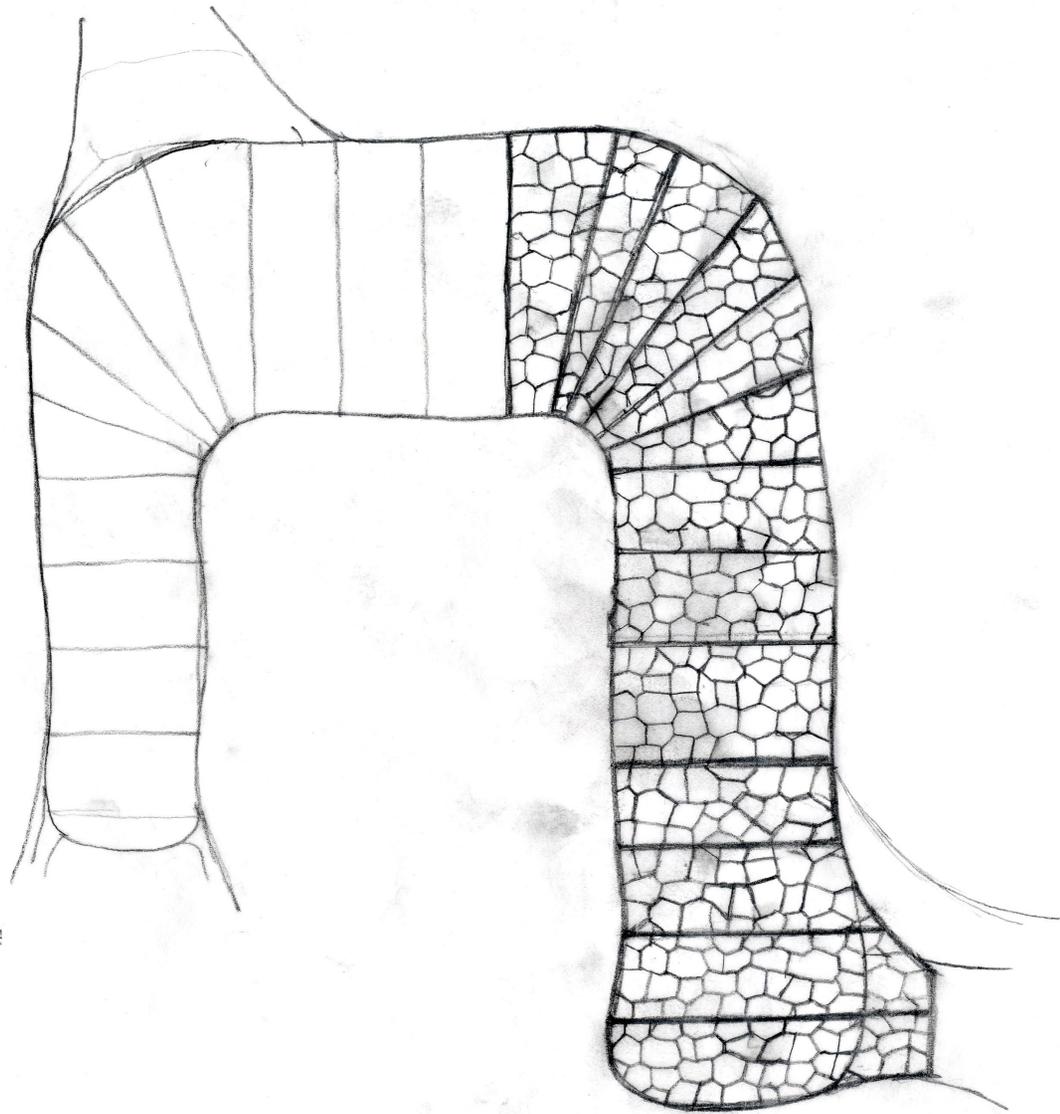
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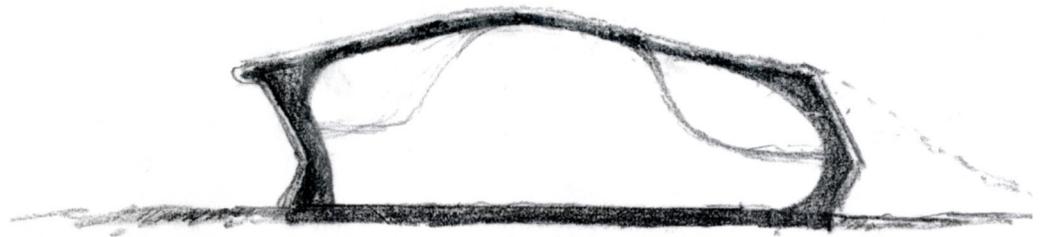
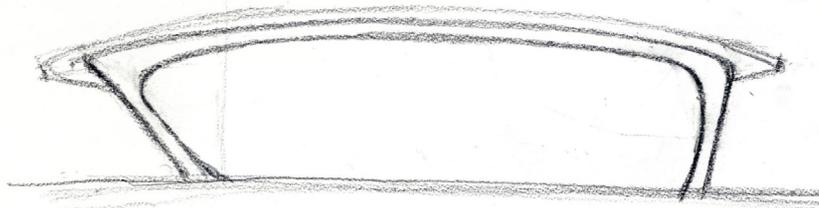
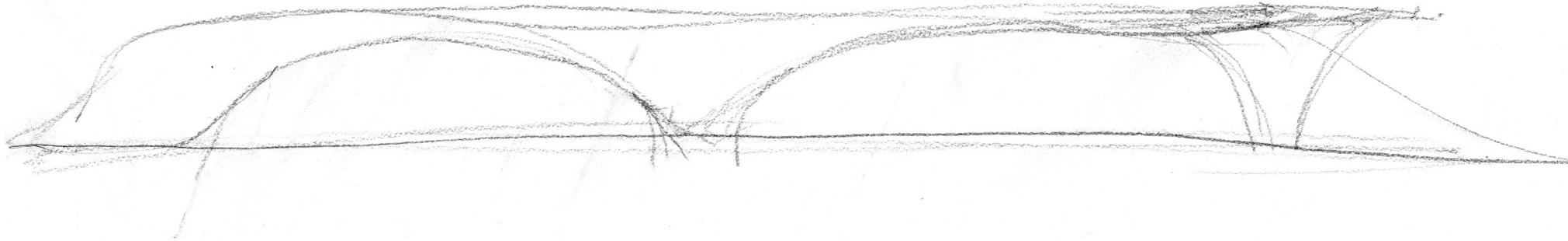
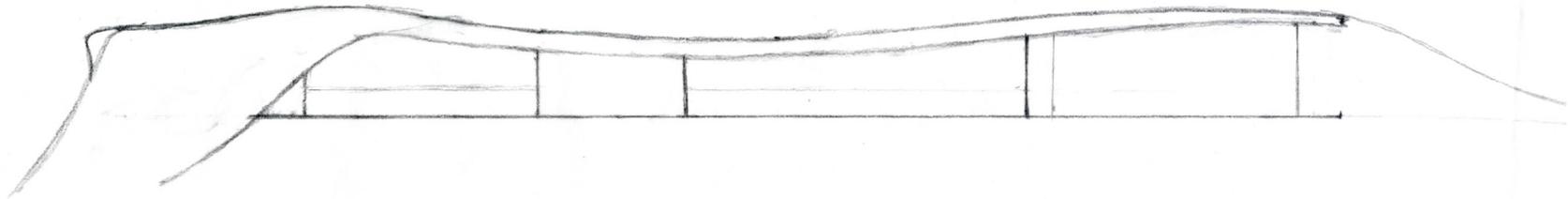


Design Process

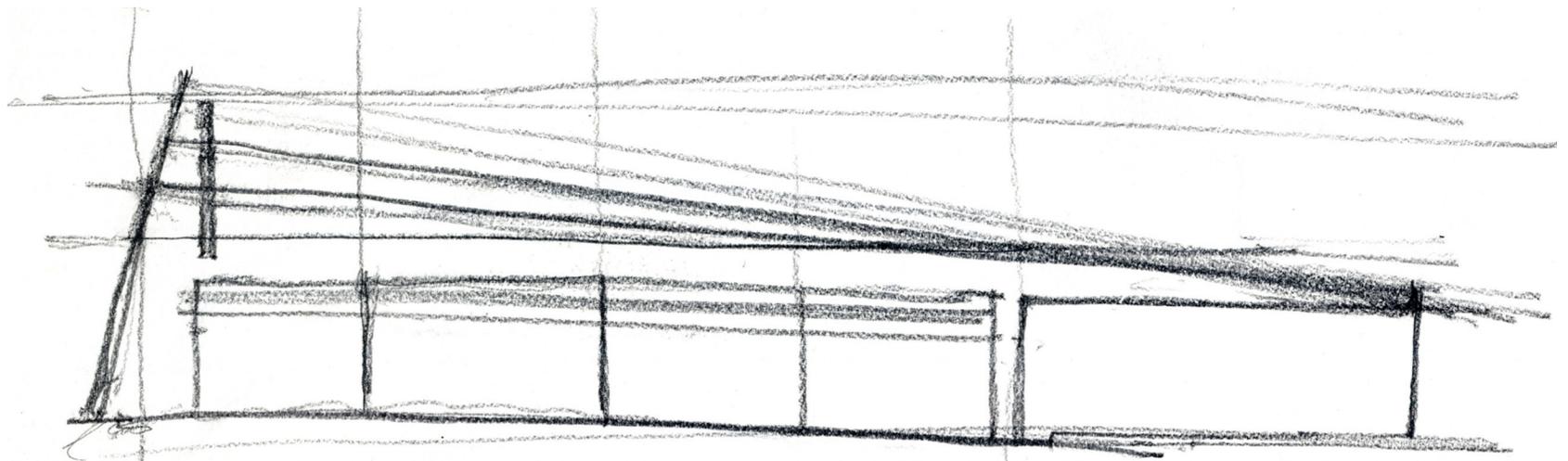


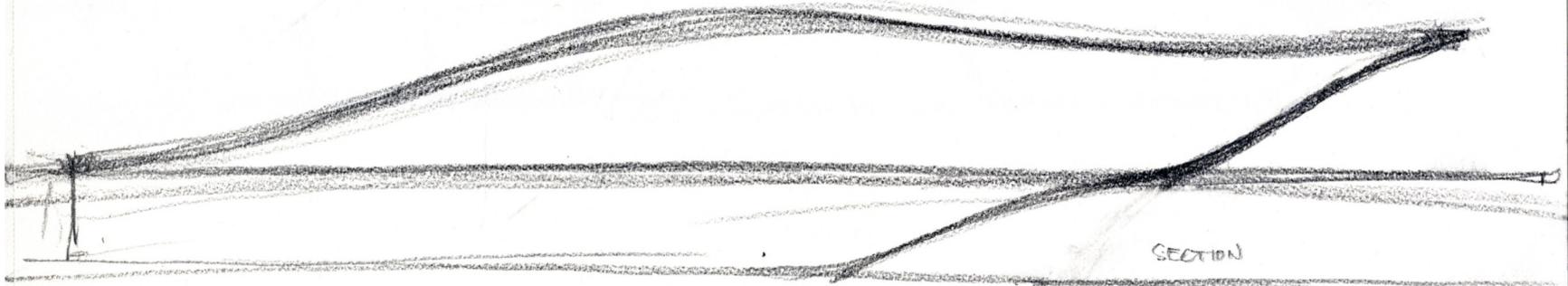




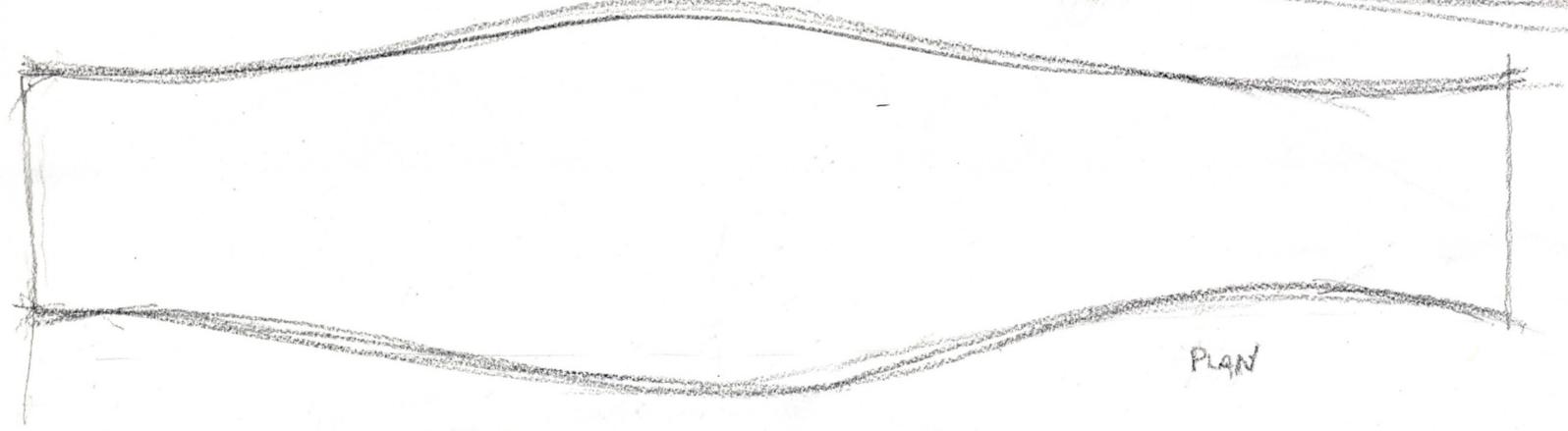


45'

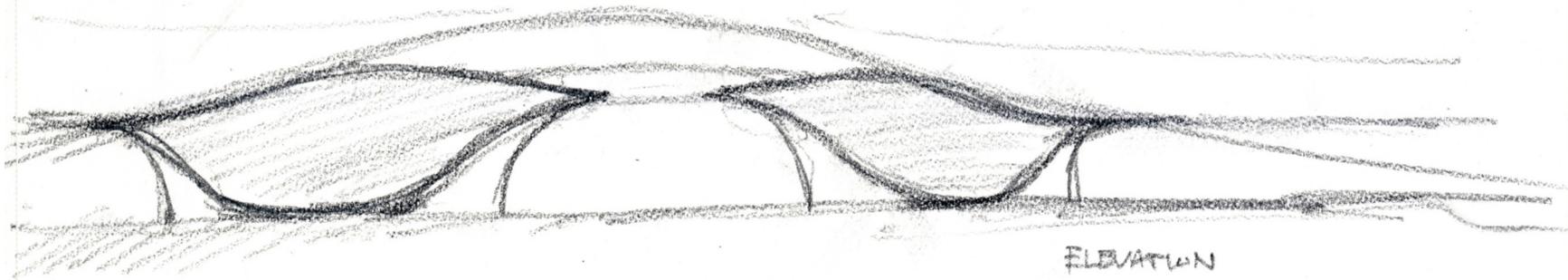




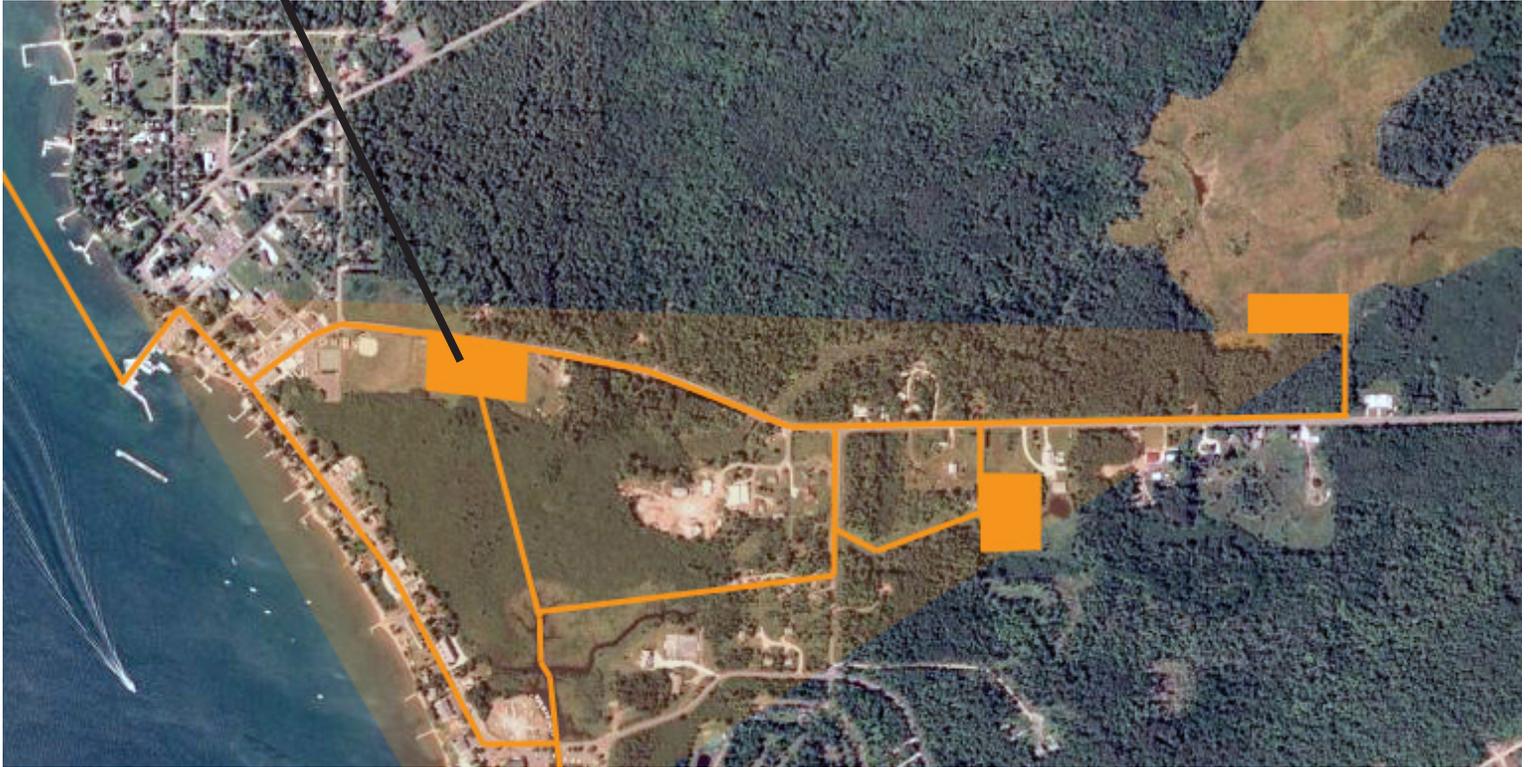
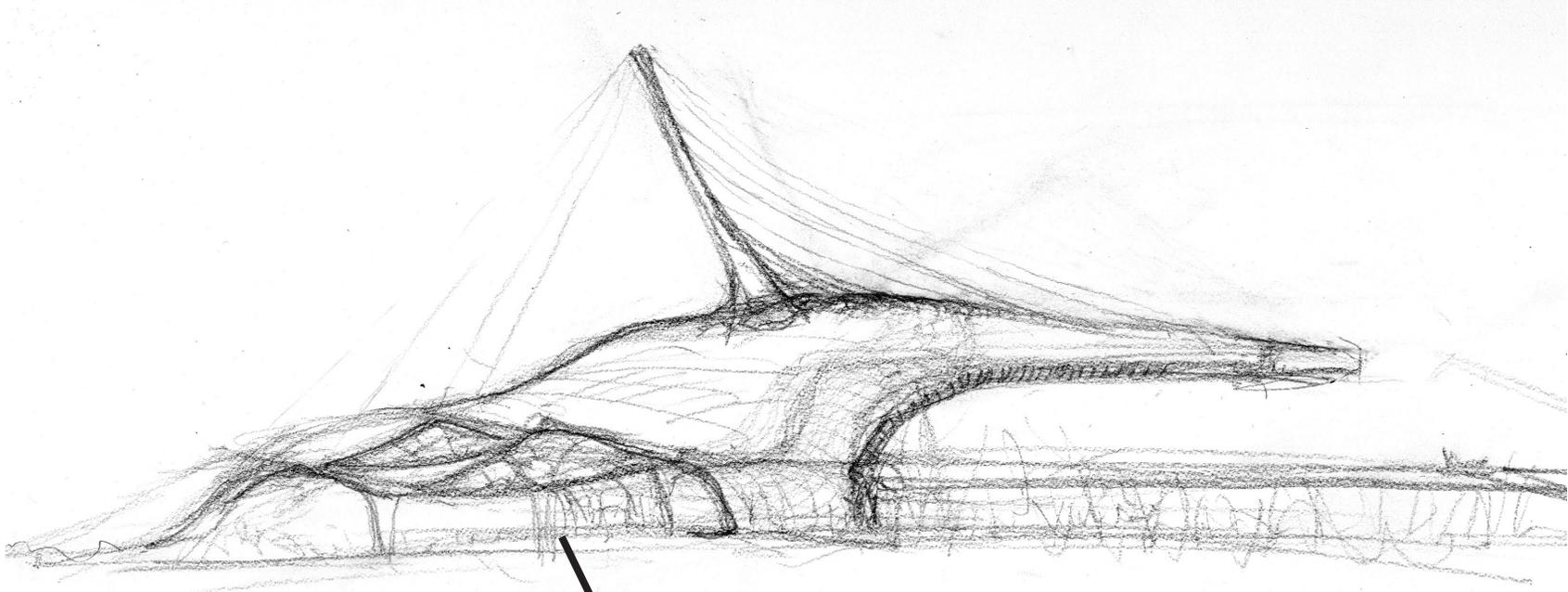
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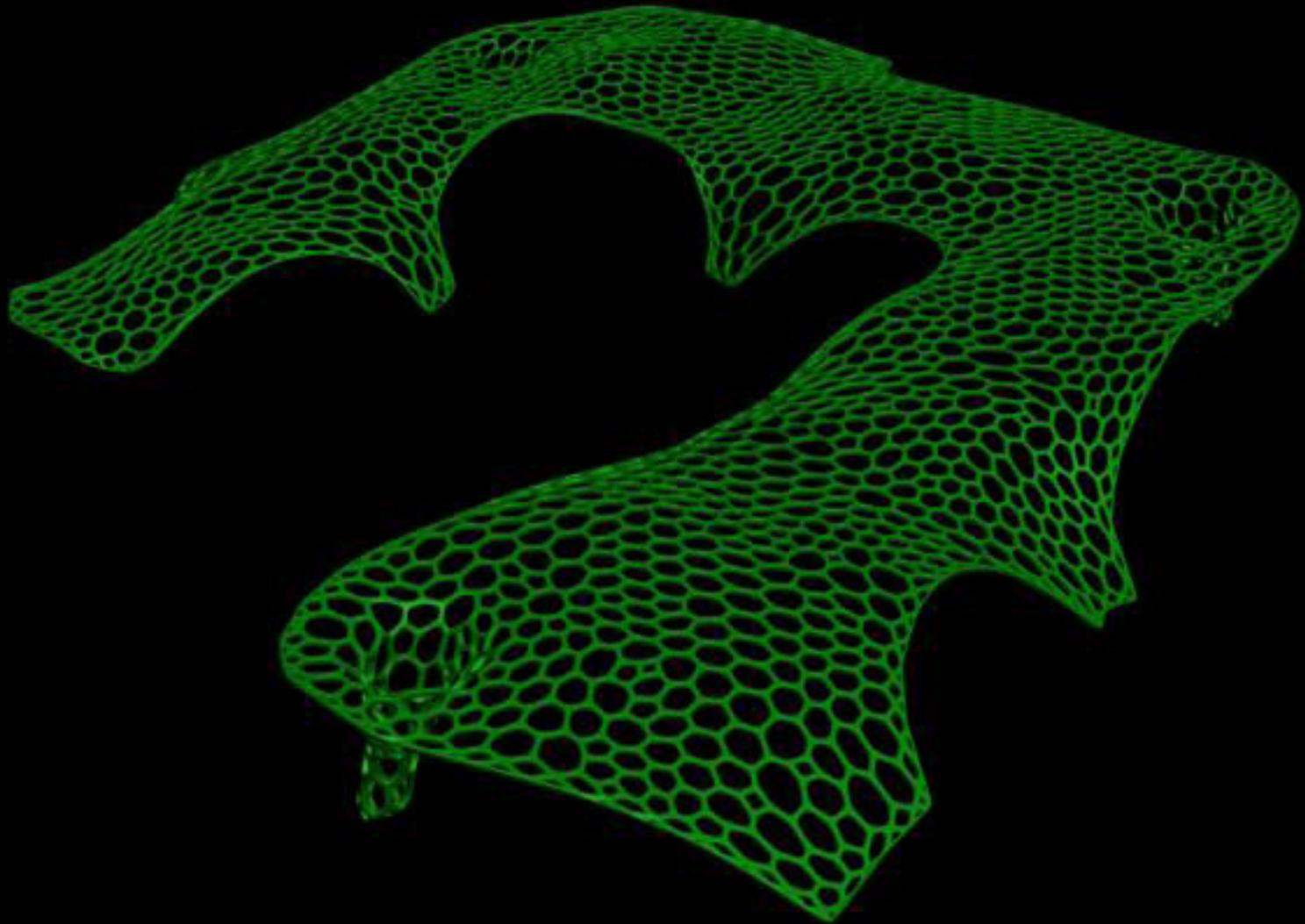


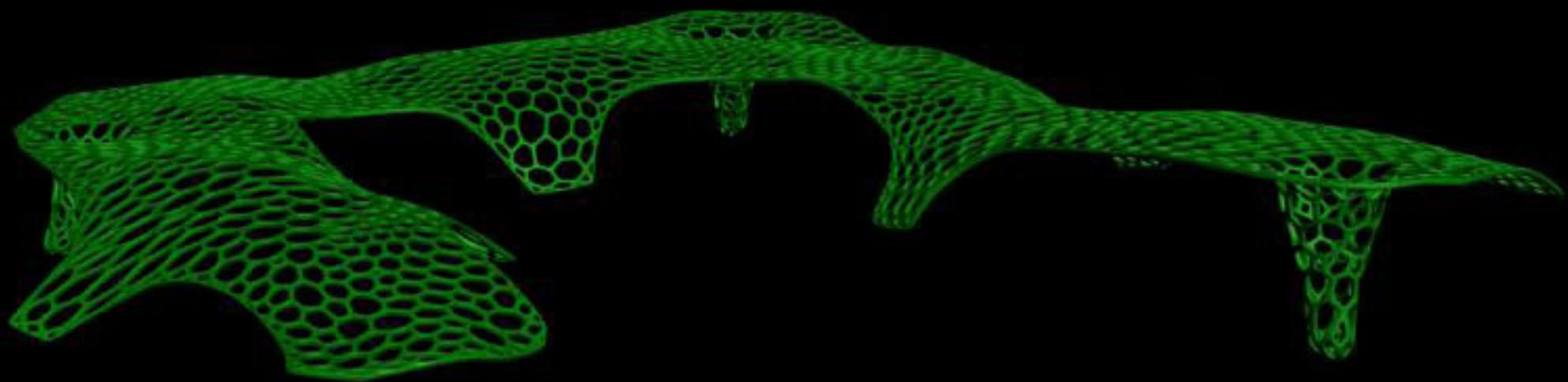
PLAN

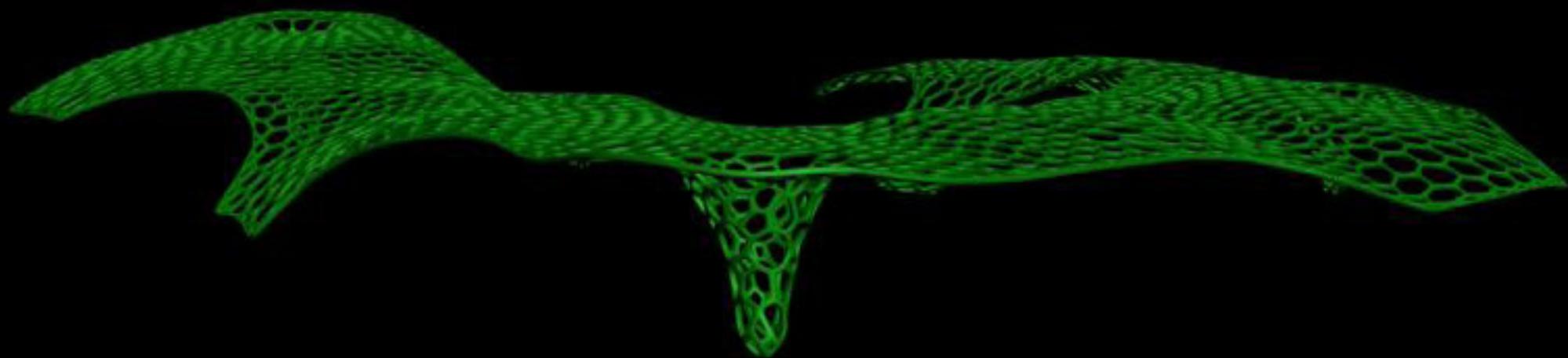


ELEVATION



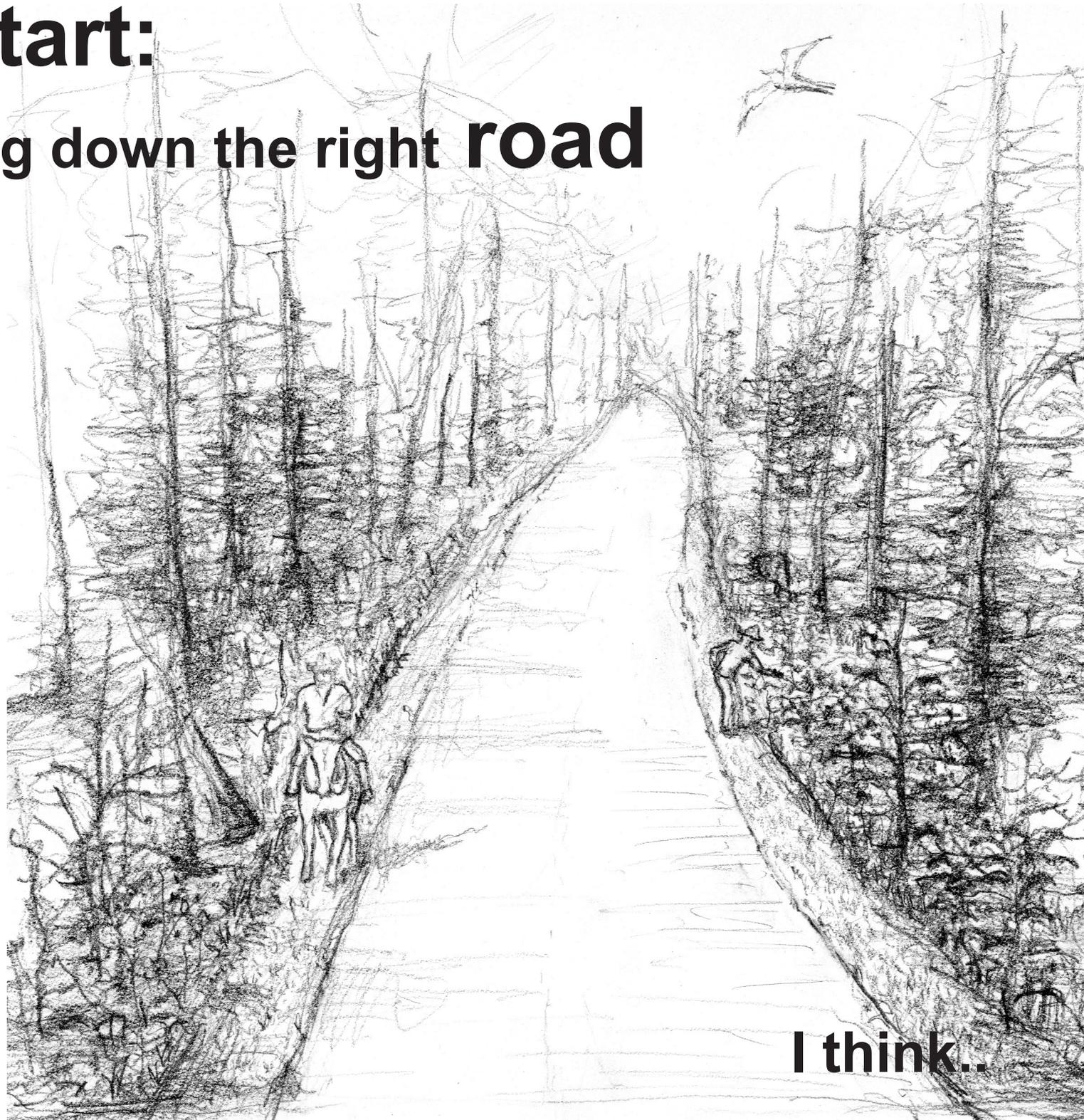






A fresh start:

Going down the right road



I think..

What kind of farm is this?

Grass farm

- An effort to capture the nutrients produced by the animal and put it back to feed the soil that would then more effectively capture solar energy and produce biomass in the form of grass.
- Farmers who succeed as grass-based livestock producers and as organic growers market directly to people who care about where their food was produced, how it was produced, and who produced it. These farmers build relationships of trust, integrity, honesty, and dependability with their customers.
- The animals grow in a very intricate symbiotic system, such that every animal is contributing to an eco-system service
- Small farmers need research and technology that will enhance their human capacity to manage things – to understand, to think, to learn to integrate things more effectively.
- Biodynamic farming regards an organic farm as a living system, as an organism whose health and productivity depends on healthy relationships among its ecological, social, economic, and spiritual dimensions. “A farm is healthy only as much as it becomes an organism in itself – an individualized, diverse ecosystem guided by the farmer, standing in living interaction with the larger ecological, social, economic, and spiritual realities of which it is part” – Rudolph Steiner
- This natural model heals the land, thickens the forage, reduces weeds, stimulates earthworms, reduces pathogens, and increases nutritional qualities in the meat.

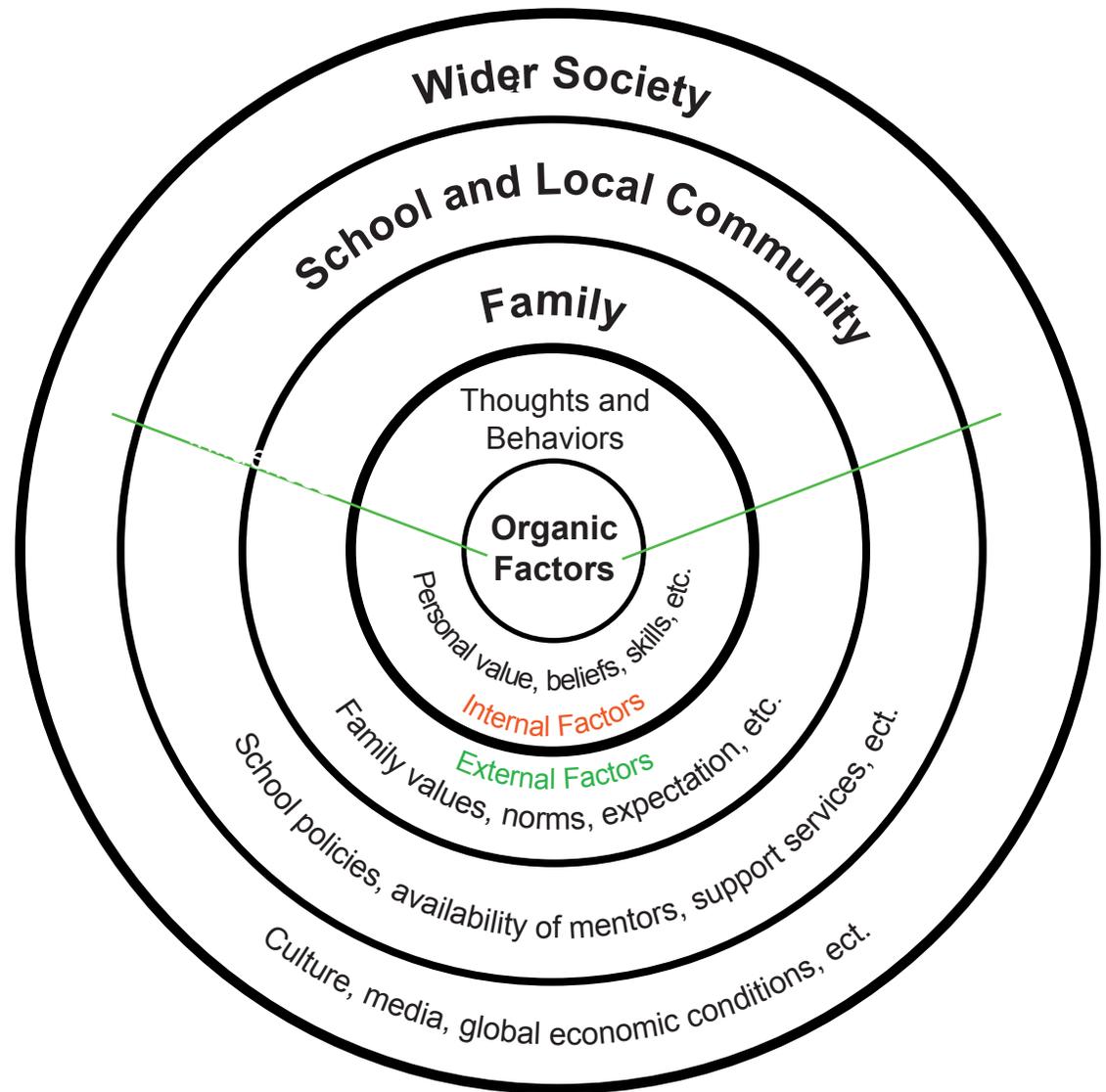
Compared farming practices

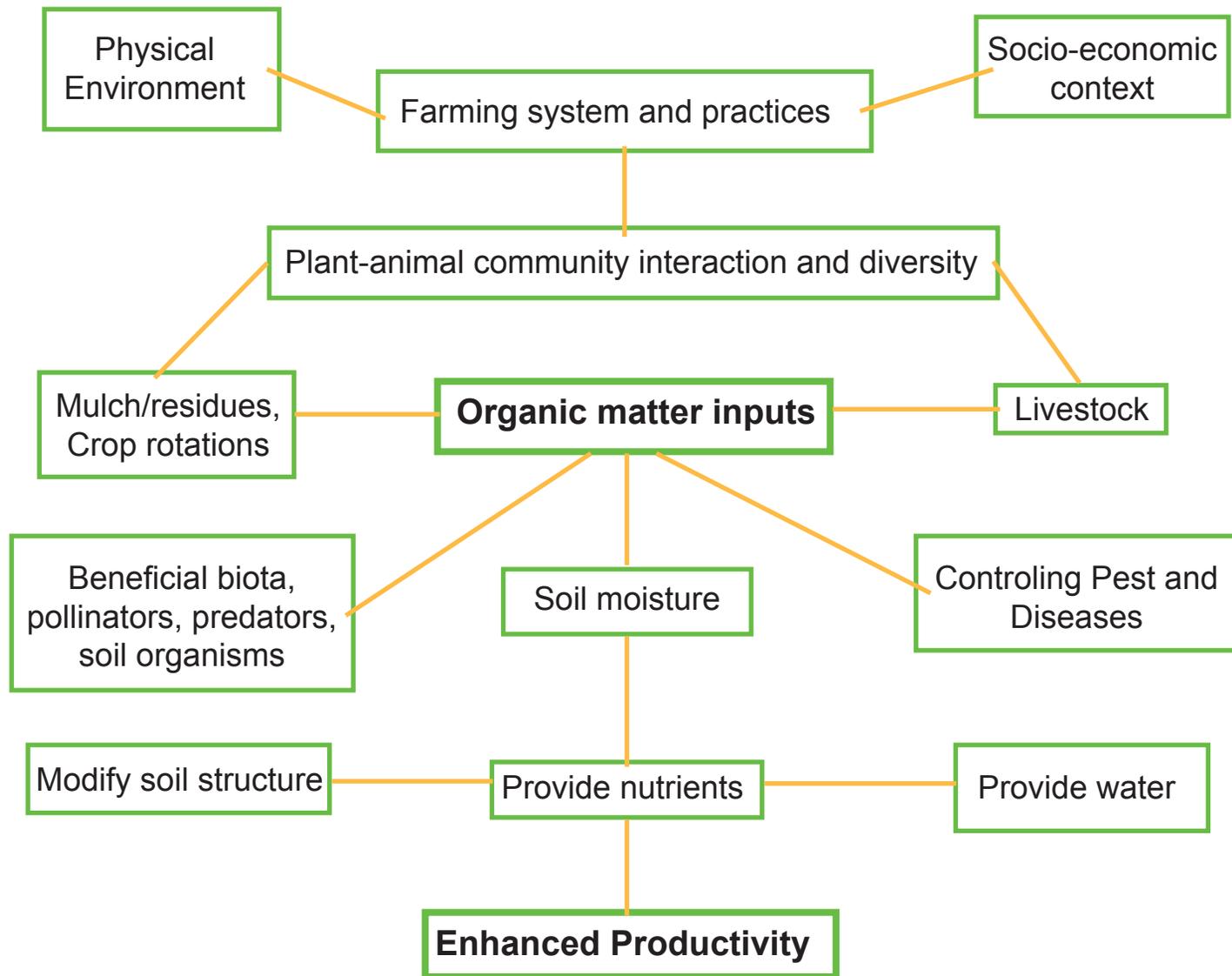
Industrial Farming

Industrial
Annual species
Monoculture
Fossil energy
Global market
Specialized
Mechanical
Imported fertility

Sustainable Farming

Pastoral
Perennial species
Polyculture
Solar energy
Local market
Diversified
Biological
Local fertility





Examples of animals and nature working together:

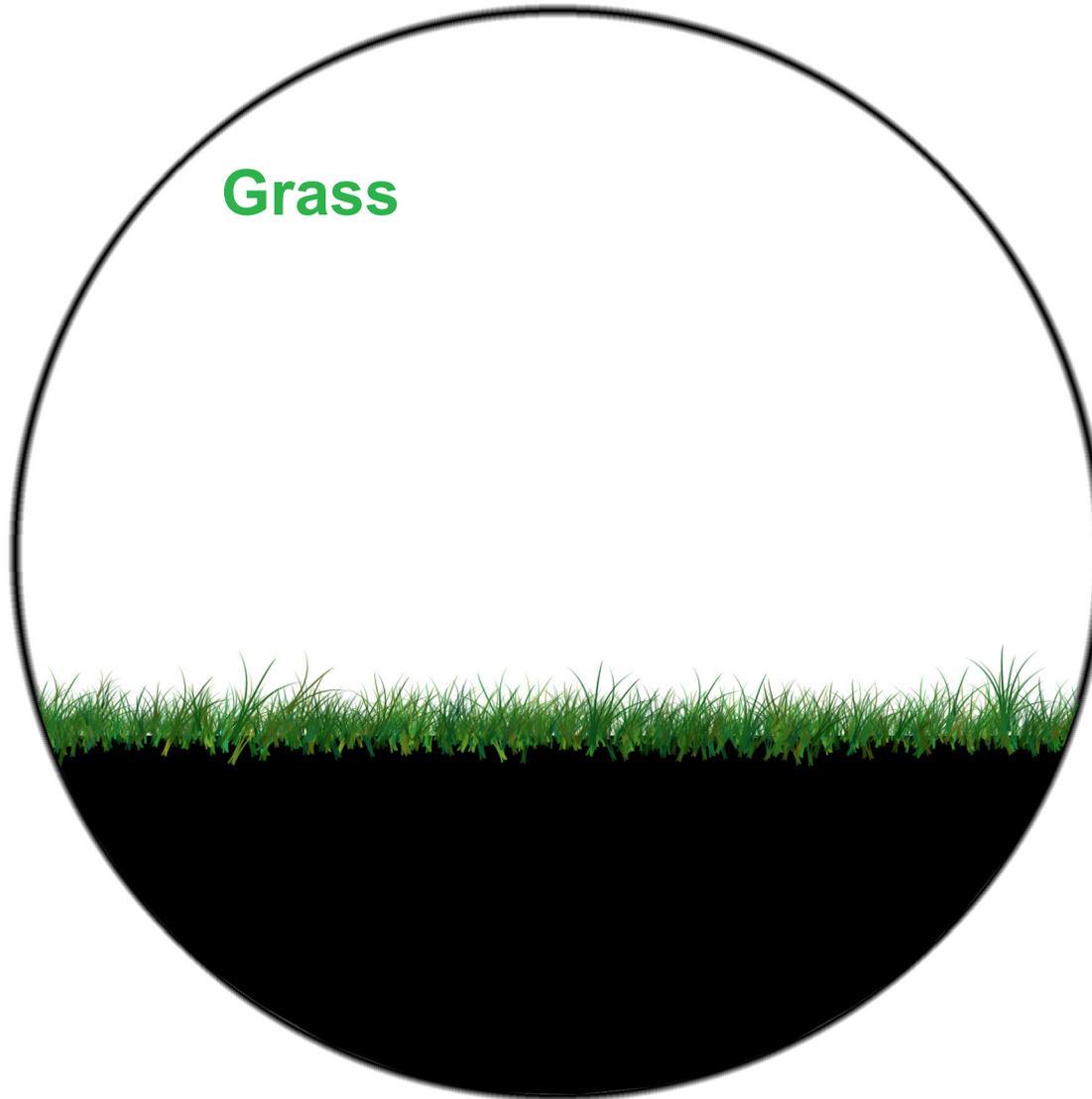
Cow + Hen



Mimicking the moving, mobbing, and mowing of herbivorous herds in nature



Portable electric fencing



Salad buffet beef

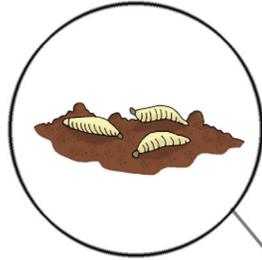
The salad buffet example – white clover, orchard grass, timothy, blue grass, red clover, ground ivy or violet, wide leaf plantain, dandelion, narrow leaf, queen annes lace grass.

Grass + Cow

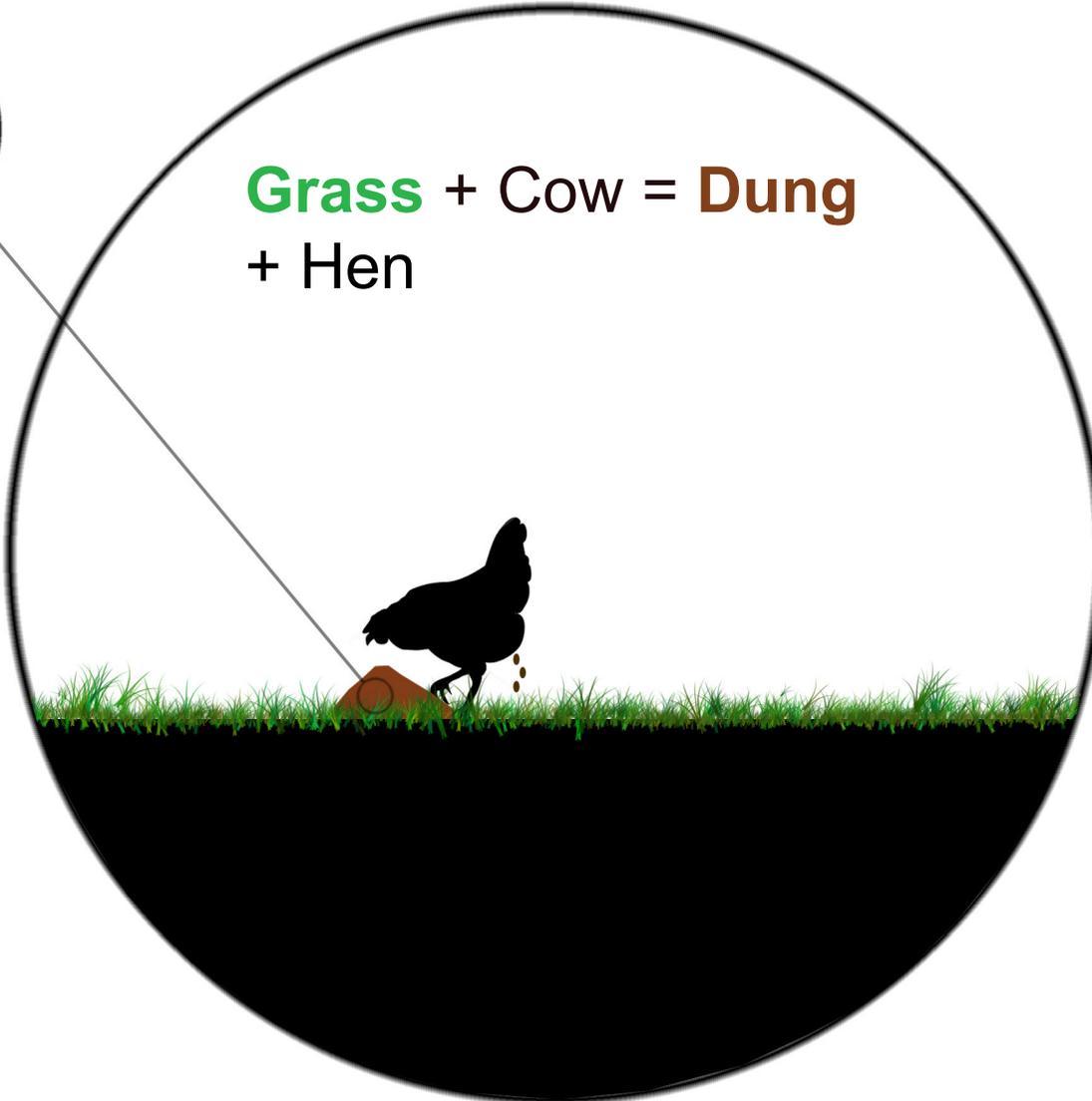


Grass + Cow = **Dung**

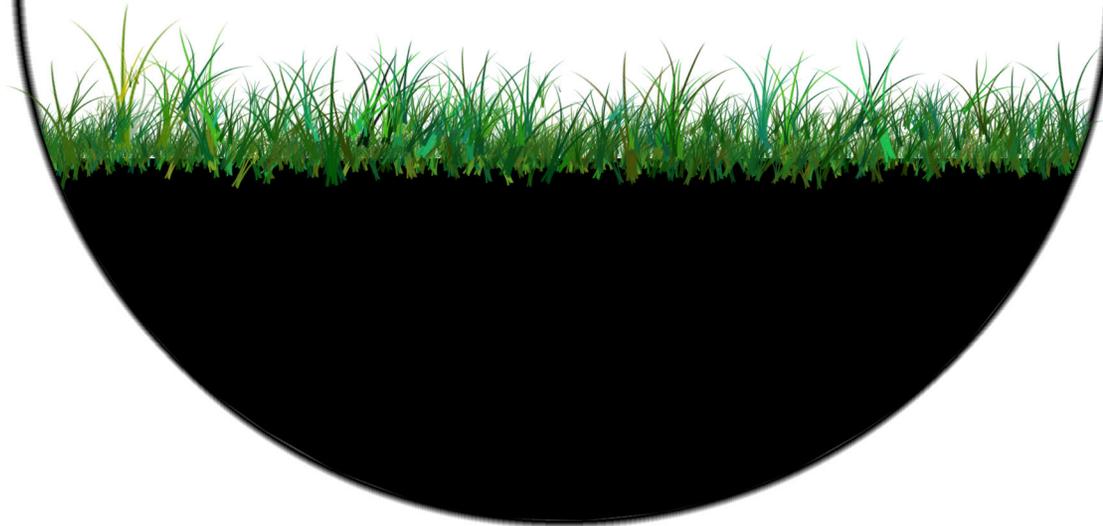




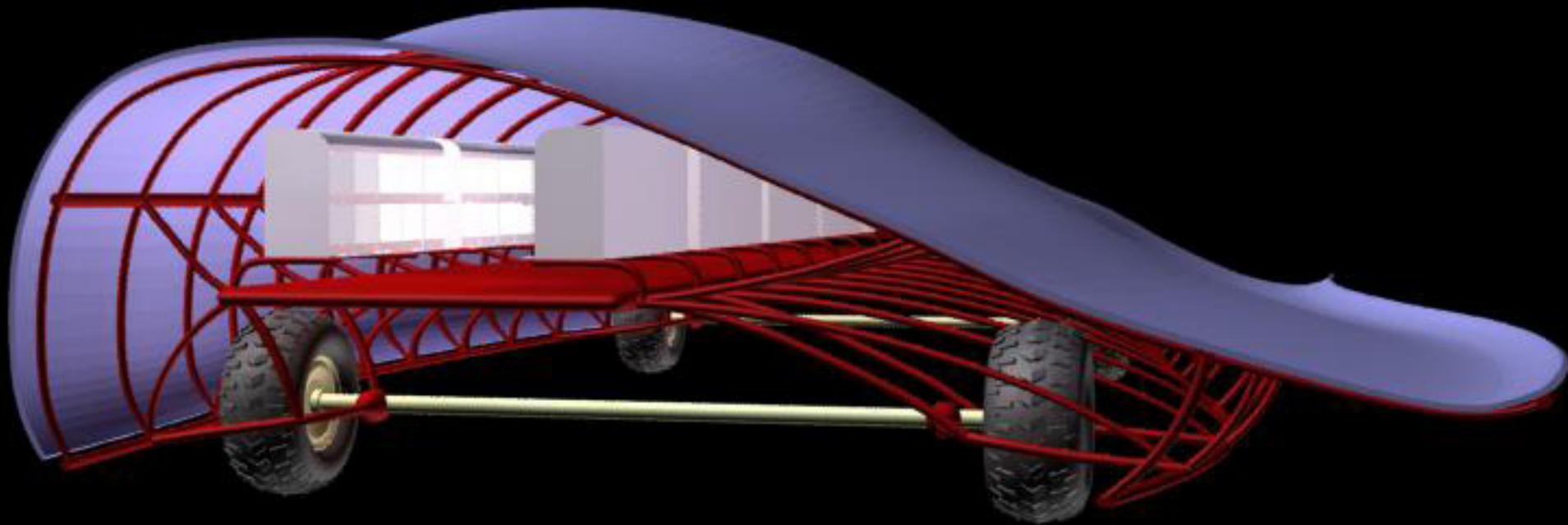
Grass + Cow = **Dung**
+ Hen

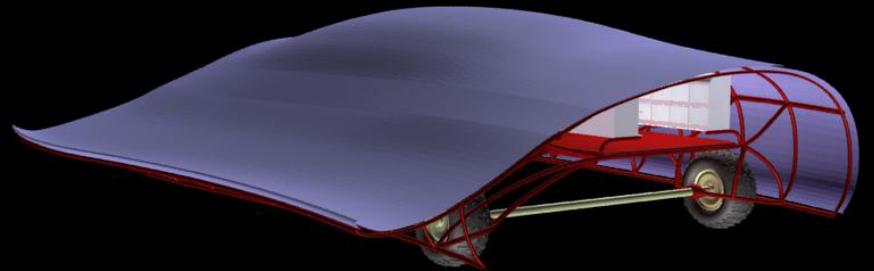
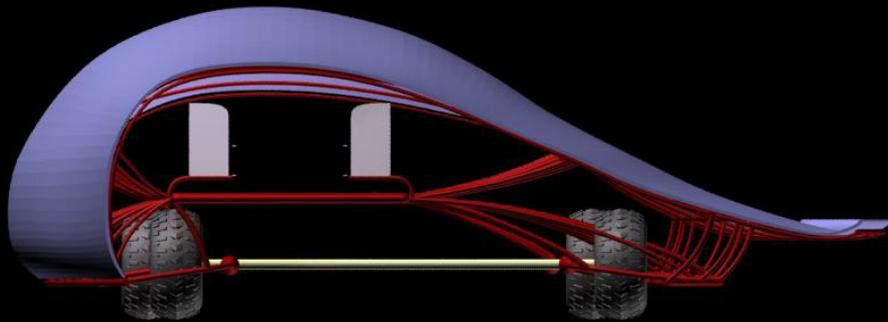
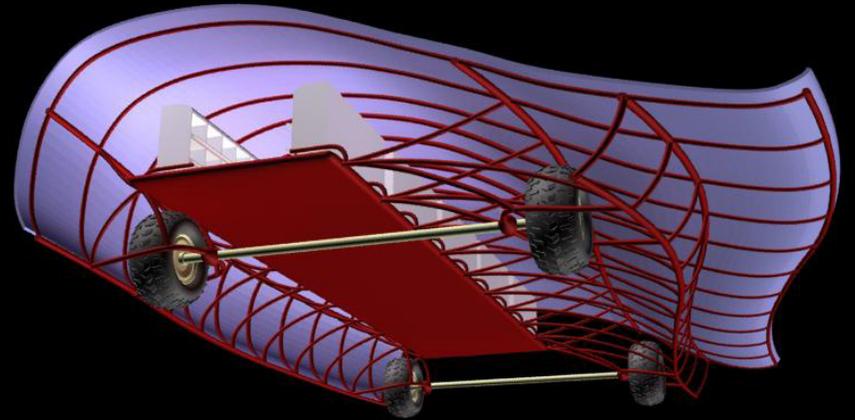
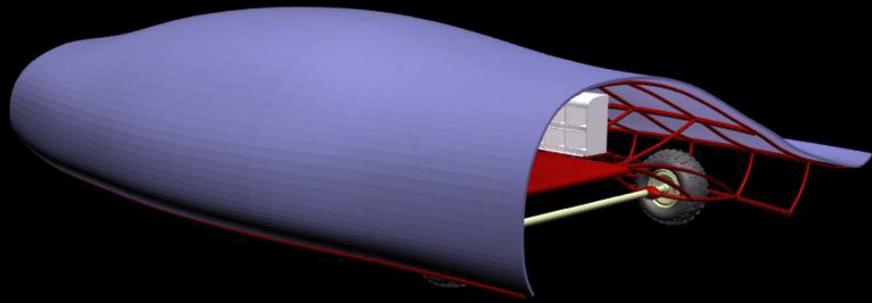


Grass + Cow = **Dung**
+ Hen = more **Grass**

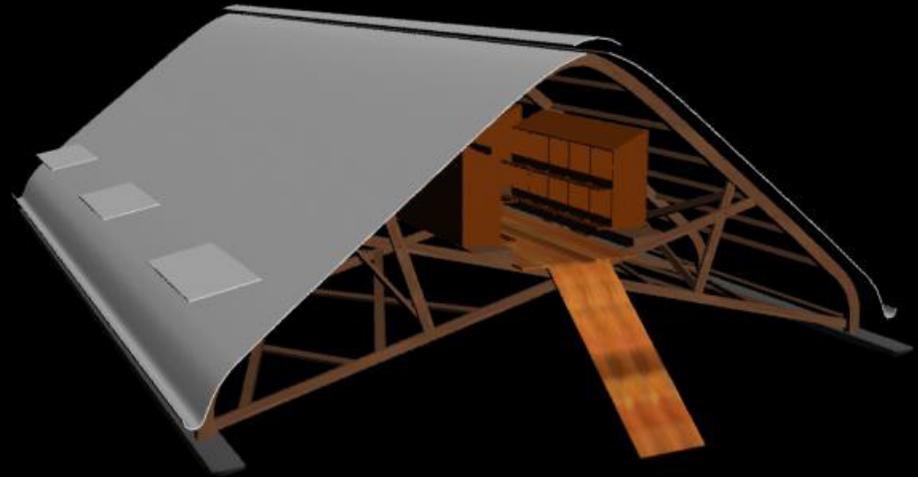
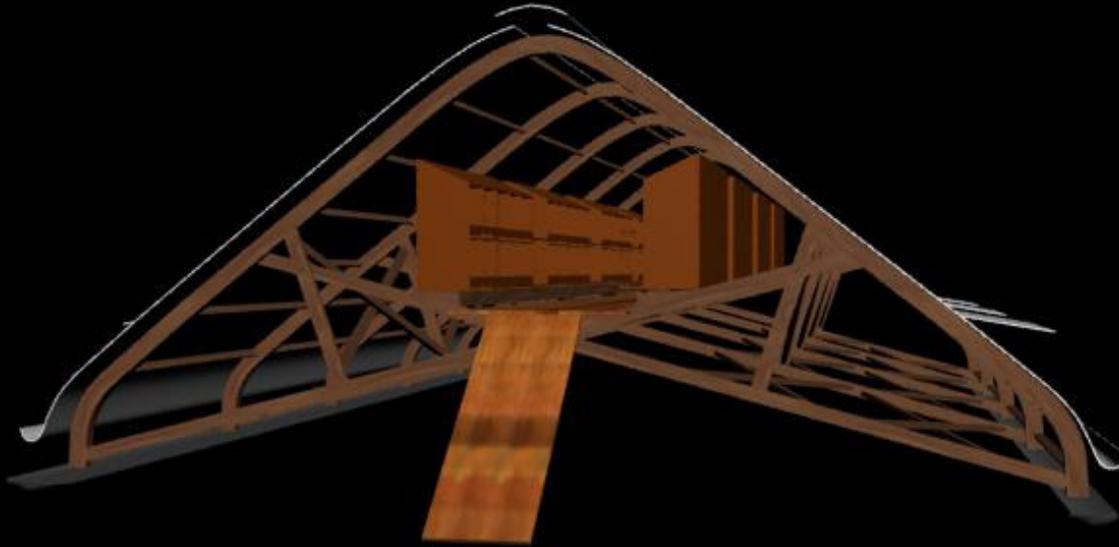


Chickmobile

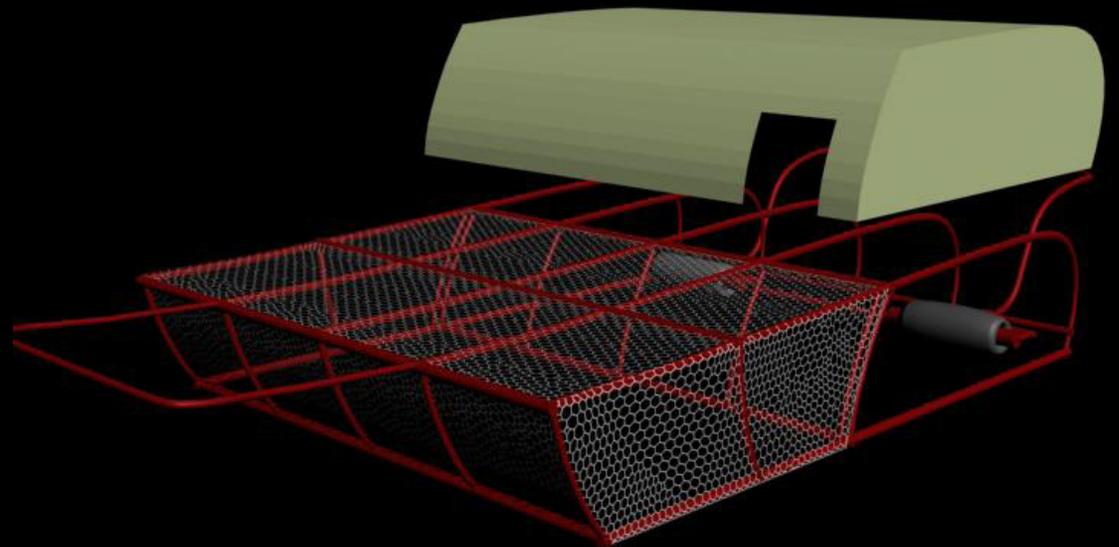
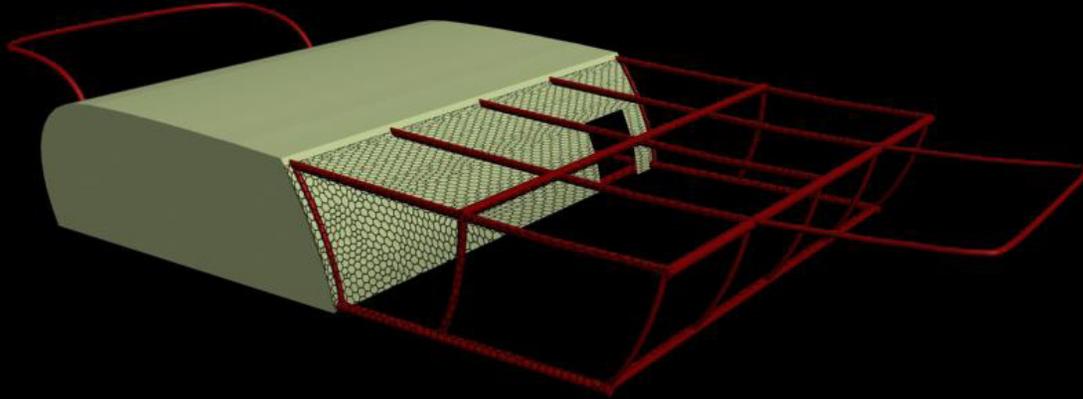




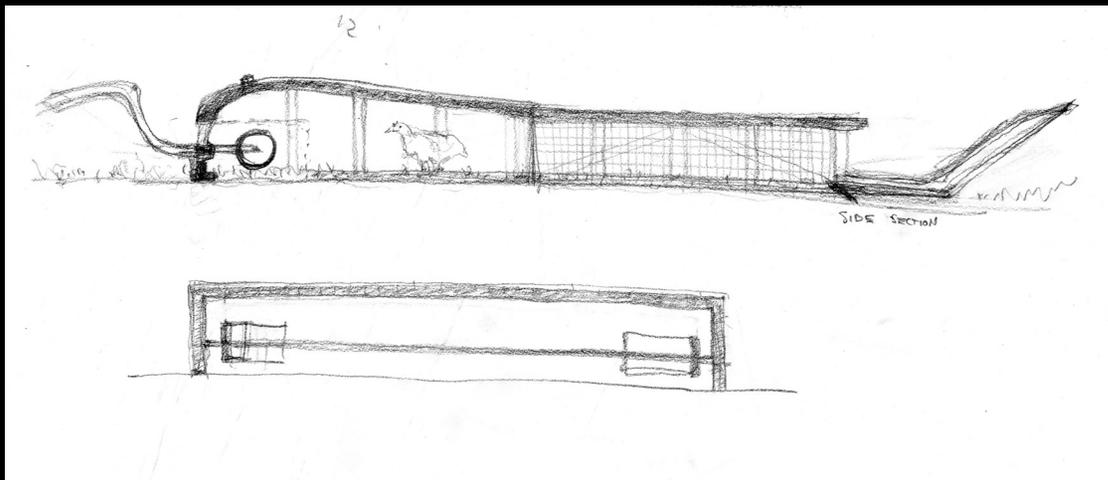
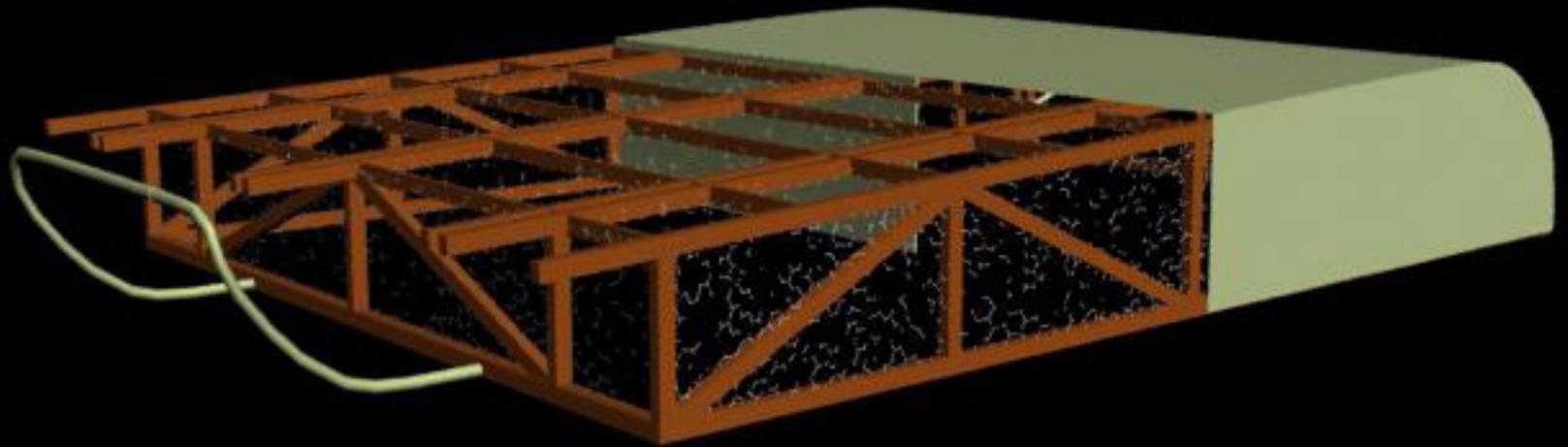
Conventional Chickmobile



Broilermobile



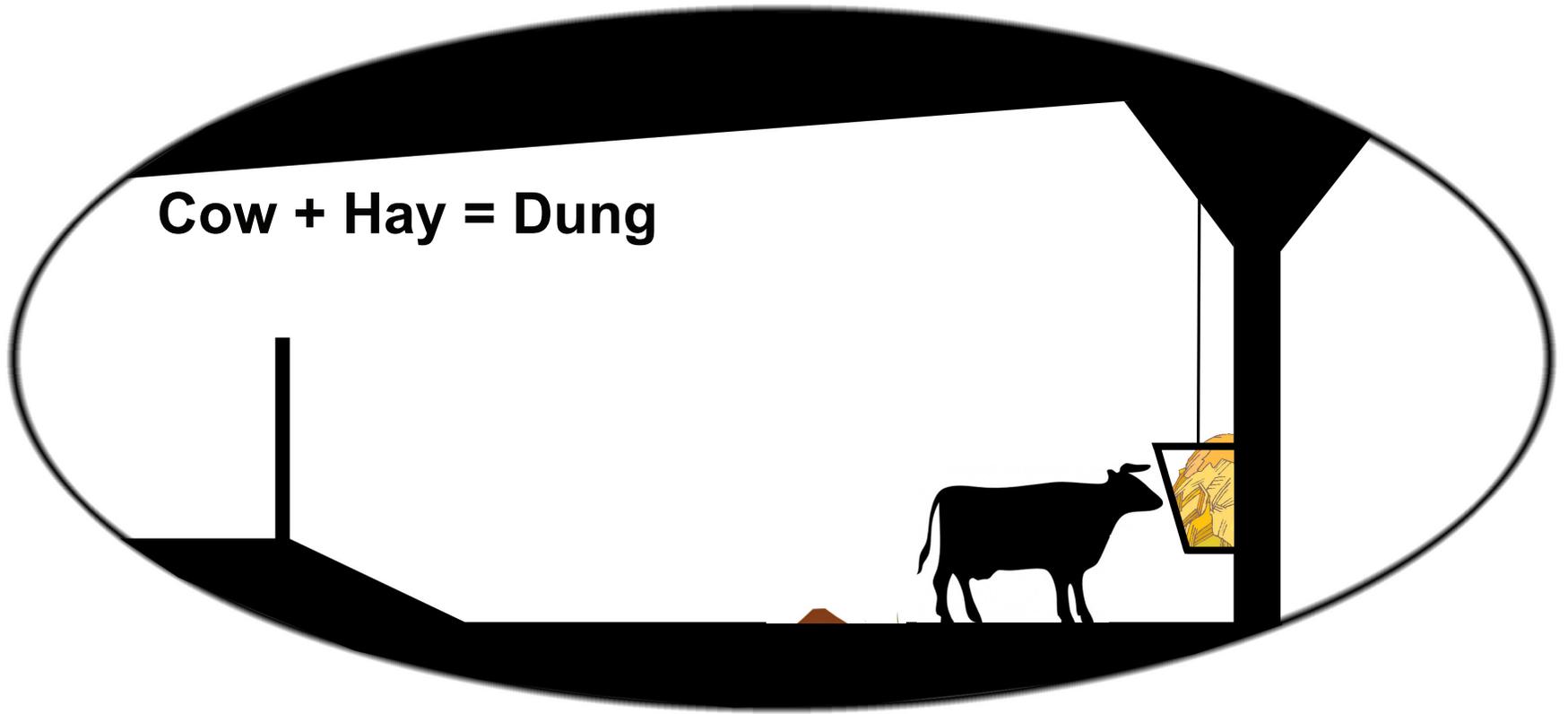
Conventional Broilermobile



Shademobile

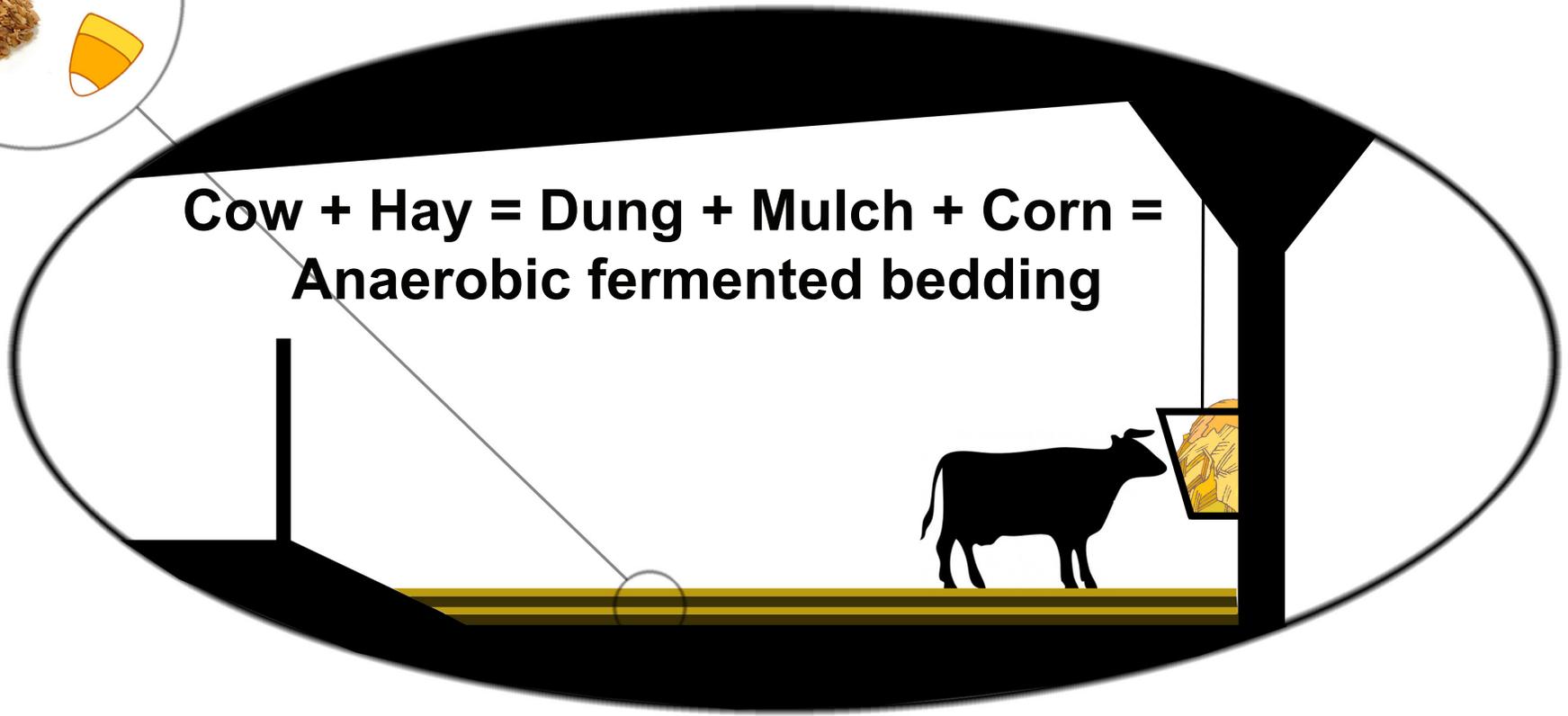
Cow + Pig

Cow + Hay = Dung





**Cow + Hay = Dung + Mulch + Corn =
Anaerobic fermented bedding**



**Pig + Anaerobic fermented bedding =
Fresh aerobic compost = More
Grass**



Other examples of animals and nature working together:

forest + pigs
rabbits + hens
Turkey + garden



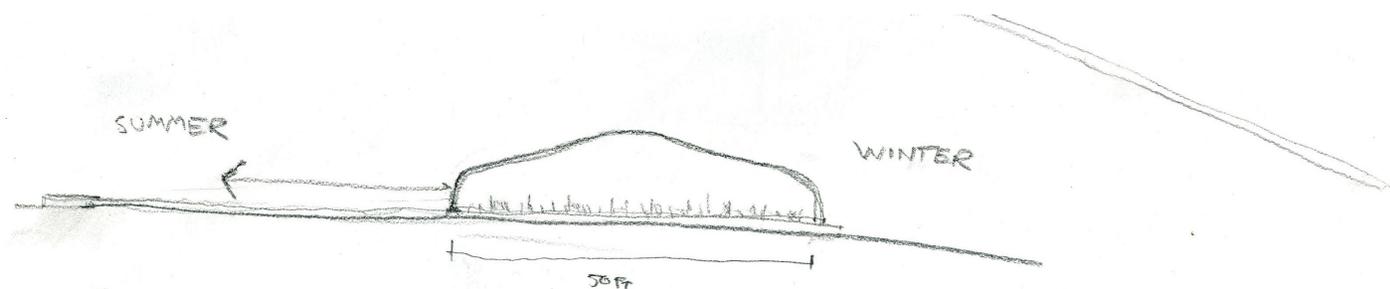
The ponds

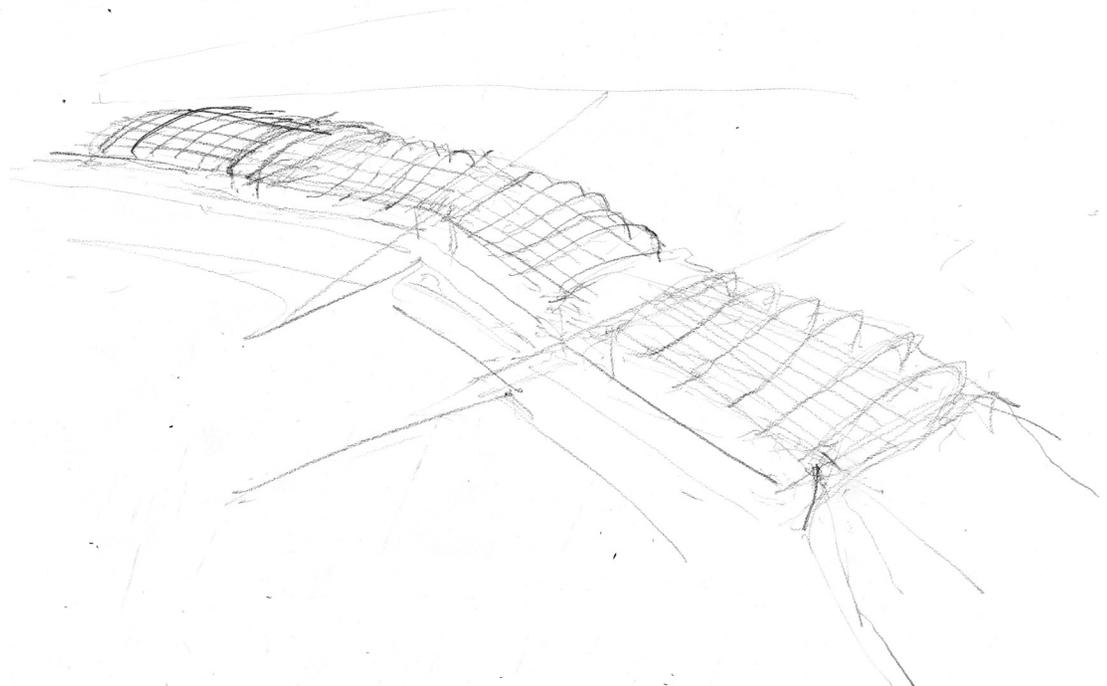
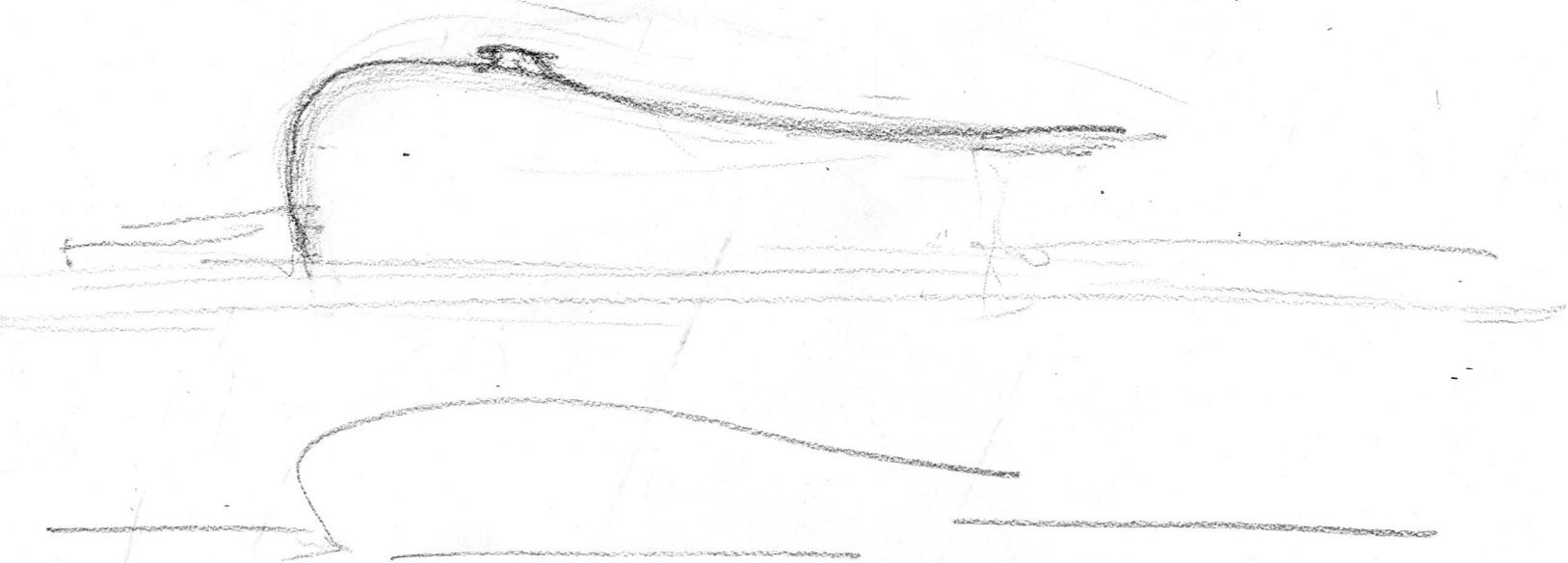
- Gravity feed water systems for the animals and farm.
- The aquatic environment fosters biodiversity.
- The greater the variety of plants and animals the greater the stability.
- Ponds encourage frogs and toads which are great insect predators.
- Birds that eat bugs are drawn to the ponds.
- Cattails and other hydrological plants filter out toxins from surface runoffs.
- Cooler in the summer and warmer in the winter. Water protection.

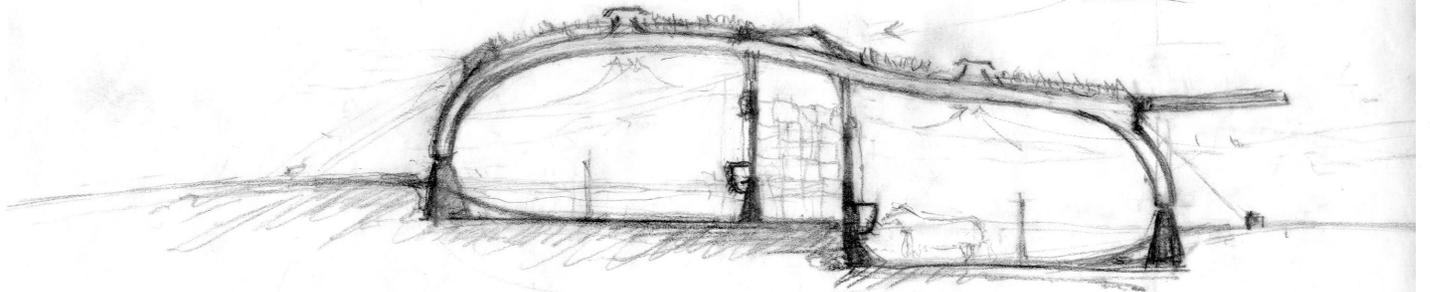
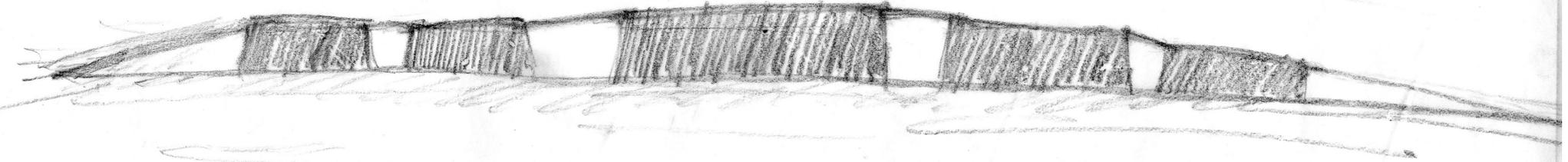
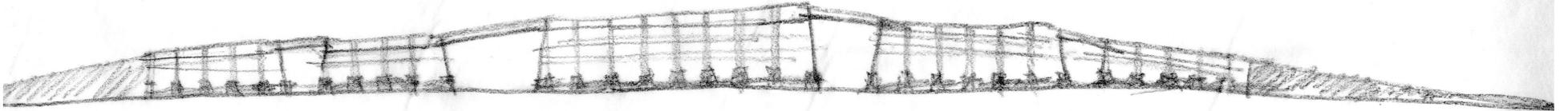
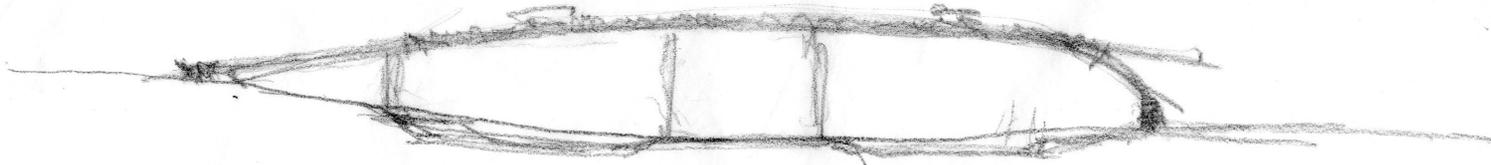


The Garden (four seasons)

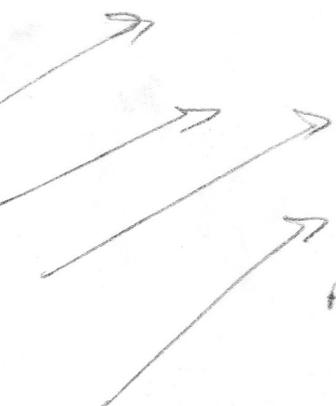
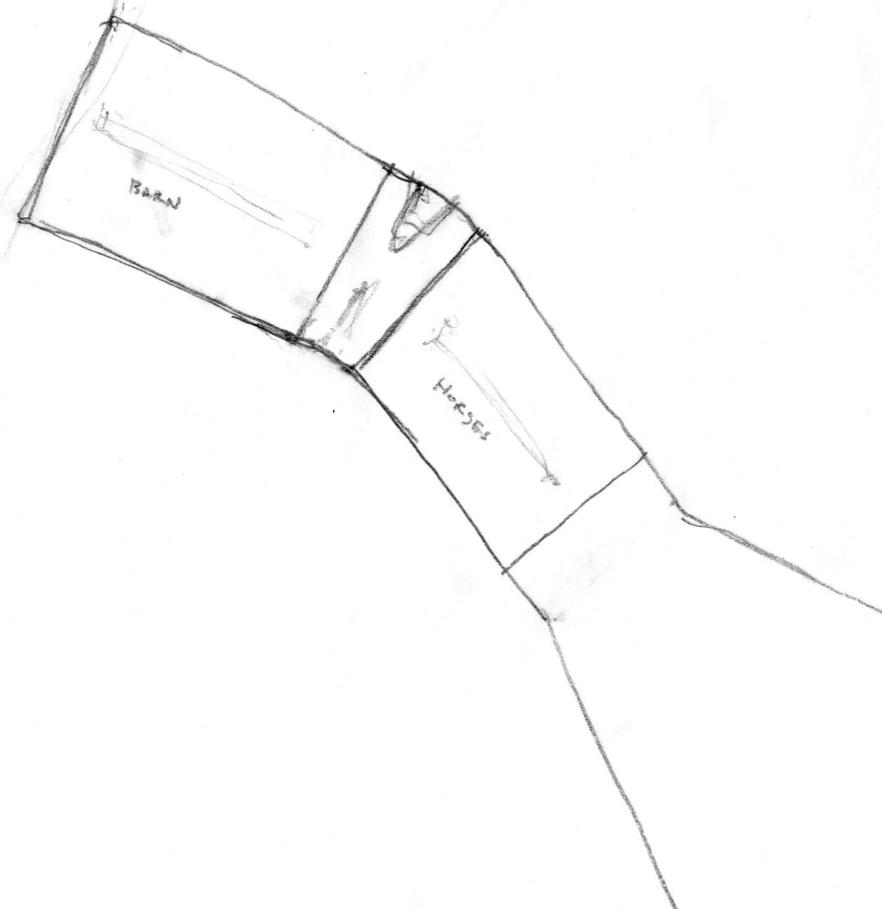
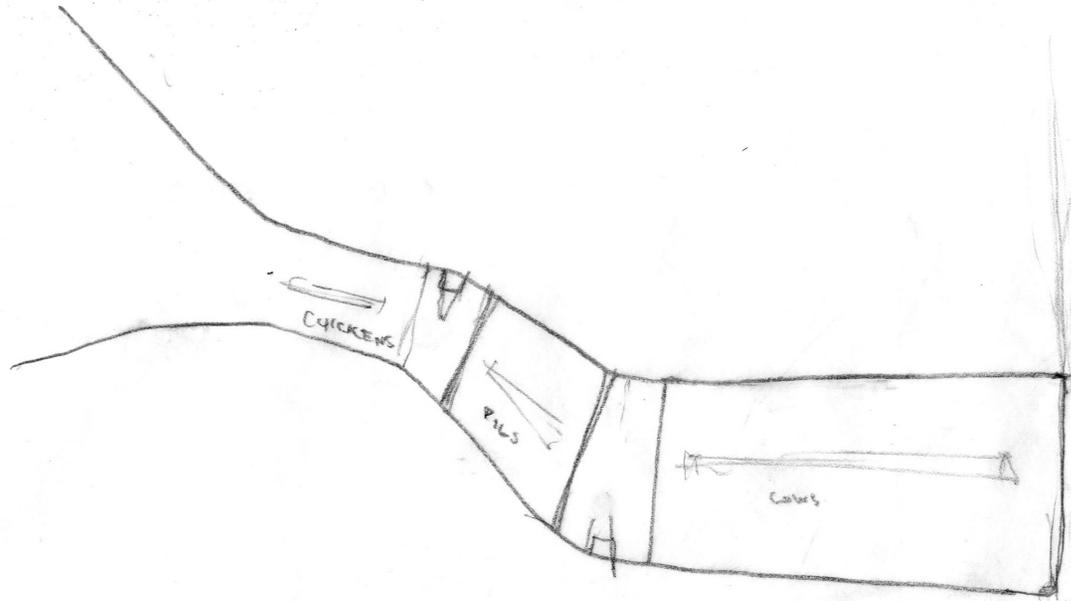
- Planting starts in August and throughout the fall so that salad greens and root crops can grow tall enough before the “big stunt” arrives – During the deep winter interim, the crops remain fresh in the ground, they’re just no longer adding bulk.
- Chill resistant varieties for winter harvest survival are spinach, chard, carrots, sorrel, turnip, kale, and scallions, arugula, claytonia, minutina, tatsoi, mache.
- For cold protection – cover the crops with remay cloth when necessary. Remy cloth is a white, gauzy synthetic fabric. It will be draped over custom made wickets about 6 inches above the beds.
- The combined plastic and fabric climate modifications provide a low-cost input passage to an entirely new way of farming. This climate modification will create growing conditions similar to coastal Georgia.
- It’s configured on tracks and hitched to a tractor and moved like a giant sled to cover an adjacent field. That way a field that was planted in late summer can get its start outside and later be protected for winter production. In the meantime heat-loving crops can be grown in the greenhouse throughout the summer, and the uncovered plots can be kept in rotation with nutrient-fixing crops.





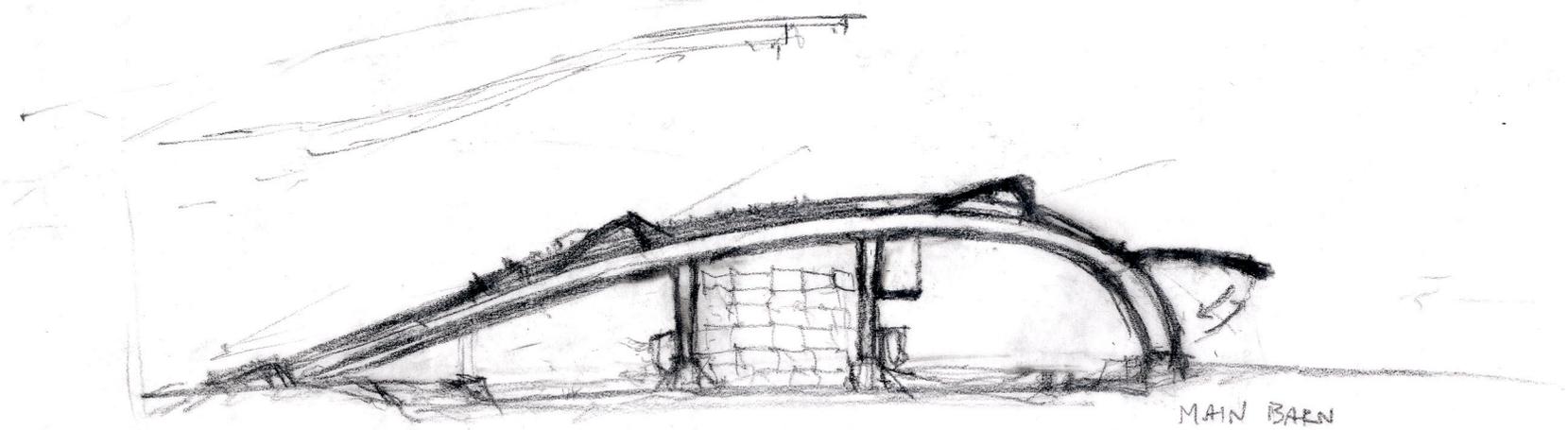
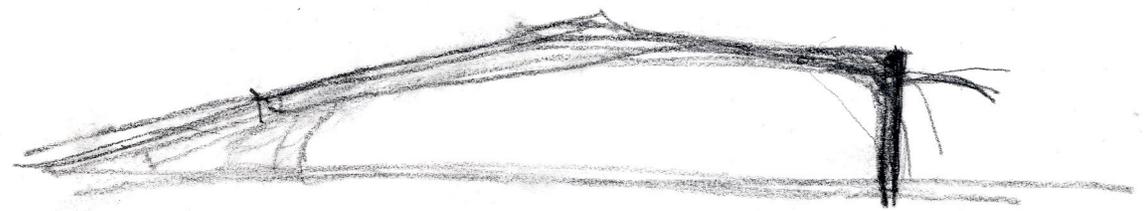
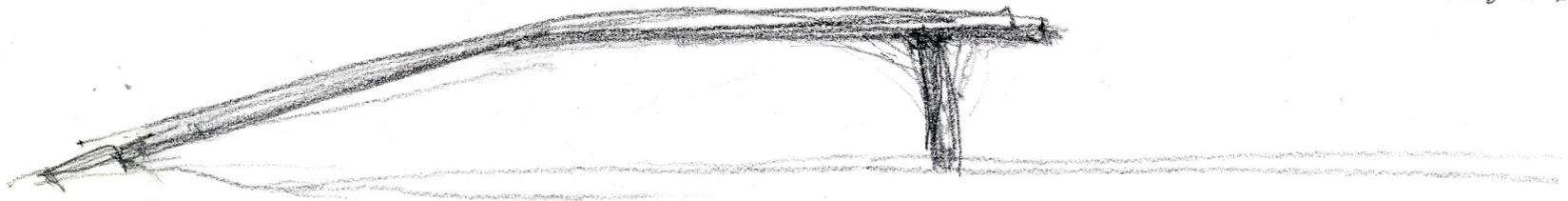


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PREVAILING WINDS

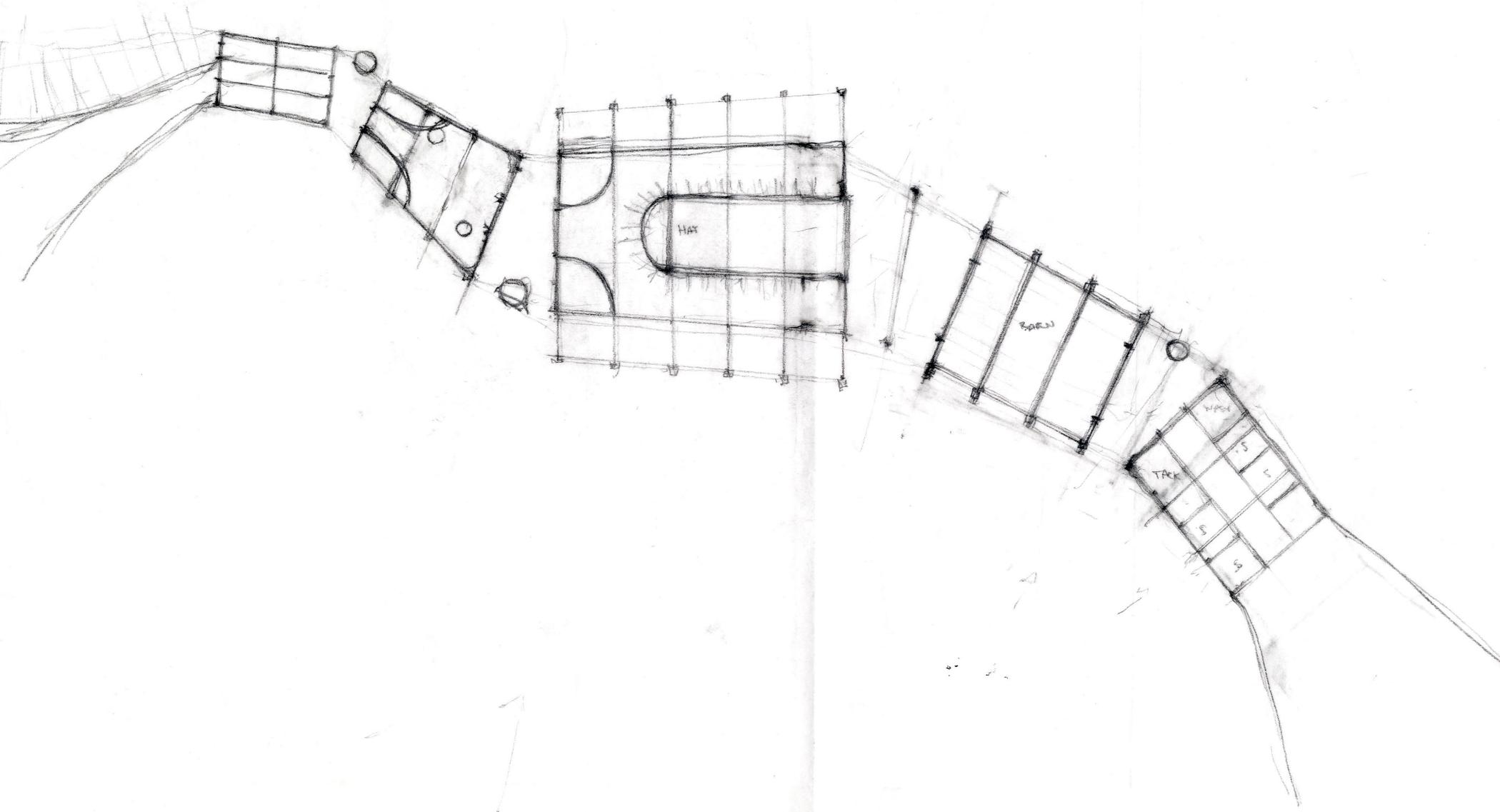
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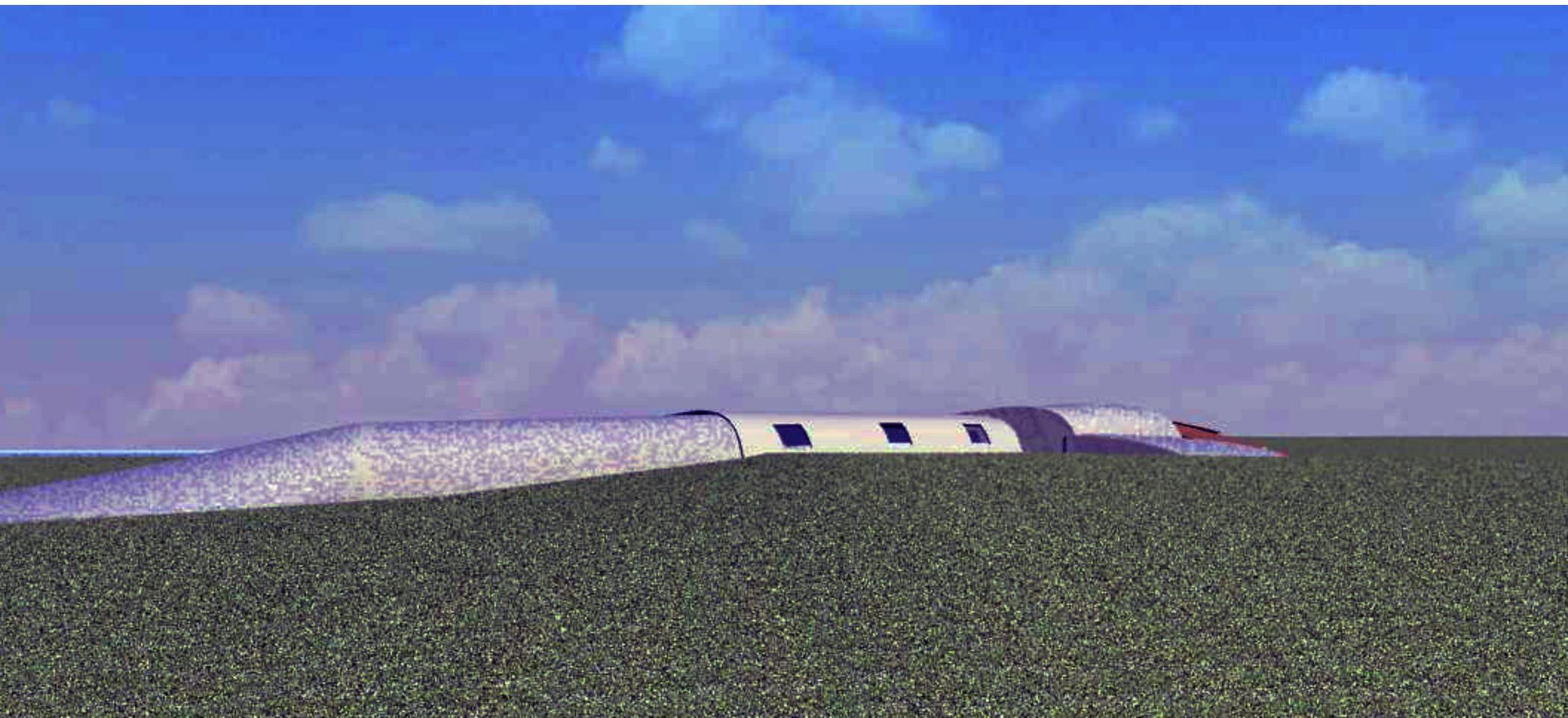


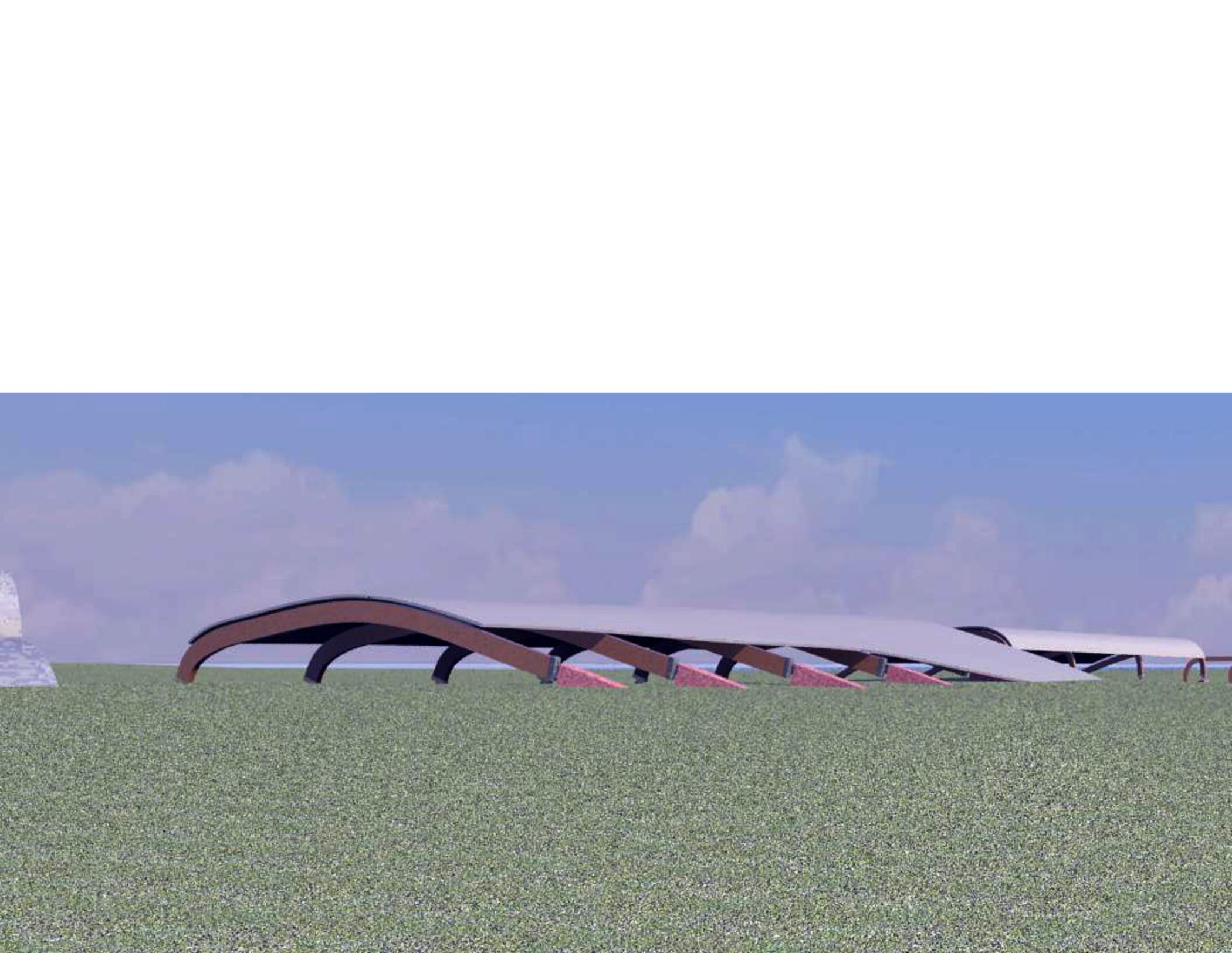
MAIN BARN

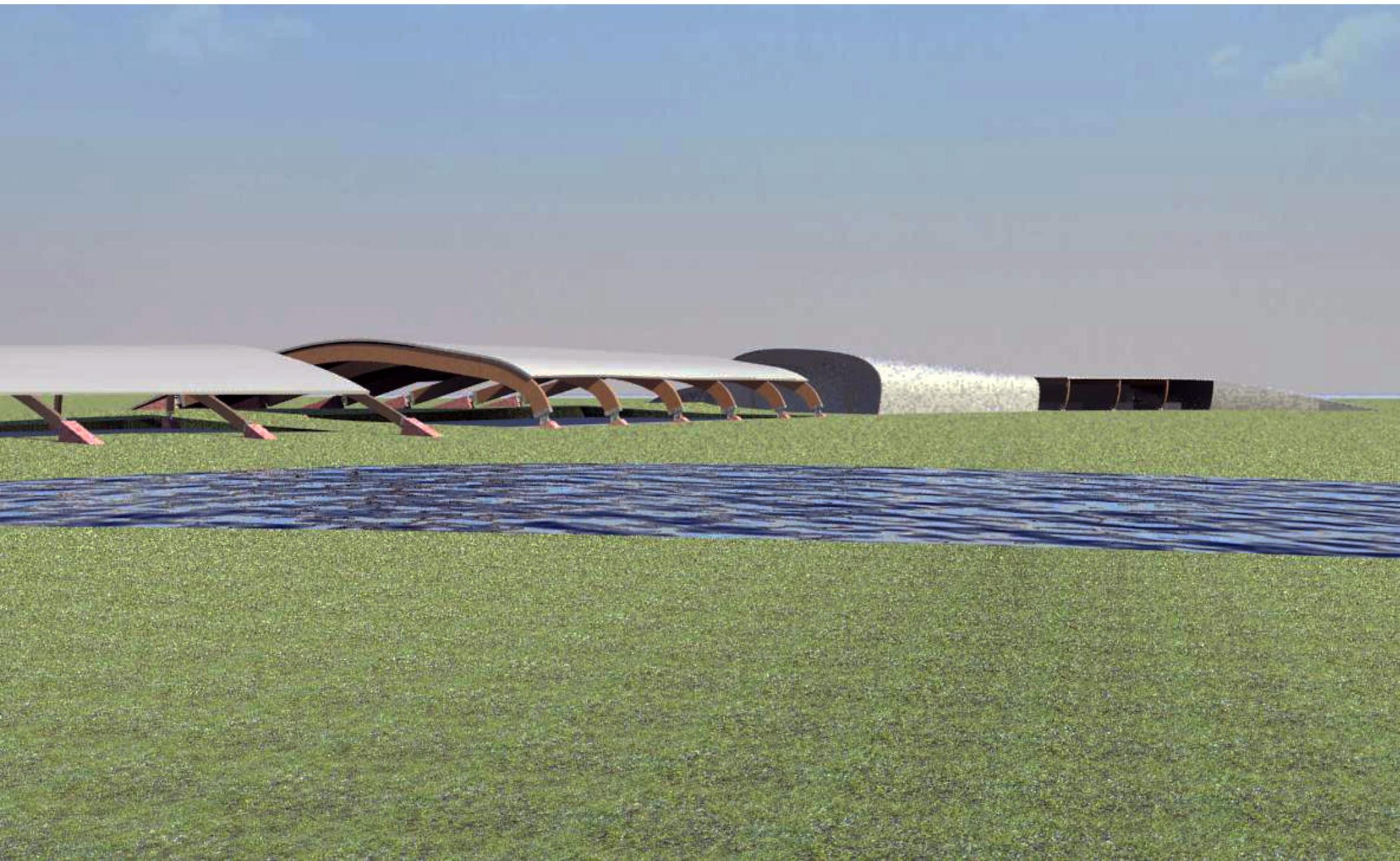
Finish Journal

N



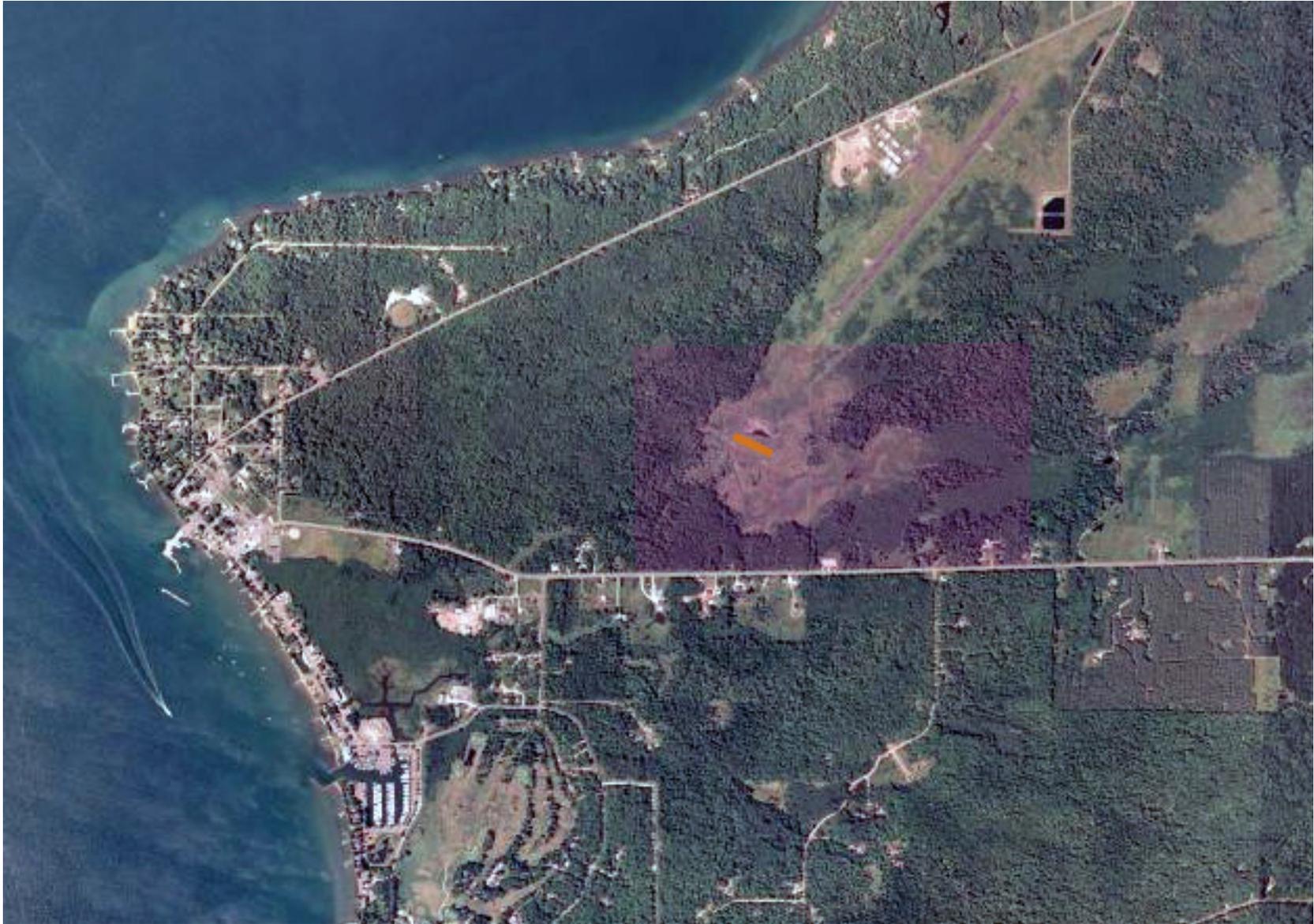




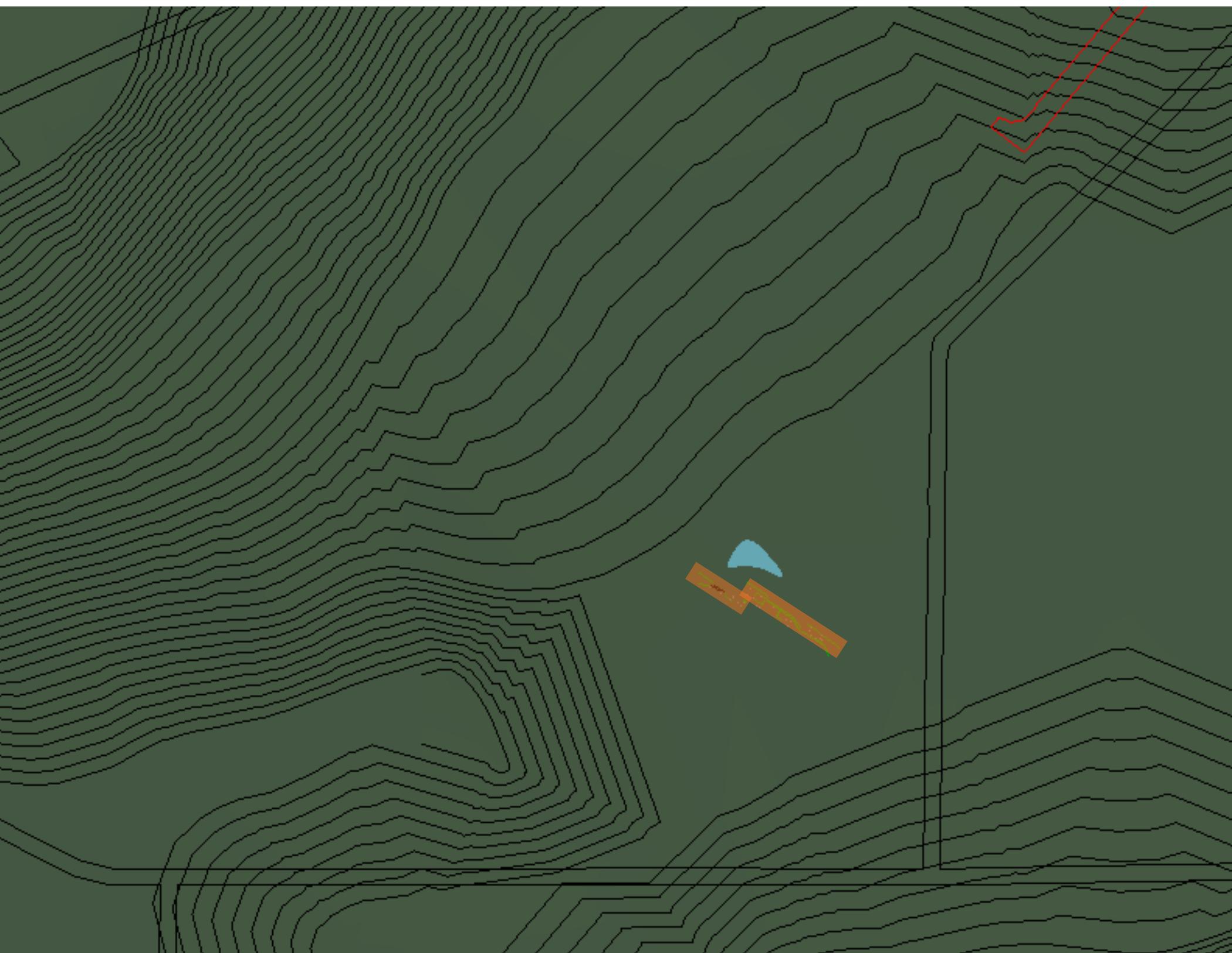


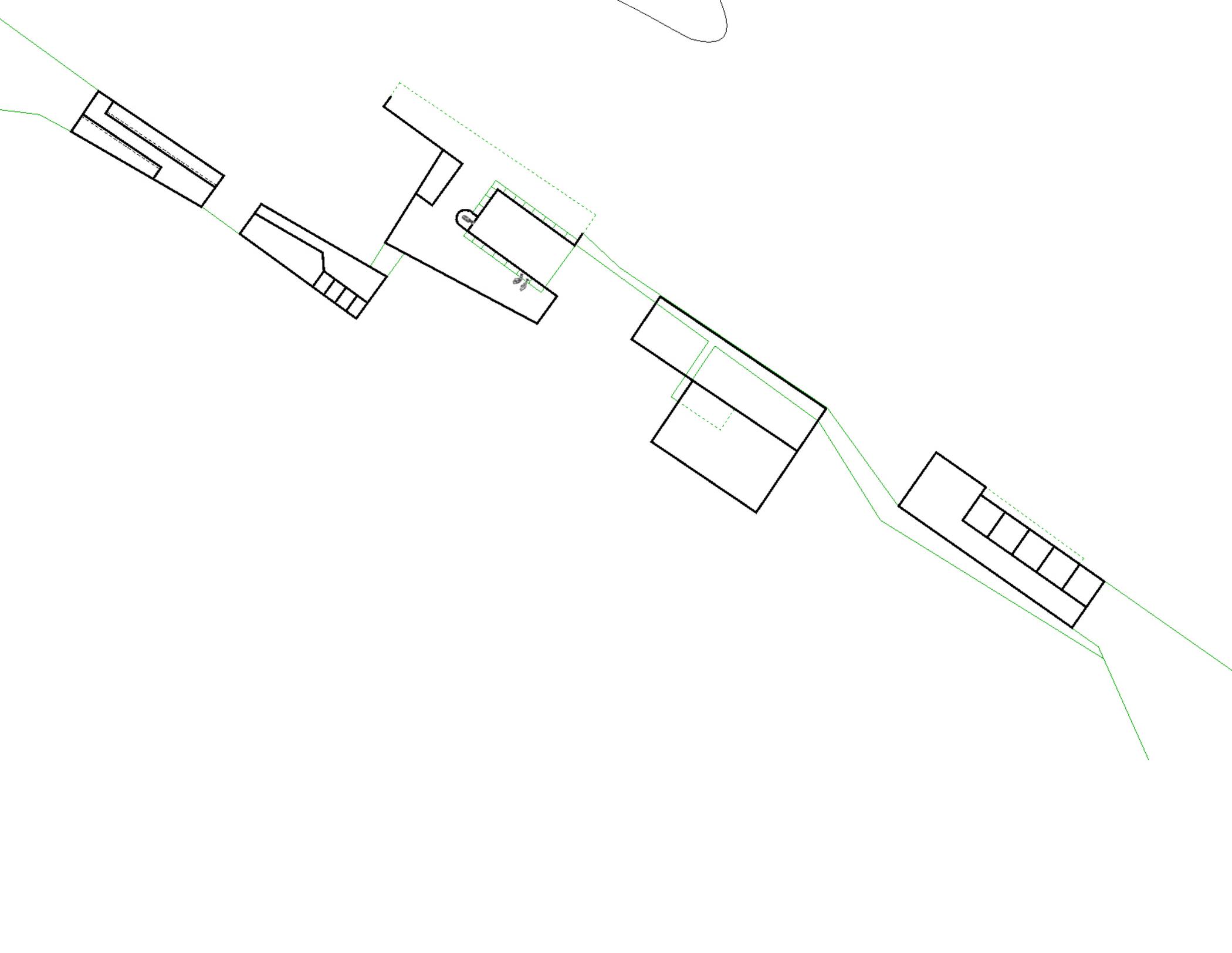
Grass!

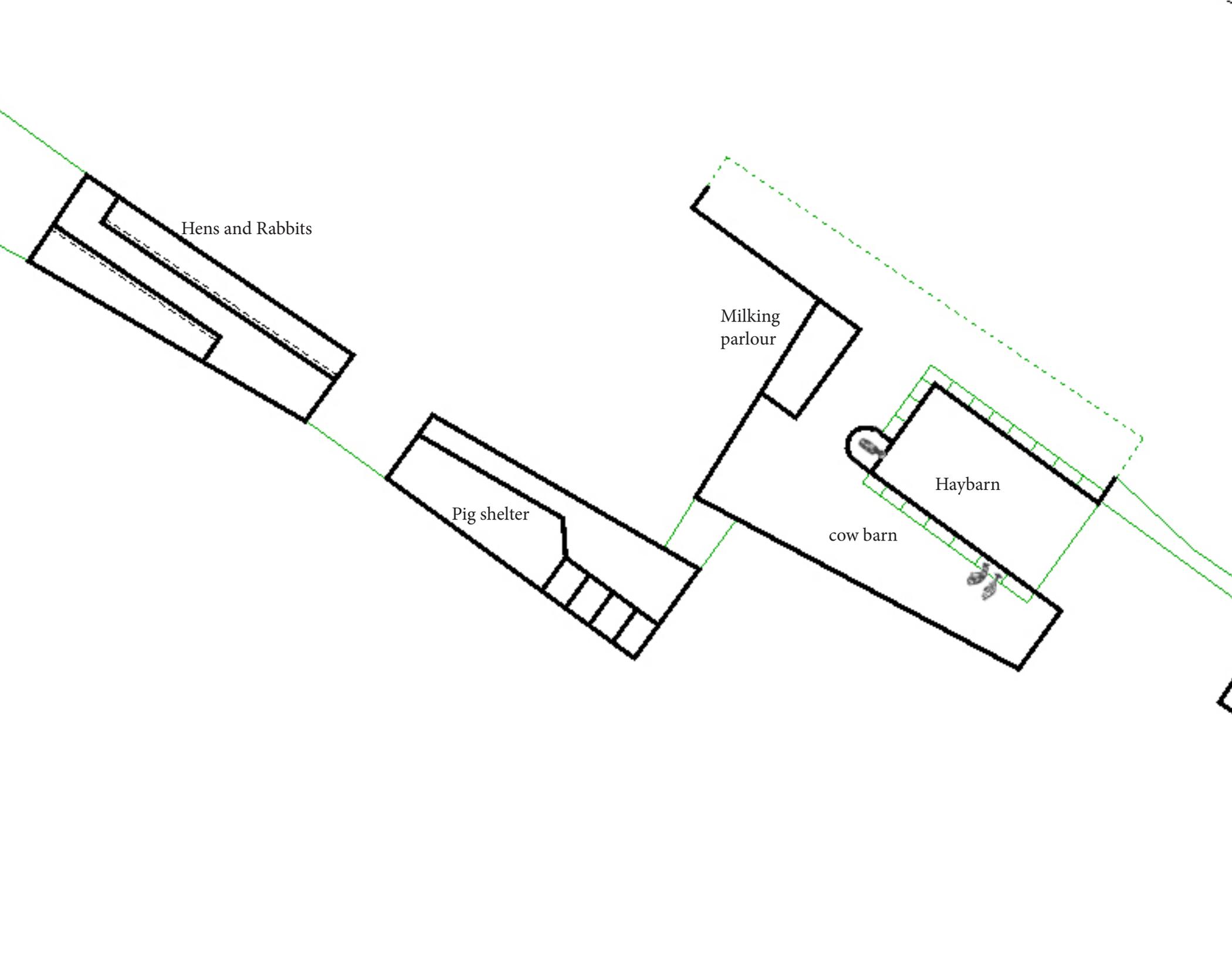


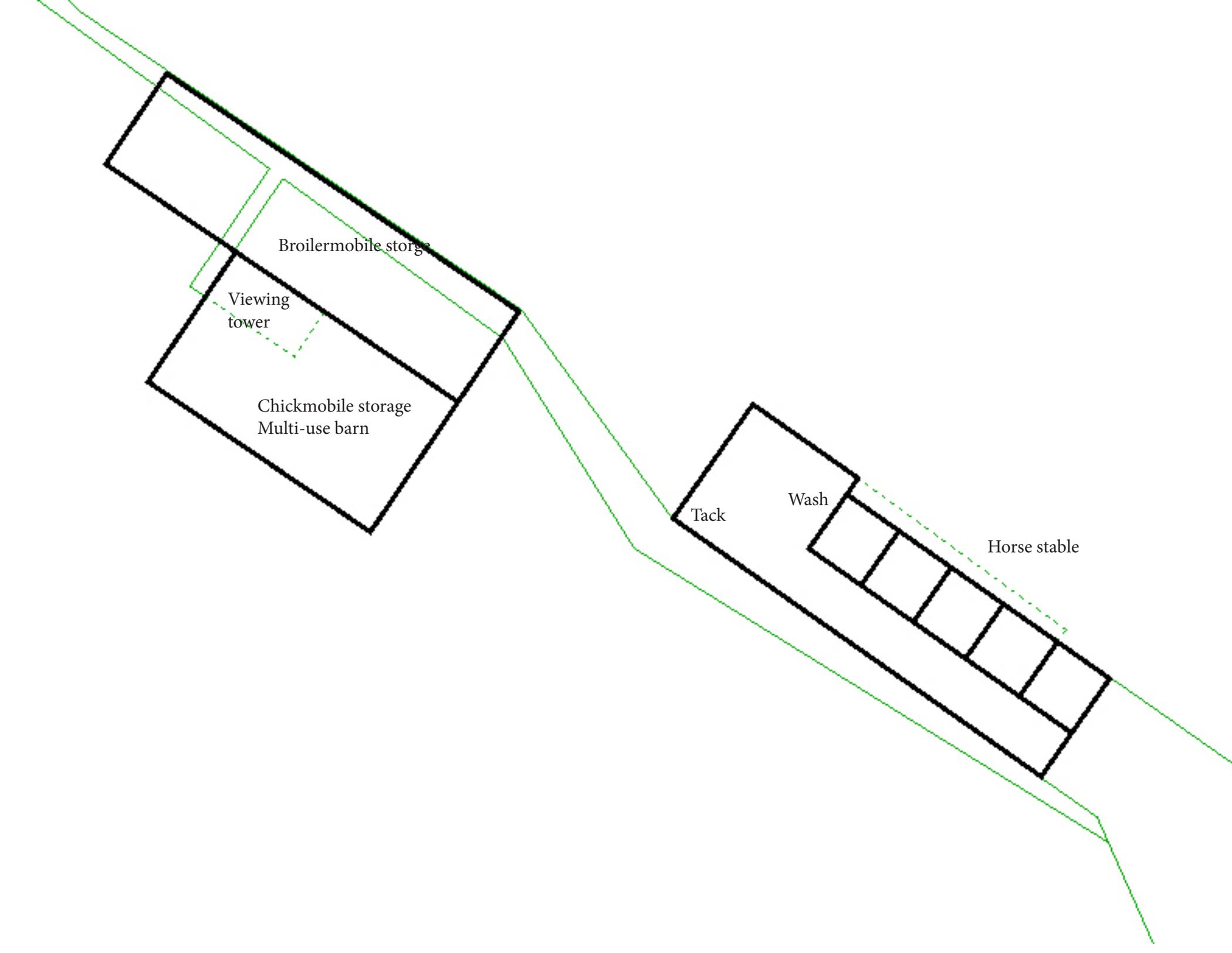


Locavore architecture









Each year

– 20,000 pounds of beef, 12,000 pounds pork, 1500 broilers, 300 turkeys, 300 rabbits, 17,000 dozen eggs.

....and the land will be better than it was before.

The end