

FLORIDA AGRI-BUSINESS

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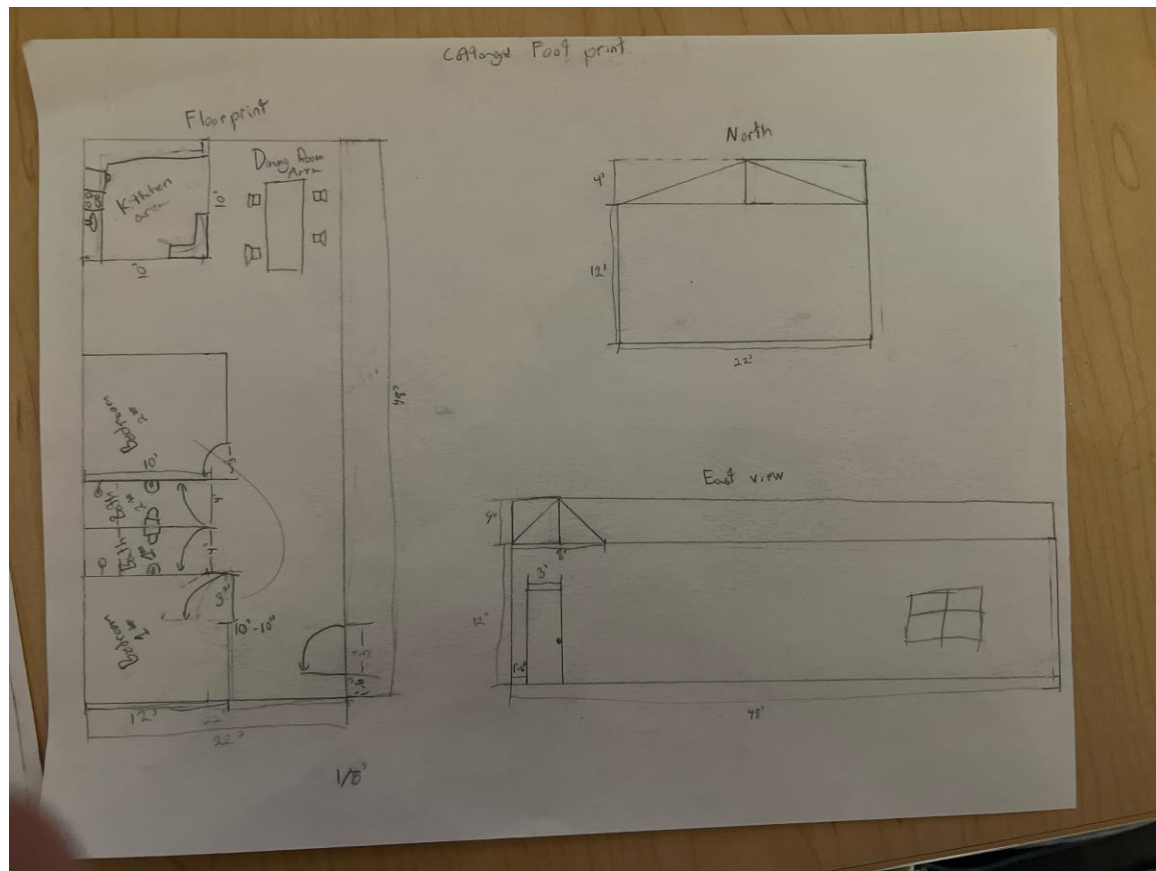


I was given the responsibility of assisting in the creation of a comprehensive plan for a 50-acre property that was intended to be a multipurpose agricultural area that combined its traditional farming origins with contemporary agribusiness potential. The long-term plan calls for combining active agricultural uses like vineyards, small farm-to-table products, and room for horses and cattle with practical buildings like a 500-square-foot barn, a greenhouse, and residential elements. With mature trees covering the remaining portion, almost two-thirds of the site have already been cleared, providing a variety of alternatives for phased development. To improve the visitor experience, the first phase focuses on building a 2,500-square-foot "barndominium," putting an Airstream on the property, and selecting important features like a hot tub, an outdoor meditation area, and walking trails. Ultimately, the property is intended to operate not only as a working farm but also as a flexible venue capable of hosting short-term rentals, summer camps, weddings, conferences, and other events.

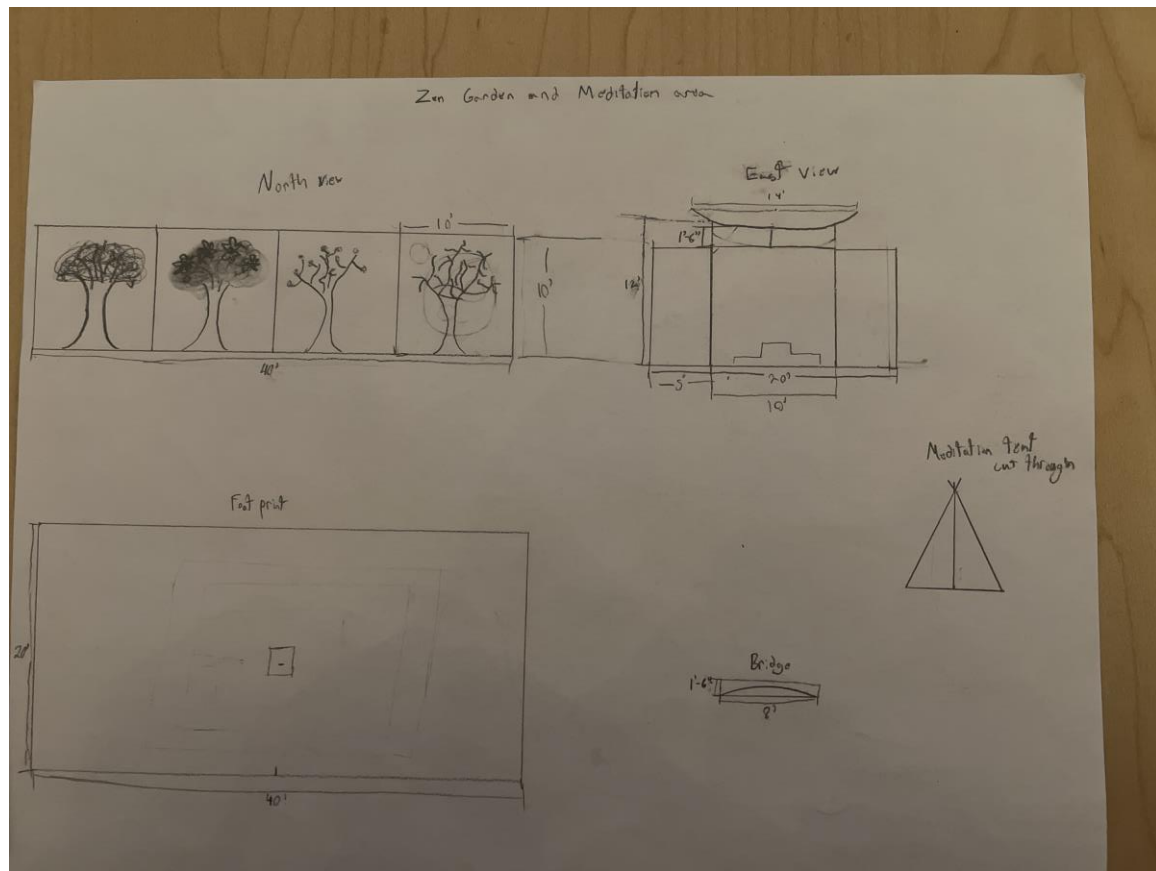
We had to design 4 of the buildings being the 4 cottages, Japanese garden/coy pond, greenhouse/dining room, and 4 stall horse barn houses. On top of this we needed to build replicas of these buildings using Revit or 3d models out of balsa wood and make the physical model for the barndominium that they have the blueprints. For my project I chose to use 3d models because I have had similar experiences in the past and find it to give more a feel aspect that Revit can do.



The guest cottages were designed as simple, functional units with two bedrooms, two bathrooms, and a shared kitchen and dining area, reflecting their use for short-term stays or retreat groups. I choose to incorporate open concepts like the dining room and kitchen area to appear bigger than the actual square footage. Additionally, they chose to not include a living room, so the guests feel more inclined to venture around the area and walk on the hiking trails behind the cottages.



The Japanese garden and koi pond were arranged as a meditative zone with a central water feature, surrounding plantings, and architectural elements such as a torii-inspired entrance to reinforce the calm, ceremonial atmosphere. The koi pond is large at the bottom but narrow towards the top to allow the people to walk across the bridge and see the fish below.

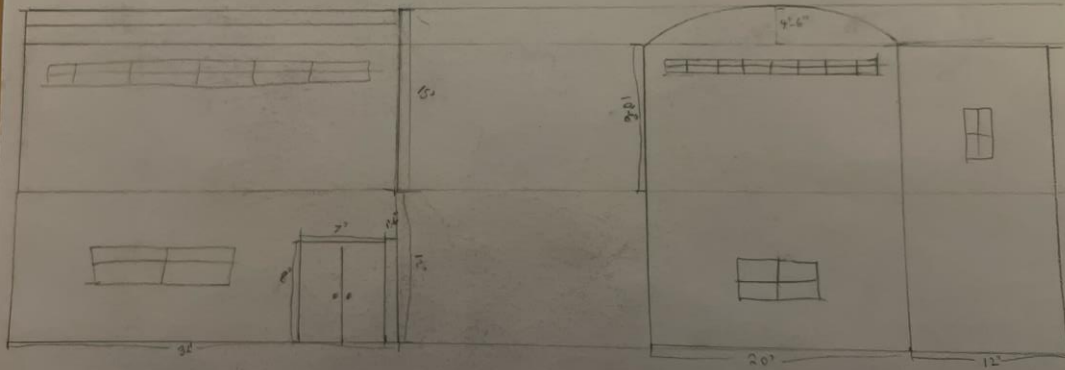


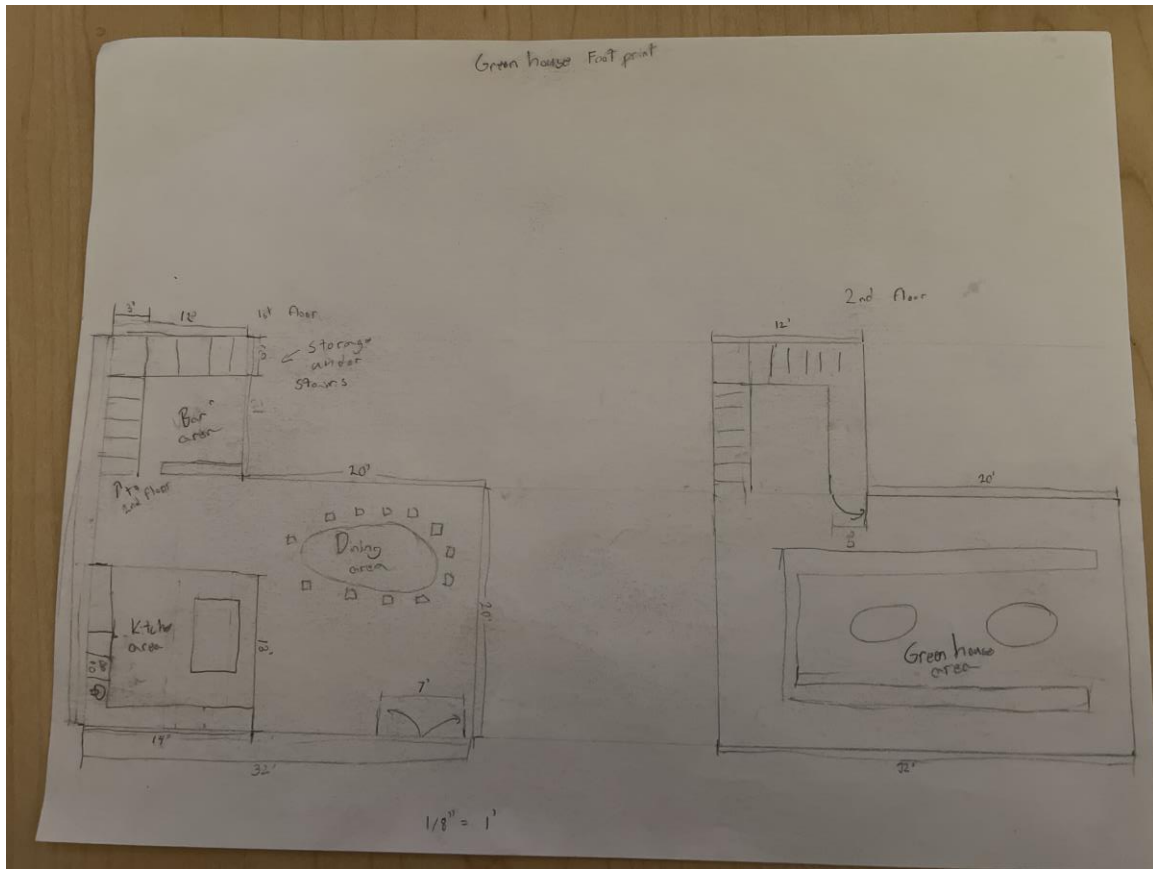
The greenhouse and dining building features a large open area on the first floor and an integrated dining room and kitchen, with a lofted second level to house plants and act as a green roof. Additionally, since the Vineyard is behind the greenhouse you can store locally made wine in the bar area and serve guests. The second floor gives more depth to the whole building and allows for the window roof to fold out and allow air to flow through if the weather is good, but the natural lighting and green plants create an environmentally friendly building to a rural area that cares for nature.

Green house Elevations

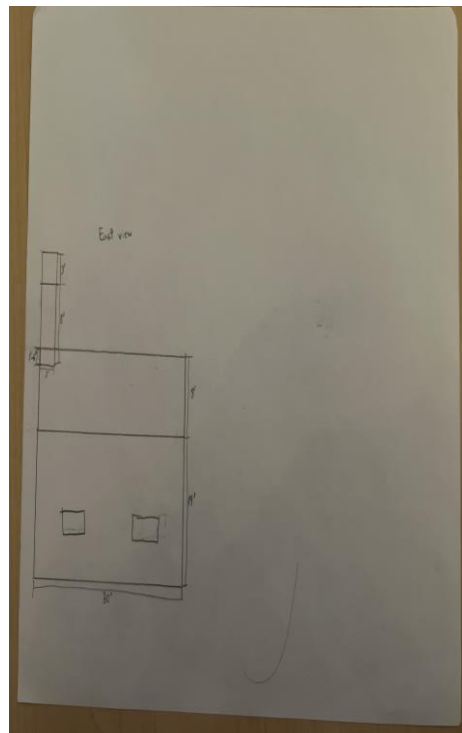
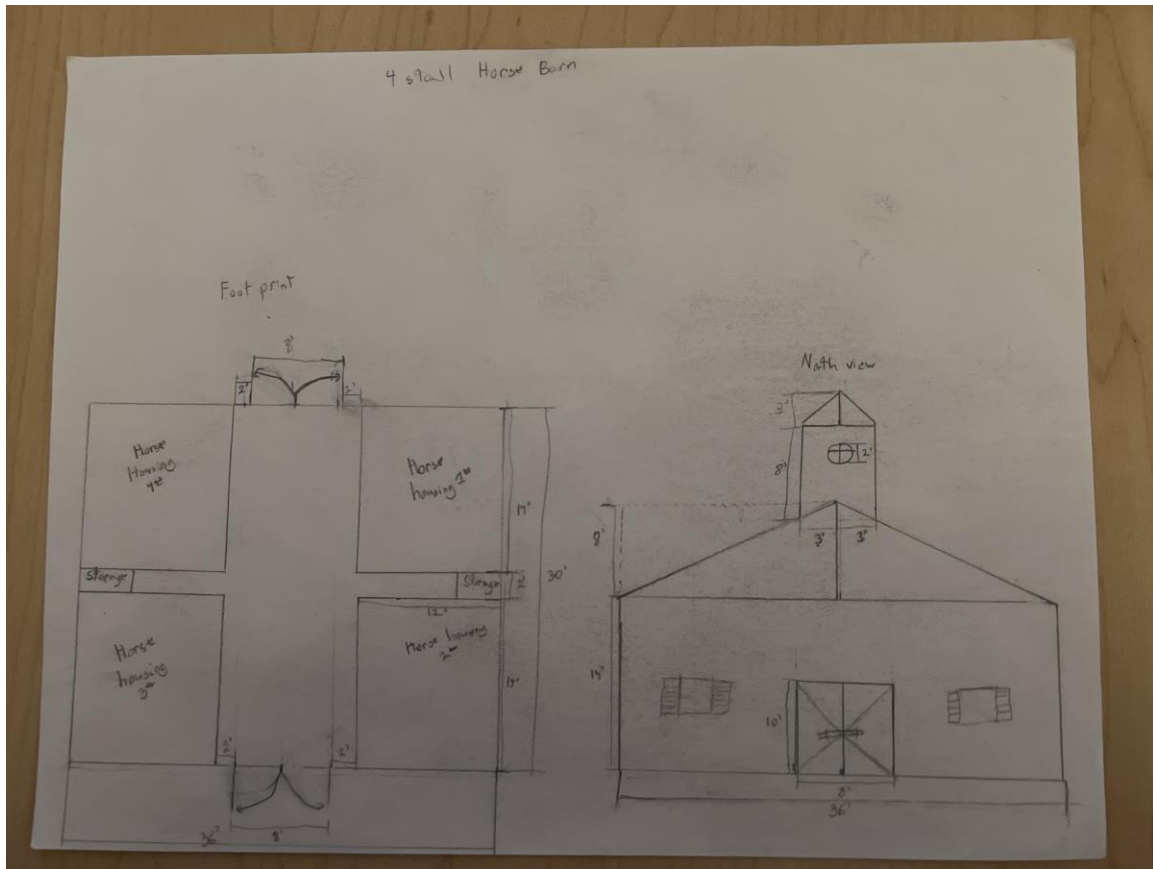
North facing

East facing





The four-stall horse barn includes symmetrical stall wings, central storage areas, and a pitched roof with a raised cupola to allow ventilation and light—features that support both animal comfort and efficient barn workflow. A classic barn appeal doesn't hurt and stays in the vernacular with the neighboring farms.



Following the creation of the building plans, I built scaled balsa-wood models of every structure, including the larger barndominium model, using the supplied blueprints. In

addition to highlighting circulation patterns and illustrating how the project's architectural language complements the property's overarching goal as a farm, retreat, and event venue, these physical models assisted envision how the structures relate to one another on the site.



In our LEED-style planning meeting, we presented the development plan to the project owner, local officials, academic partners, a real estate representative, and a contractor. We also highlighted opportunities for academic partnerships. Elizabethtown College can contribute through design and sustainability studies, and the University of Florida (already collaborating on vineyard planning) can support agricultural, environmental, and horticultural research. Additionally, we would partner with local schools in the area to allow children to learn while also being around horses and cows. Together, these partnerships strengthen the property's value in the community's eye.

To create level spaces for the buildings, roads, koi pond, and now a typical in-ground pool and hot tub, the property will need some earthwork. I estimate that 3,500–5,000 cubic yards of soil will need to be moved just to grade the main construction areas and roadways.

Approximately 80–90 cubic yards of excavation are required for a standard home pool (approximately 15' × 30', with an average depth of 4–5 feet) including a small hot tub. Additional digging is also facilitated by the koi pond. The total amount of earth transported during the project is probably between 4,000 and 5,500 cubic yards. Excavators, bulldozers, dump trucks, skid steers, and compactors are examples of common equipment that will be required.

As long as the water table is monitored, the generally sandy, well-drained soil in this part of Florida is perfect for lightweight buildings like cottages, barns, and septic systems. A preliminary geotechnical (soil) analysis will still be conducted before construction to ensure that the earth is solid because sinkhole activity may occur in some areas of Marion County.

Ocala has a relatively low hurricane storm-surge risk because it is inland, but strong winds and heavy rain should still be taken into account. Although the majority of the property surroundings are low-risk according to FEMA flood maps, we will nonetheless make sure that construction sites are above the 100-year floodplain. The buildings will adhere to the wind requirements of the Florida Building Code.

To make sure there are no contamination issues, protected wetlands, or endangered species on the property, environmental inspections will involve searching for data from the Florida DEP, Marion County, and the EPA. Although there are now no significant environmental concerns, examining these maps guarantees that the project proceeds responsibly.

The property's long-term goal is to progressively develop into a fully integrated agricultural and hospitality destination that strikes a balance between development and the land's natural features. While later phases increase agricultural operations like the vineyard and farm-to-table crops in collaboration with the University of Florida, early phases construct the main buildings and amenities—cottages, barn, greenhouse/dining room, meditation garden, pool, and paths. Larger gatherings and events, such as retreats, summer camps, weddings, and small conferences, will be supported by the site as it grows. Upcoming features include more farm animals or outdoor classrooms. With such a blank canvas you can really do so much with these ideas but with what has been created and planned,

Masakani LLC has a bright future.