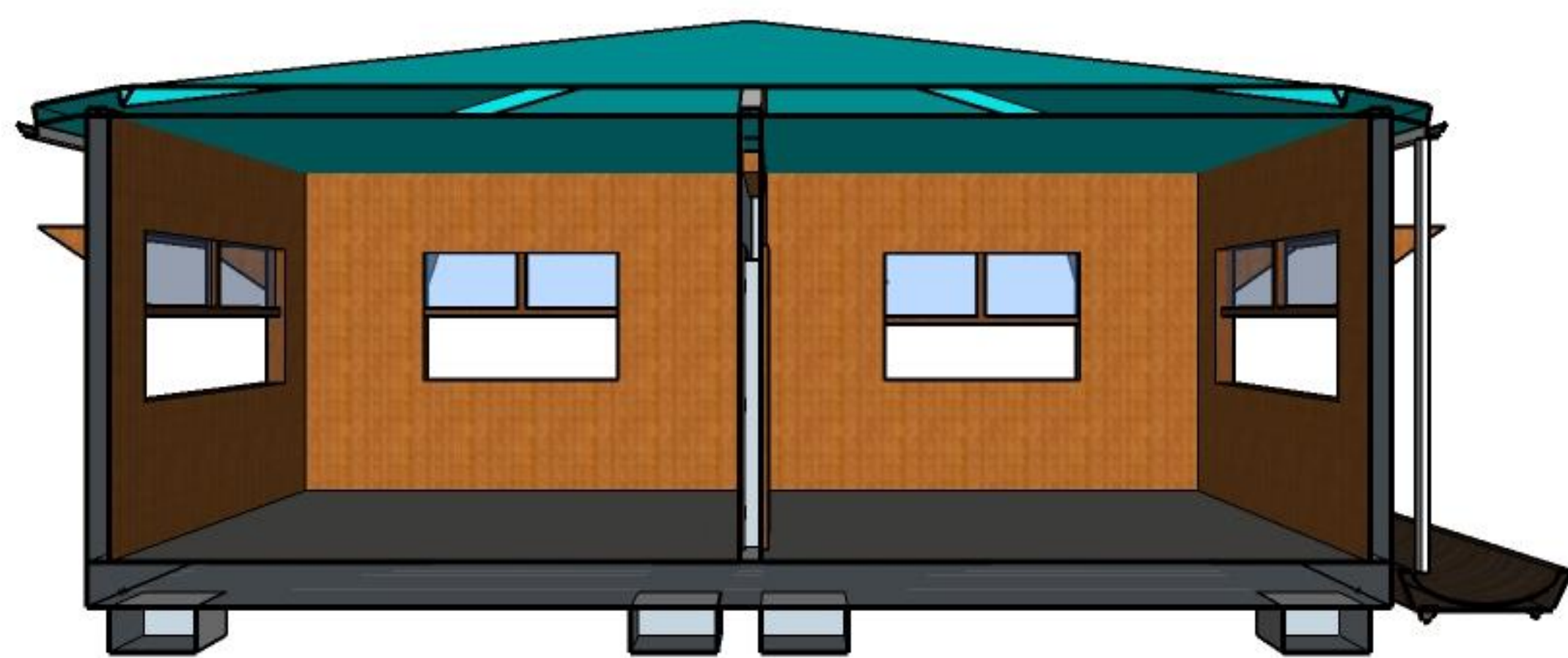


Abstract

Hurricane and flood resistant permanent housing for those who live in the dangerous slums of Jimani, Dominican Republic. Our project can help contribute to fix the issue of the millions of impoverished people that do not have adequate housing and provide an example that can be used anywhere around the world.



Sandbags will be placed in wall frames to provide weight and stability during hurricanes

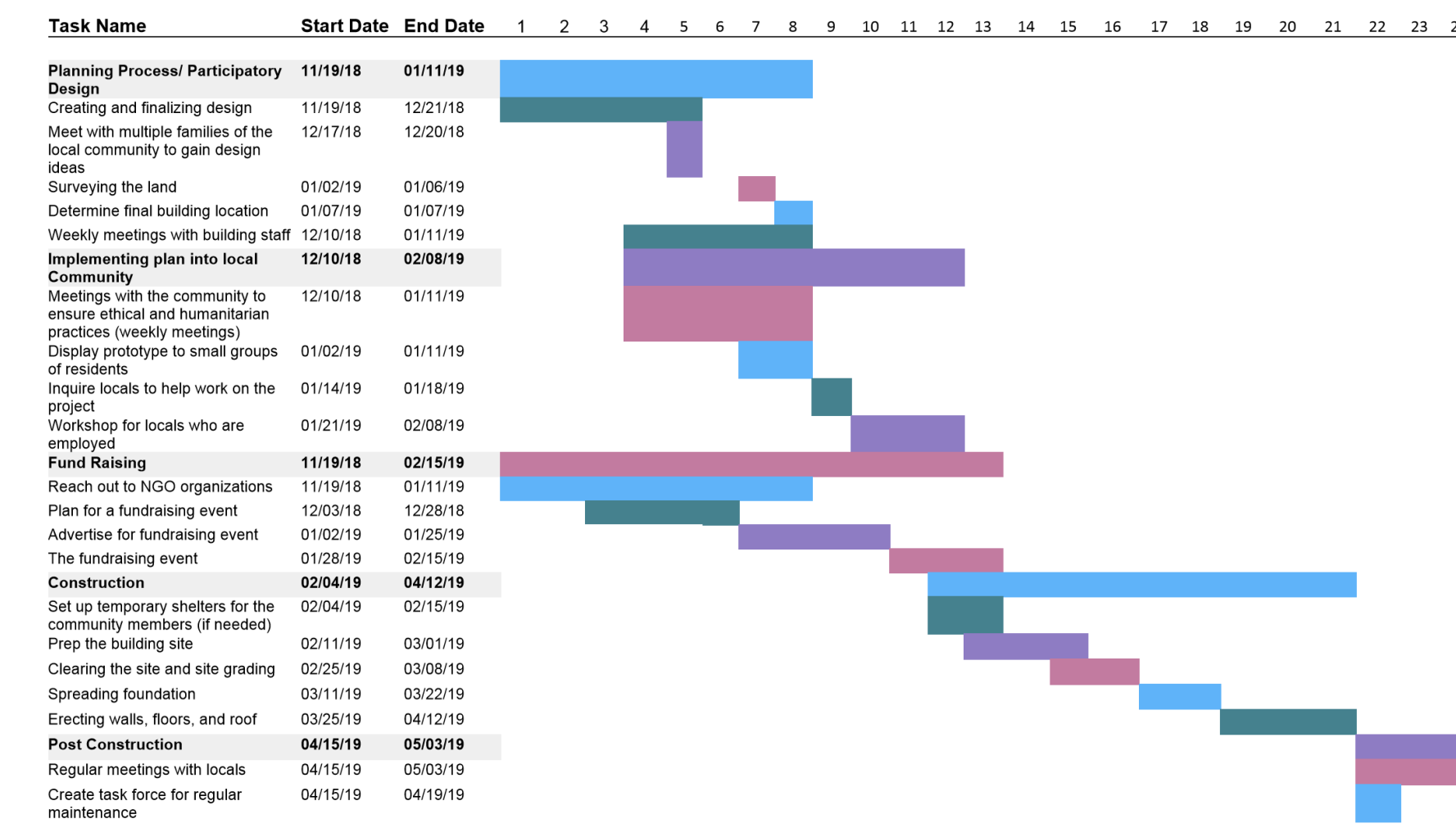


Construction Methods

- Cement base/stilts
- Sandbags in walls
- Adobe siding
- Hip roof: ModRoof
- Shades for cooling
- Gutter

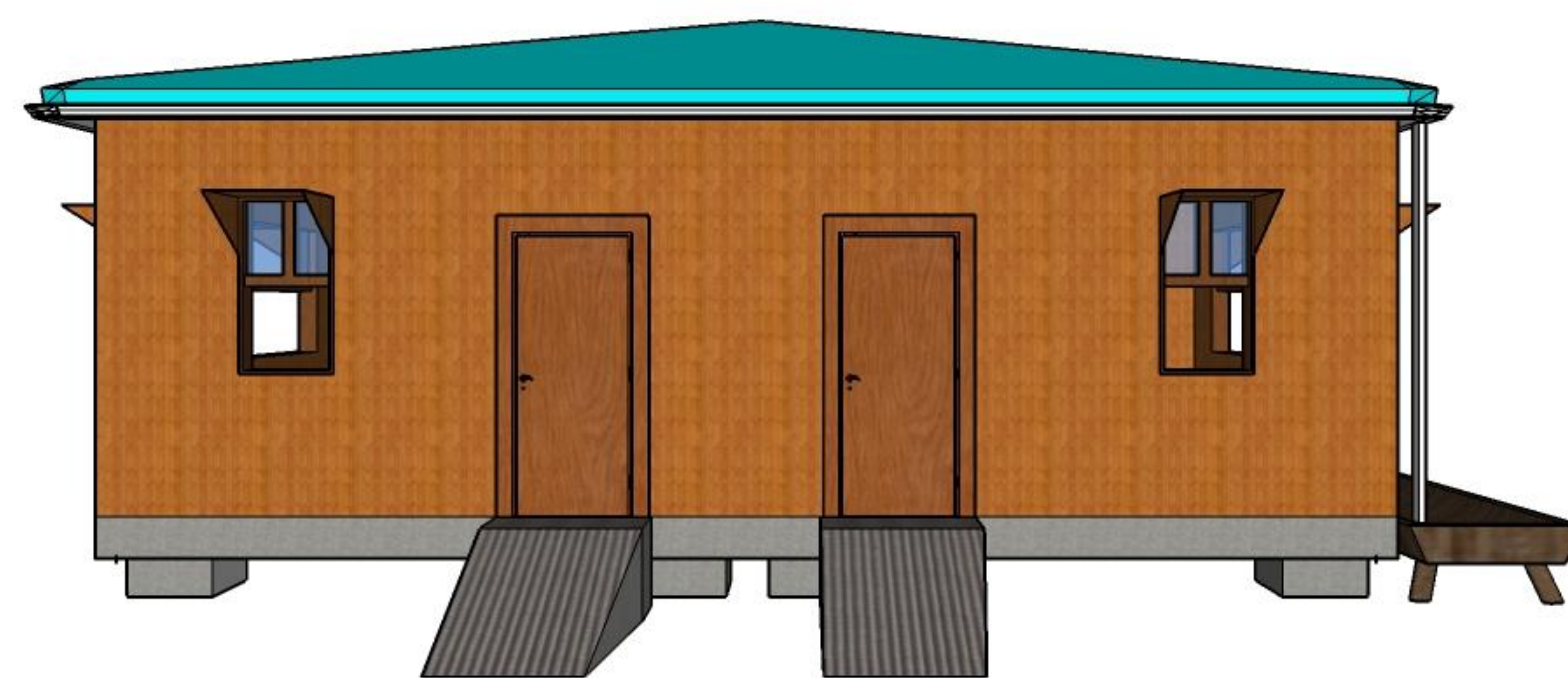
Background

- Current housing lacks protection from heavy rains and hurricanes
- Homes have little security as most are made of sheet metal

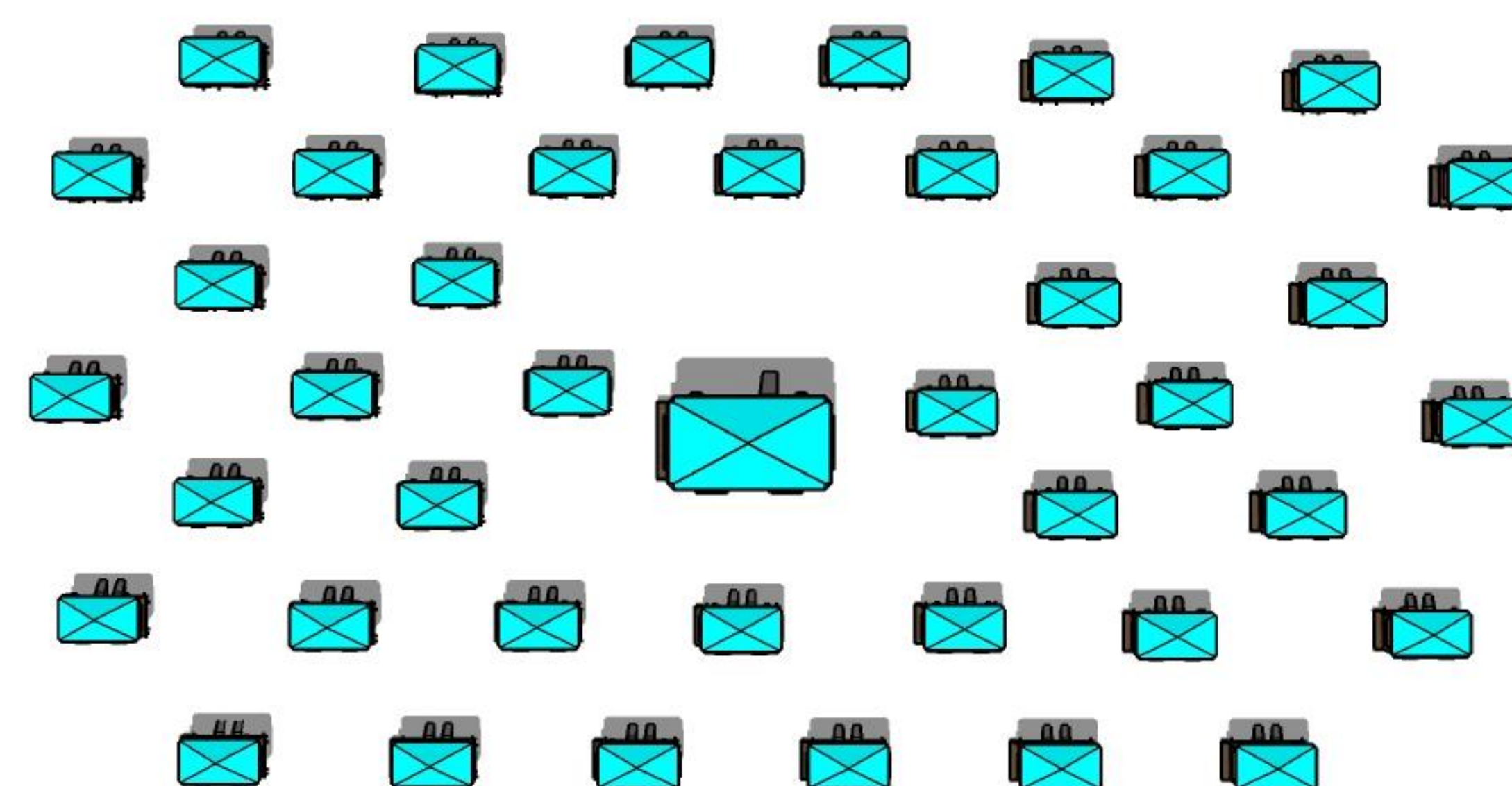


Gantt Chart

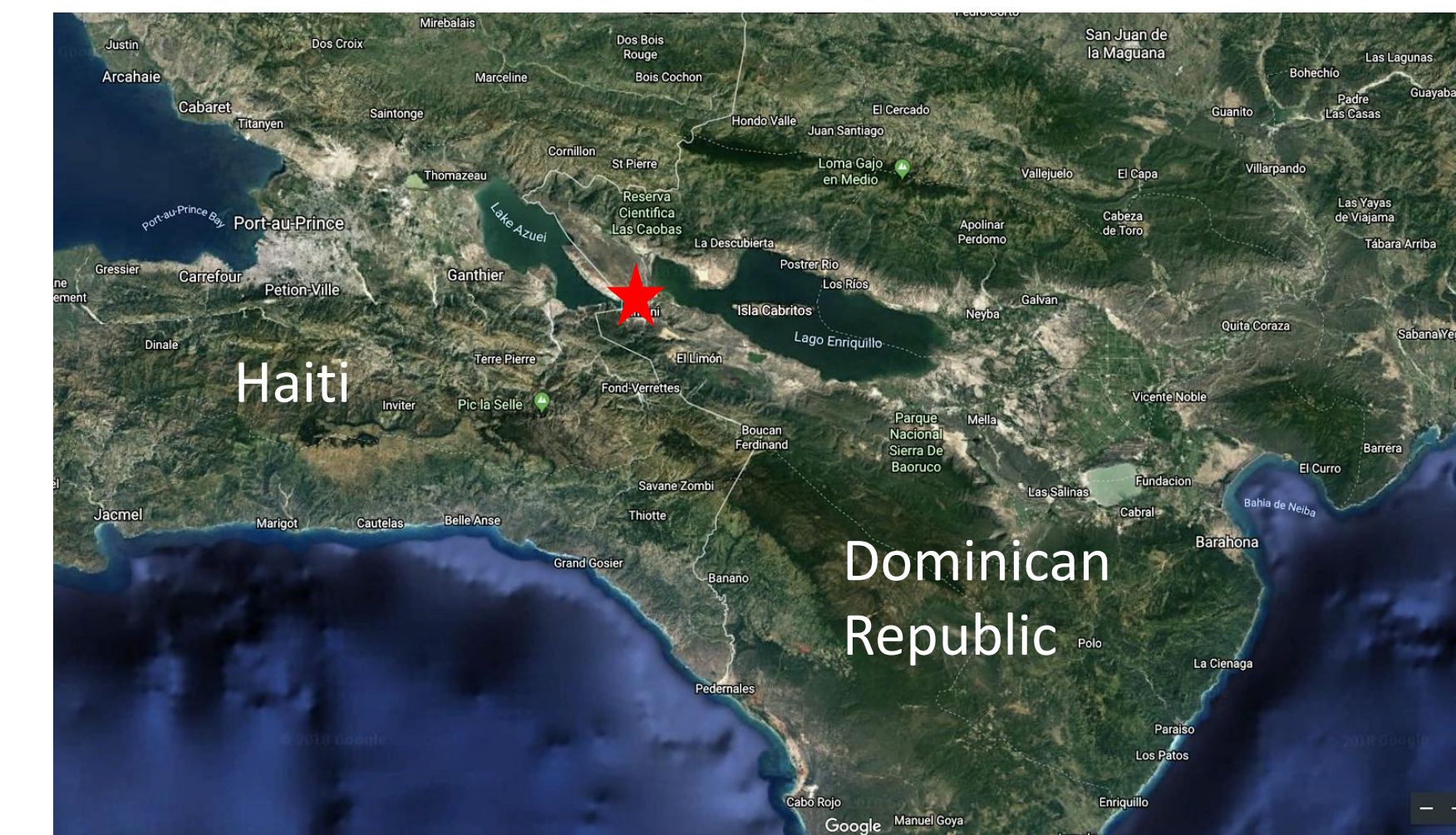
Design Concept



Cement will be used for the base of the house and stilts, which will be raised one foot above the ground



Community centers will be centered around 40 complexes all facing the south.

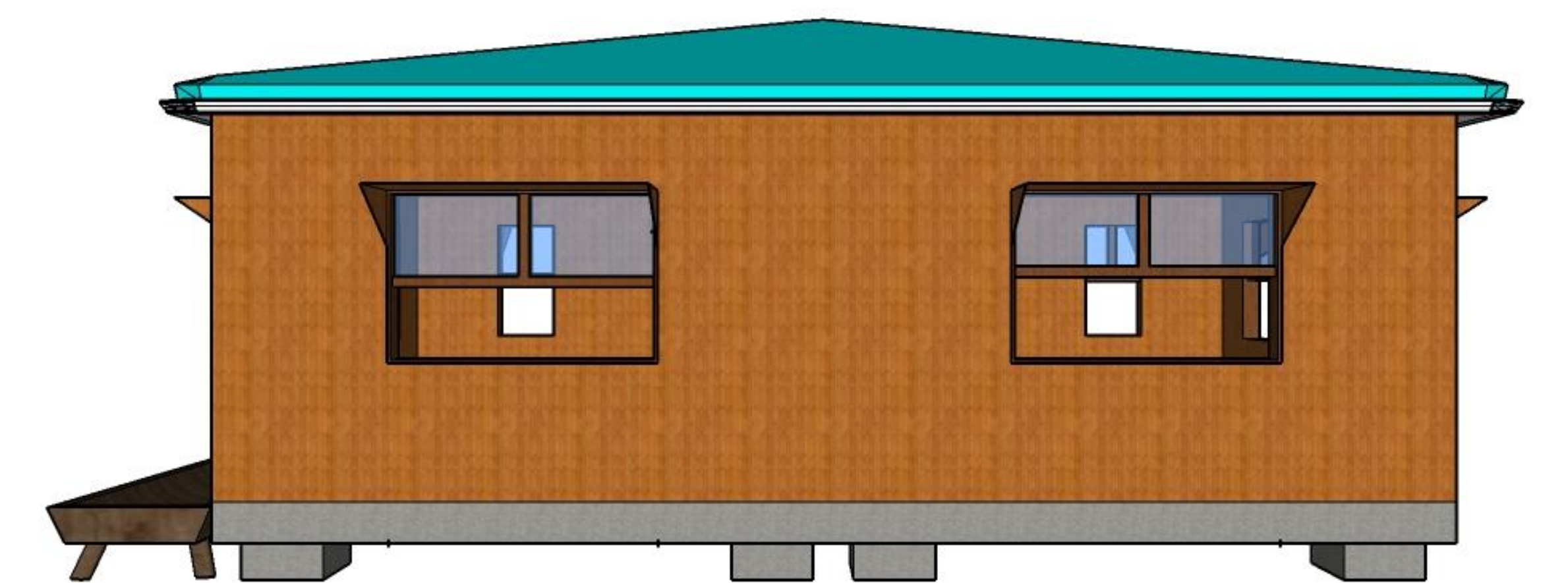
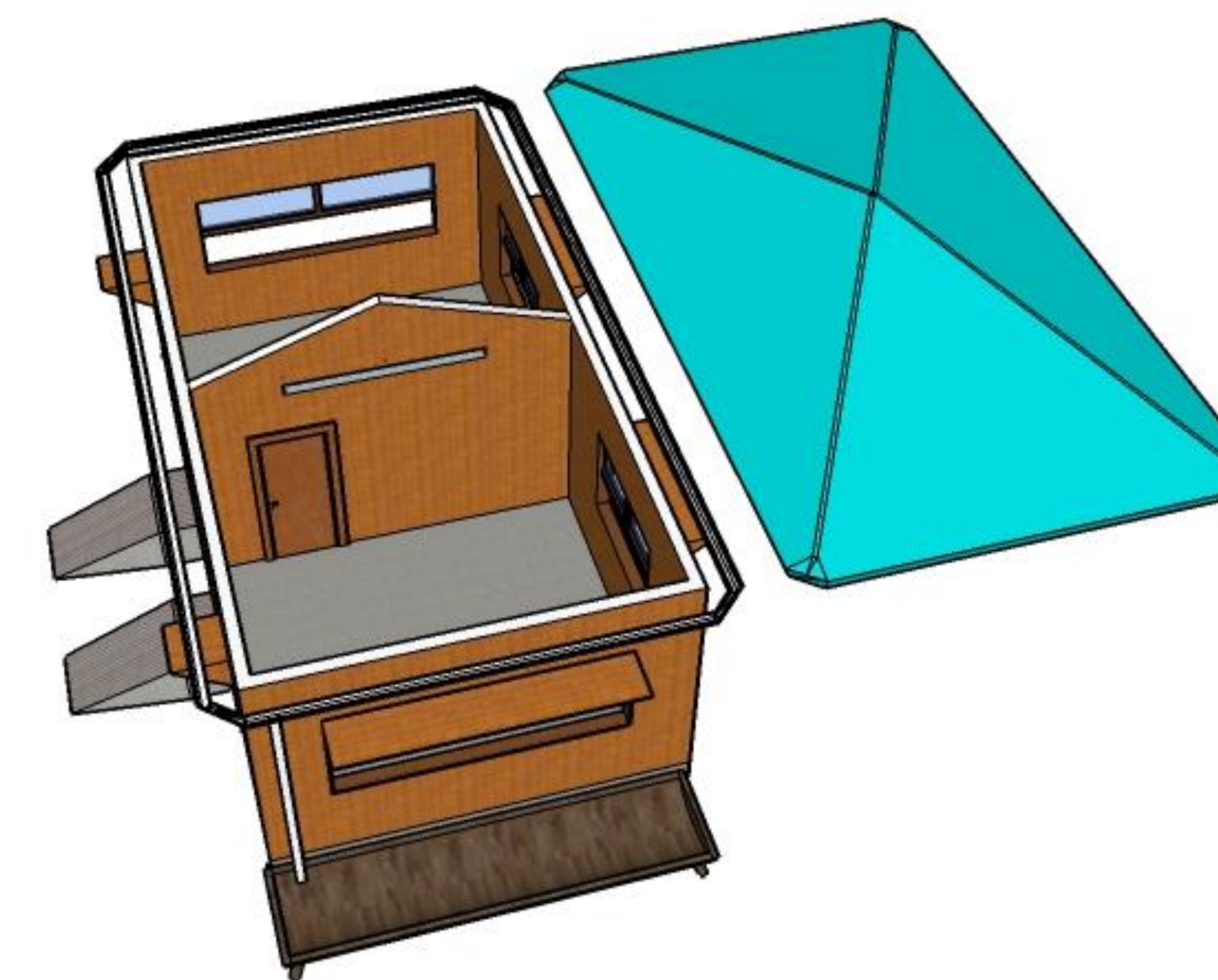


Jimani, Dominican Republic



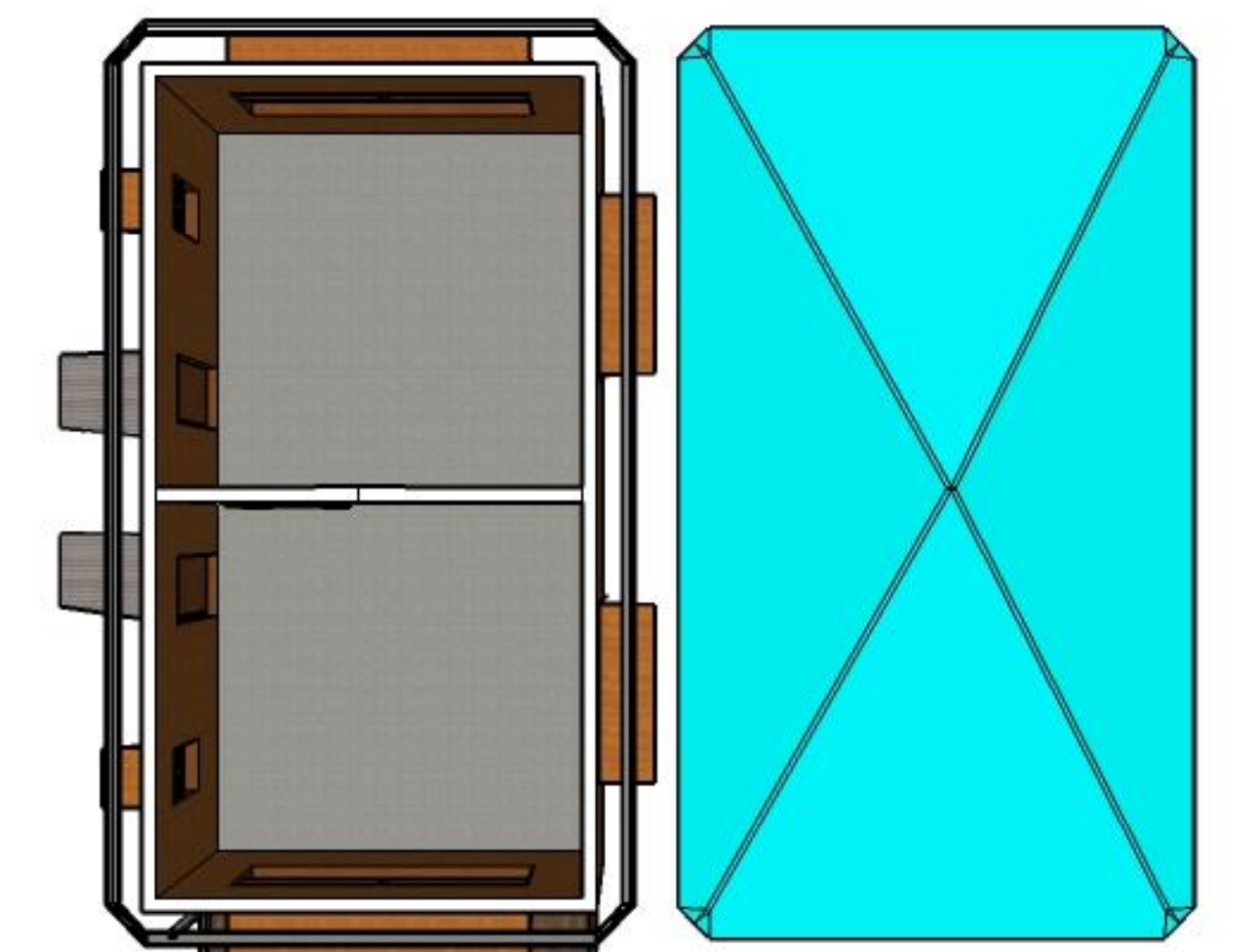
Poor condition housing in the Dominican Republic

A gutter system will be used to collect rainwater in a trough located on the side of the house for families to collect water for their daily needs.



Adobe will be used as the siding of the wall

The roof is a 4 plane hip roof made of ModRoof paneling that withstands high winds during floods and hurricanes



Program Design

- Emphasizes community, economic solutions and social improvements
- Multigenerational households which makes choosing a house size limiting
- 70% of households has a female head who is a single parent with children under the age of 15
- The duplex design allows single mothers the opportunity to live in a common building with other women facing the same situation, thus facilitating new relationships and support systems
- Micro-loan financing features low interest rates with a 5 year payback period
- In-kind labor allows our group to donate 5 community centers

References

Williams, A. (2015, September 04). ModRoof promises a safer shelter for low-income families. Retrieved from <https://newatlas.com/rematerials-roof/39239/>
 Metal Roofing and Hot Climates. (2011, August 08). Retrieved from <https://www.classicmetalroofingsystems.com/metal-roofing-and-hot-climates/>