

Living Love Ministries - Kenya Land Development

By: Isaac Albrite & Jacob Holderman

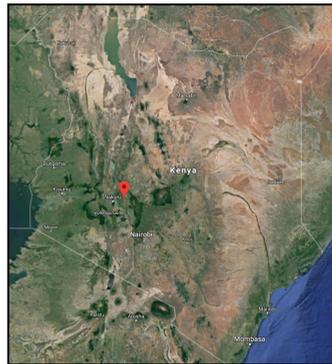
Background

Living Love Ministries (LLM) is a children's home for over 30 orphans in Ol Kalou, Kenya. Their mission is to "Pour out God's love on vulnerable children." They have a goal of becoming a self-sustained facility by growing their own crops on site. The Land Development in Kenya team has partnered with LLM to help achieve this goal.



Problem Definition:

The region in which Living Love Ministries is located experiences dry seasons for several months of the year. During the dry seasons, they cannot continue to grow crops, requiring additional expense to purchase produce.



Project Objective:

The objective of the Land Development in Kenya team is to implement a drip irrigation system for LLM children's home to allow for year-round produce.

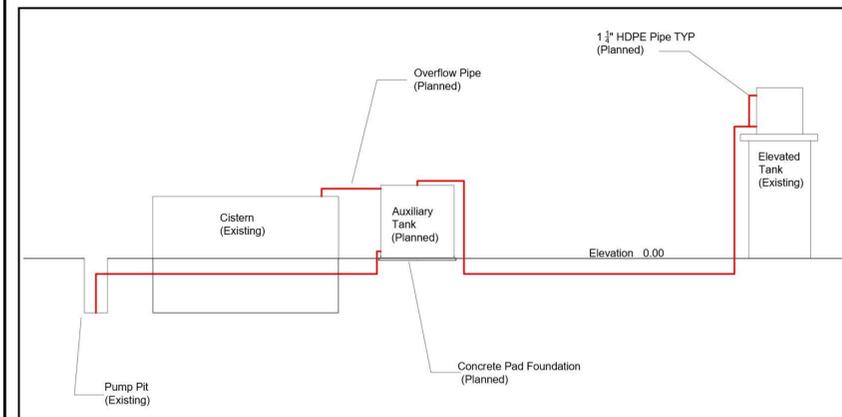
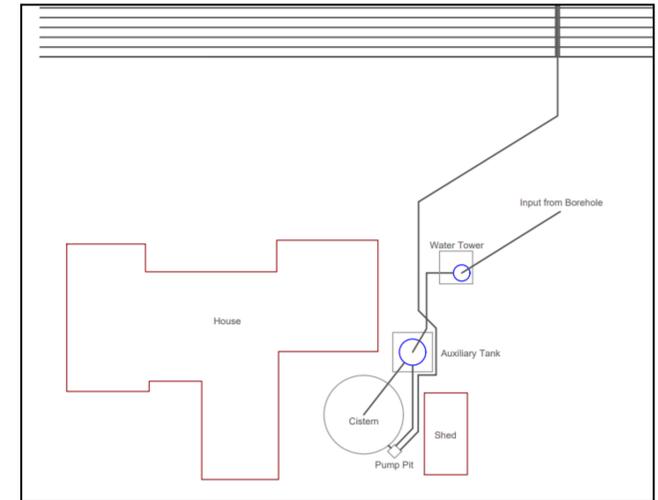
Site Overview

The LLM facility includes approximately 10 acres of farmland. Initially, two acres of farmland will be developed for irrigation. An existing well will act as the source of water for the drip irrigation system. Additional areas of irrigation could be developed in the future.



Drip Irrigation System Design

- Water will be obtained from an existing well and piped to an elevated water tank.
- Overflow from the tower tank will feed a new 16,000-liter auxiliary tank.
- The auxiliary tank will serve as the supply for the drip irrigation system.
- An existing booster pump will provide pressure to the system.
- The drip tubing will cover two acres and include valves to operate individual field sections depending on plant water requirements.
- Our estimates show that the system will be able to provide up to 10,000 liters of water per day.

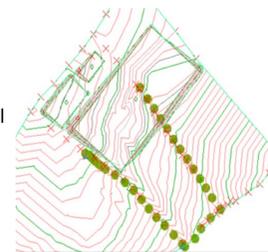


Construction

Installation of the drip irrigation system is planned for June 2019. A team of students and faculty from the Land Development and Solar PV project teams will be traveling to Kenya to assist with the construction. Staff from Living Love Ministries will help with the installation.

Future Work

The second project to be completed at Living Love Ministries will be the design and construction of a recreational facility that includes a new soccer field, basketball court, and volleyball court. The new recreational facility will provide both the children and the community with a larger, more suitable space for recreation and athletic events.



Partner and Funding

Living Love Ministries is a Christ-centered family home established to address the needs of orphaned children in Kenya. Started by Solomon Mwangi in 2010, the children's home now houses over 30 children. Mark Weeks, head of the LLM partnership in the US, has made this project possible through fundraising and networking between the Collaboratory and the children's home.



Acknowledgements

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 Project Team Members: Isaac Albrite, Justin Blest, Madalyn Heckman, Jacob Holderman, and Cheylee Smith
 Project Advisor: Scott Heisey

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