

U004.01

Project Total Square Footage:
35,200 sf

Anticipated Date of Completion:
TBD

Location of Project:
Duwehn's Town,
Grand Bassa County,
Liberia
Africa

Type of Project:
Education



PROJECT DESCRIPTION

This School project in Liberia, Africa, provided an opportunity to explore a new framework to engage in the process of architecture. In traditional contemporary practices, we serve clients who offer a tailor-made project to be designed, and realized. Instead, we were approached by an educational consultant and coach, who has dedicated years to the development of educational leadership programs in Liberia. As part of his commitment to the people of Liberia, he had directed his efforts to help a community in Central Liberia build a school that would serve as catalyst to create a sustainable village in the area.

Liberia's educational landscape is in desperate need of help. A 14 year brutal civil war left the country in shambles, destroying over 80% of its schools. 65% of primary school age children are out of school, and more than 50% of young people aged 15-24 are illiterate.

We were asked to participate in the effort, to engage with our knowledge and skills as architects in order to help materialize a vision for a potential client in desperate need of an intervention.

U004.02

LOCATION MAP AND SITEPLAN

Prompted by our visionary partner, the government of the County of Grand Bassa in Central Liberia has granted a 52 acre parcel of land to be dedicated to the vision of a future sustainable community. The site is 10 miles from the heart of Buchanan--the third largest city in Liberia, with a population of approximately 35,000—and one mile from the main road that links Monrovia to Buchanan. It is accessed through the gravel road that leads to Duwehns's town, a small rural village.

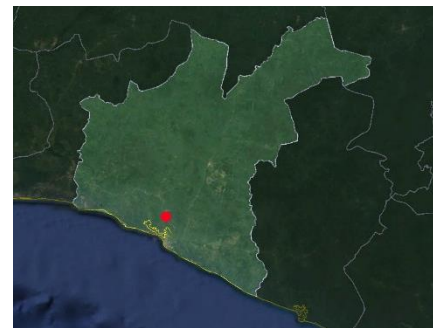
The school will be built in the Northernmost part of the site, adjacent to the existing gravel road

The vision for the 52 acre site contemplates the future development of a technical school for trade oriented occupations with an emphasis on agriculture and self sustaining activities. In addition, the master plan will include housing villas for teachers and students.

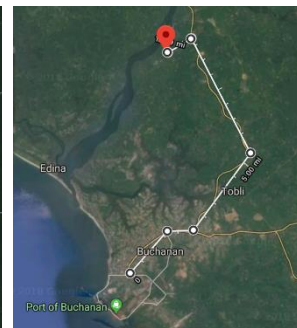
The rest of the site will be allocated to agricultural fields.



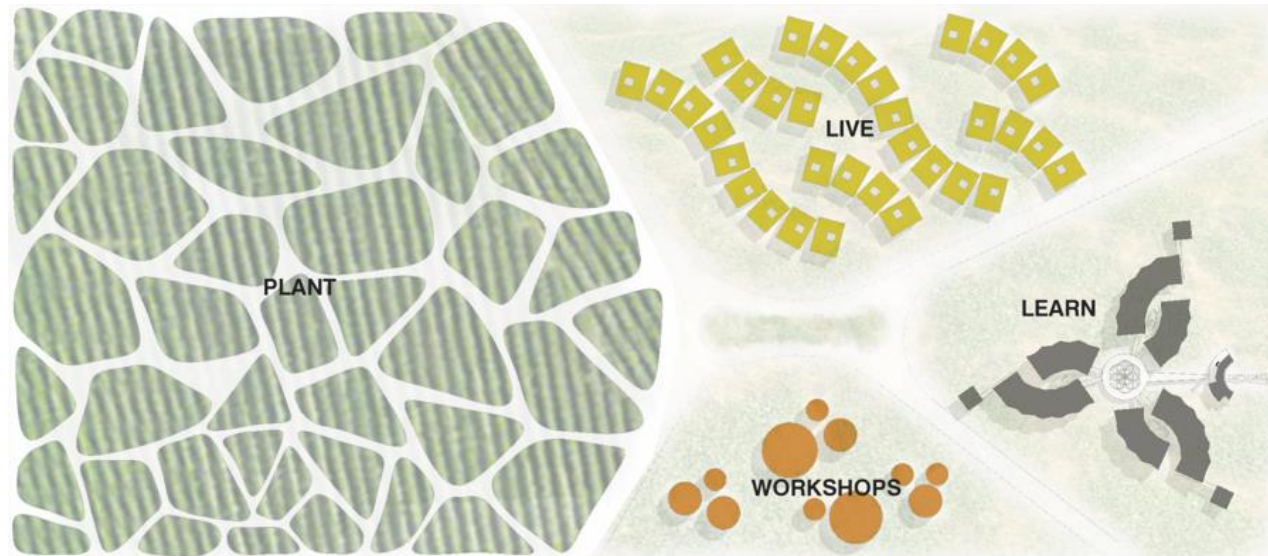
Central Liberia, Africa



Grand Bassa County



Buchanan



U004.03

A SELF SUSTAINING VISION

Materials are all locally sourced and many will be generated by simple on-site production methods.

A water tower will capitalize on the ample water supply on site and serve the needs of the community as it develops.

Building openings are screened but not glazed which will maximize cross ventilation.

A double roof system keeps the classrooms cool and airy and the large overhangs of the metal roof will protect the spaces and building facades from the sun and heavy rains.

Electrical power is scarce in Liberia and mostly supplied by fuel generators. Provisions will be made for solar panels to be installed on the corrugated zinc roof as a potential source of energy.

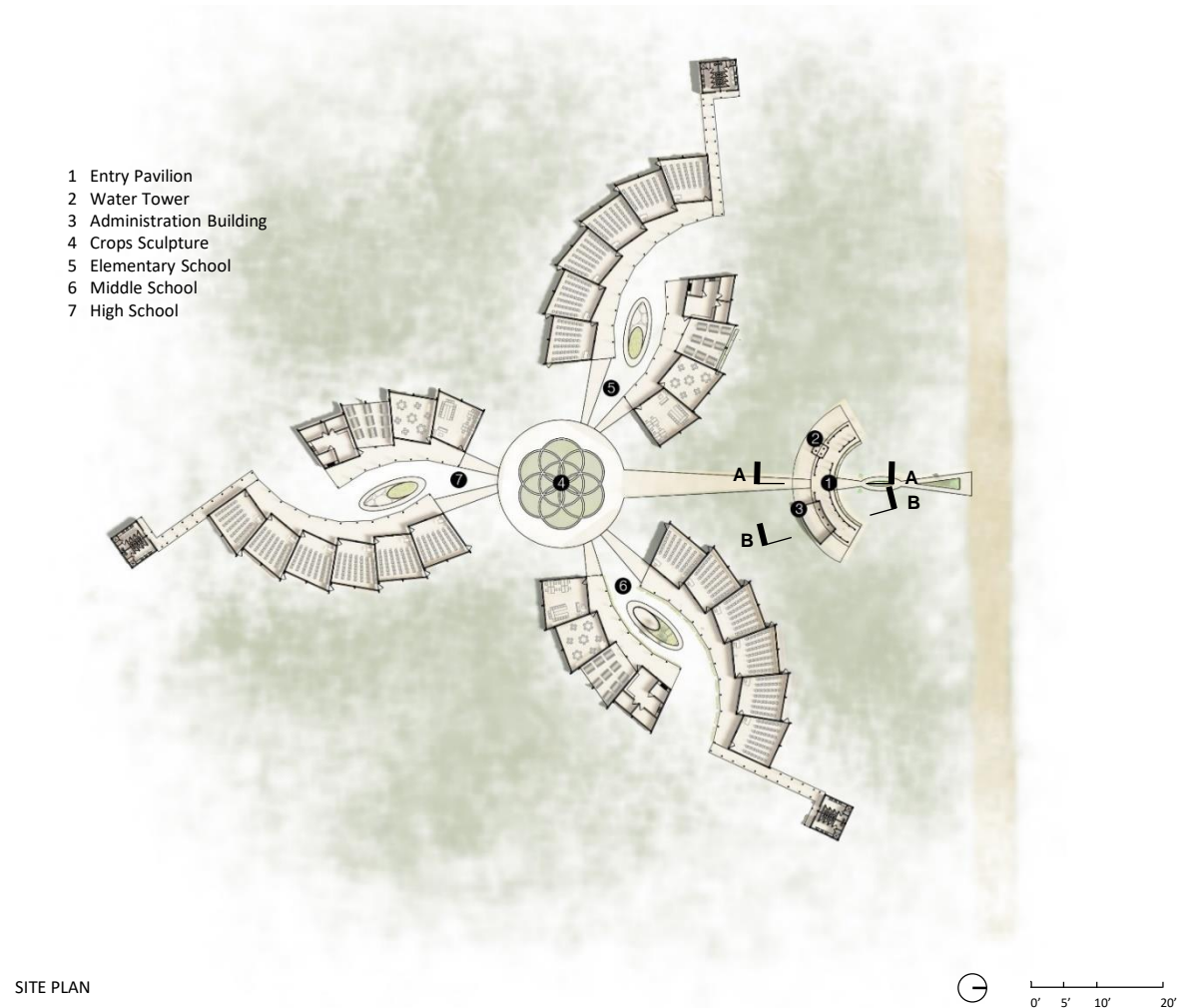


U004.04

School Site Plan

The school site plan involves a semicircular entry pavilion with the water tower and administrative office to either side.

All three educational clusters—elementary, middle and high schools-- are organized around a landscape sculpture which is on axis with the entry and inspired by the geometry of the Flower of Life.



U004.05

Floor plan

As the local population will participate in the actual construction of the project, it was important to standardize the geometry to facilitate lay involvement.

Each school cluster consists of two wings of equally shaped spaces.

The larger wing houses 6 classrooms and the smaller one includes two multipurpose rooms, a kitchen with associated storage areas, and an outdoor dining pavilion.

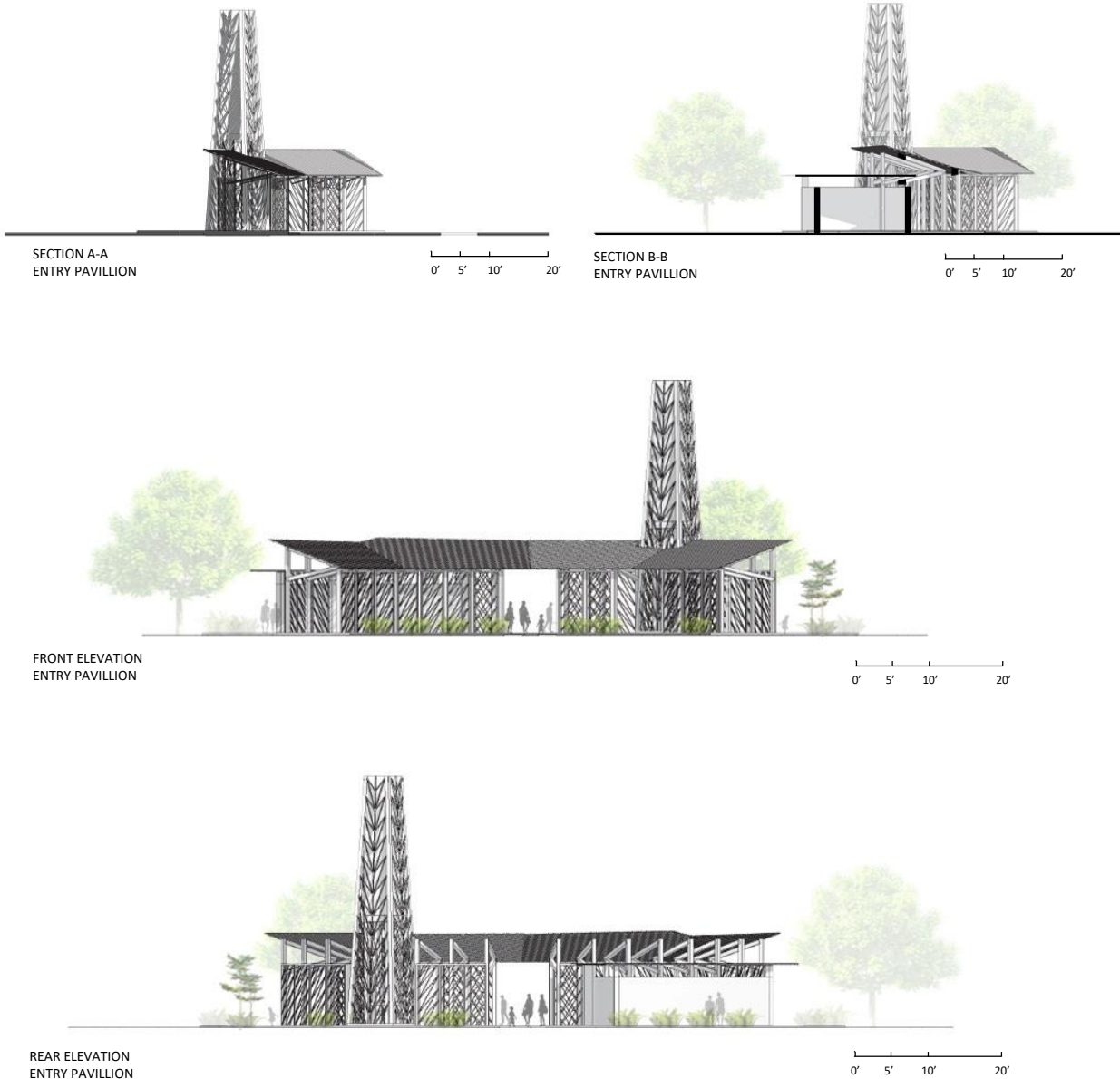
Given the open air ventilation of the project, bathrooms are required to be separate from the main structure, accessible through a covered passage.



U004.06

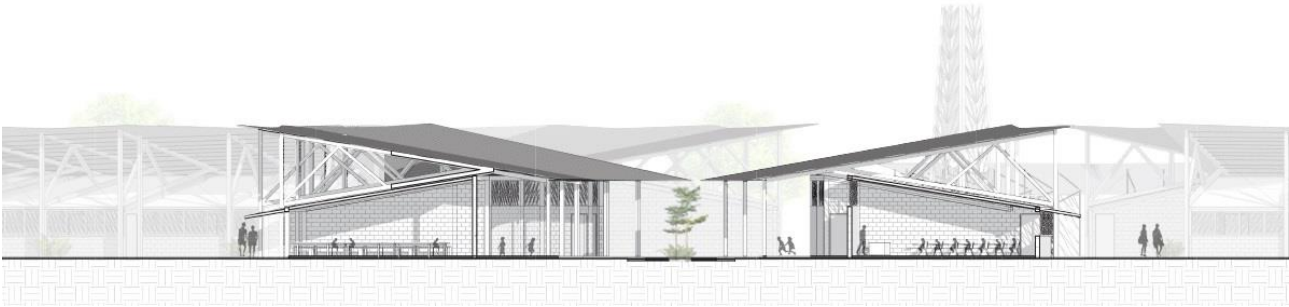
ELEVATIONS AND SECTIONS

Entry Pavilion and Water Tower



ELEVATIONS AND SECTIONS

School Buildings



SECTION D-D

0' 5' 10' 20'



EXTERIOR ELEVATION

0' 10' 20' 40'



INTERIOR ELEVATION

0' 10' 20' 40'

Entry Pavilion

The semicircular entry pavilion greets visitors as they approach the site. With the water tower as the focal object on one side and administrative office on the other, the outdoor pavilion serves as the welcoming structure for the complex.



Entry Path

Upon passing through the entry pavilion, the three school clusters are organized around the central sculptural landscape inspired by the Flower of Life geometry. Each segment of the intersecting circles of the flower will be planted with a sampling of the agricultural crops that will be harvested on the rear of the property.



U004.9

Materials and Construction

The school will be built with materials that are sourced locally and readily available.



Clay bricks made on site will provide infill for a simple concrete foundation and post and lintel structural system.

Bamboo is also sourced on site and will be used for the ceilings in the classrooms.

Wood posts and trusses will be sourced from a nearby mill.



U004.10

Classrooms

The classrooms are open and airy. They provide a warm and pleasant environment with the local clay brick walls, openings that afford abundance of natural light and ventilation. Local bamboo will be used for the sloped ceilings.



Dining Hall

The open dining area is clad in the same materiality as the classrooms, with a total open front and back.



U004.11

Agricultural Sculpture

The Flower of Life Landscape sculpture, will constantly serve as reminder that only through working the land and creating an agricultural self-sustaining community will the school be able to thrive.

Education in Liberia is not free and only available to the small percentage of the population that can afford it.



U004.12

Courtyards

The courtyard spaces within each cluster are flexible in nature and will adapt to the different school populations--elementary, middle school or high school. They provide playground opportunities for the younger students or gathering areas for older groups.



Loggias

The large loggia provides under cover gathering spaces for students as well as visual access to the courtyards.

