

# The Bond with the Land



Landscape near Fond des Blancs

Since European settlement and the development of plantation agriculture, based on slave labor, the people and economy of Haiti have been directly tied to the land. Their blood, sweat, and tears created the most profitable colony in the New World. After independence, they coined the new name “Haiti,” after the term for lush, mountainous land used by the native Taino people. Haitians worked and worshipped the land as peasant farmers, establishing small farms that supported a once thriving domestic economy. Today, deforestation, erosion, and the degradation of the environment pose dire threats to the country. Environmental regeneration from the mountains through the plains and river valleys to the sea, as well as in the cities, will be critical to the recovery of the country.

# The Lakou



Kapen Lakou



Kapen Lakou

Following Haiti’s independence from France in 1804, the Lakou emerged as the predominant unit of social, spiritual, and economic organization. Literally meaning *courtyard*, the Lakou is a shared living space. It houses the living quarters, ancestral spirits, garden plot, and burial grounds of the Haitian family. Not only a physical place, it is also the embodiment of the family’s ancestral and spiritual connection to each other and the land. Born out of slaves’ garden plots, West African social arrangements, and European peasant economies, the lakou is rooted in feeding and rearing a healthy extended family. As it became the center of Haitians’ economic, spiritual, and family life, it would ensure that plantations and slavery never returned.



# Food

Food insecurity and malnutrition, the results of extreme poverty, unfair trade policies, and lack of agricultural development, are at the heart of the challenges facing Haiti. Food production can occur



Fresh Fish, Mouillage Fouquet



Going to market, Port-au-Prince



Corn Harvest, Kapen

on multiple levels, from kitchen gardens to family farms to large ranches and commercial farms. The increased agricultural production and the creation of food security depend on restoring both the land and a culture of stewardship.

Stimulating economic development must be comprehensive-- agronomy projects in rural areas, urban gardens, demonstration farms, and training programs are only a few examples.

# The Market

The market is one of the most enduring and successful institutions in Haiti, and it is the lifeblood of communities. The market is the dominant economic and social stage in villages and towns, as well as most urban neighborhoods. Cultivating the land is a masculine activity, but vending is a mainly female affair, and marketing is the source of women's role in the family and Haitian society. Most Haitians continue to seek their livelihood through semi-formal or informal marketing. This is often out of necessity, but it is also a practice that is cherished for its independence.

Today, the success of local markets, particularly in urban areas, is being undermined by the importation of subsidized agricultural products, primarily from the United States. This has created significant impact on the economy and also nutrition.



Marketplace, Fond des Blancs



Marketplace, Fond des Blancs



# Patterns of Settlement: Rural



*Fond des Blancs*  
photo St. Boniface Haiti Foundation

Settlement patterns in rural areas changed radically after the demise of slavery and plantations. With the *lakou* as the basic building block, and in response to widely varying topography, a pattern of family compounds, villages, and towns spread throughout Haiti. Based primarily on small-scale agriculture, forestry and fishing, an economy developed that was essentially related to farming and natural resources. Over time resources have been depleted. The country is significantly deforested and soil erosion presents major challenges to agriculture. This, alongside trade and development policies that favored light manufacturing over agriculture, forced many off the land and toward cities, especially Port-au-Prince.

# Urban



*Martissant, Port-au-Prince*

The major problems facing today's cities result from limited infrastructure and decades of rapid growth. Built for a population of 250,000 people, Port-au-Prince's population has risen to over 3 million since the 1980s. A study and understanding of these aspects of the modern city is essential to the development and improvement of living conditions. This is especially true in urban *bidonvilles* or informal settlements, which house the majority of residents but where basic infrastructure such as water supply, sanitation, power and storm water control largely do not exist.



# The Porch

The porch, or *galri*, is the heart of the Haitian house. The interior of the house is used primarily for sleeping and the secure storage of belongings. The porch – along with the outdoor cooking area – serve as the primary stage for day-to-day family and social life. It is also the place to catch a breeze and stay cool. From the simplest thatched roof (*ti kay*) to urban houses to grand hotels, the porch is an essential component of life in Haiti.



Madame Toussaint



Fond des Blancs



Cite de Dieu, Port-au-Prince



Hotel Florita, Jacmel



Jacmel

# The Garden

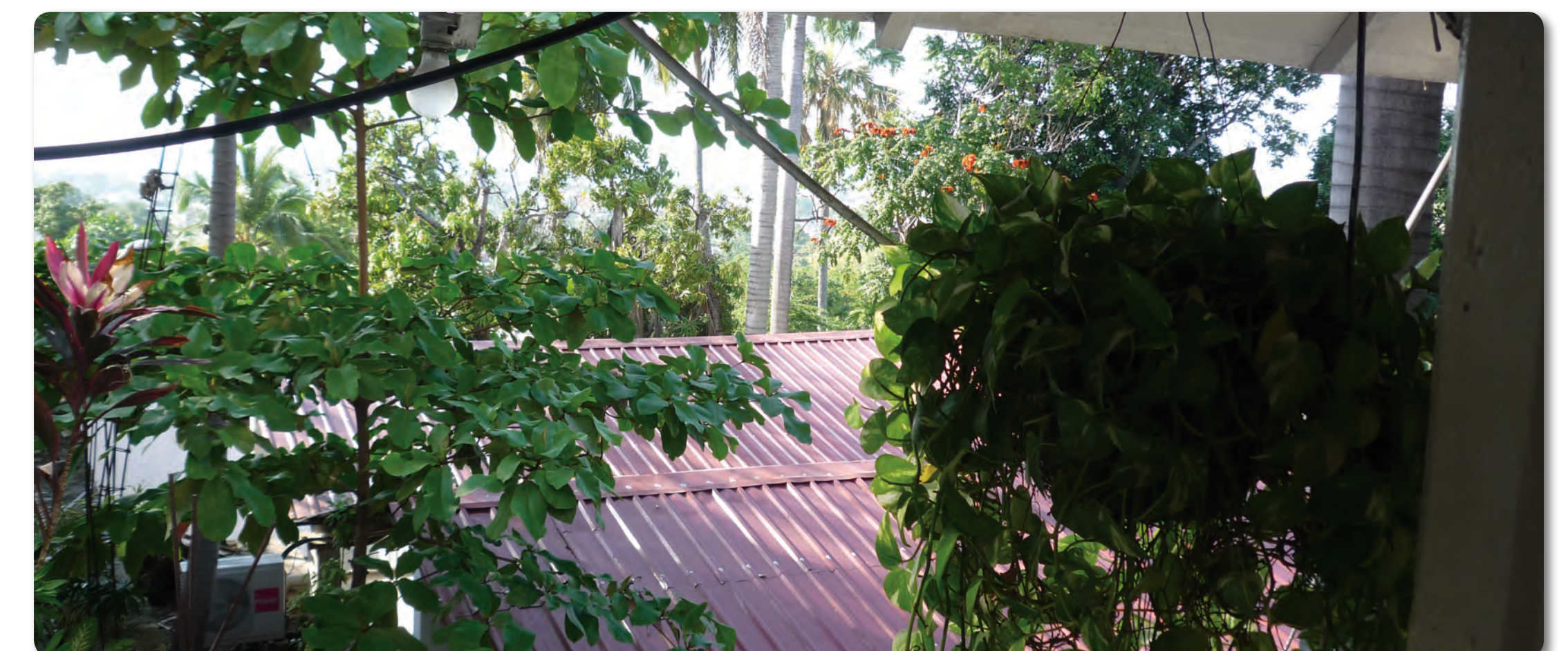
Haitian gardens, whether practical or ornamental, integrate the home with the landscape. Even the simplest rural household is likely to have ornamental as well as useful plants in the yard. The garden offers comfort and solace to the family and creates a beautiful and healthy environment. The integration of gardens into redevelopment, especially in urban areas, will be essential to improve the quality of life and health of the people.



Gaspard



Hotel Florita, Jacmel



Olofsson Hotel, Port-au-Prince

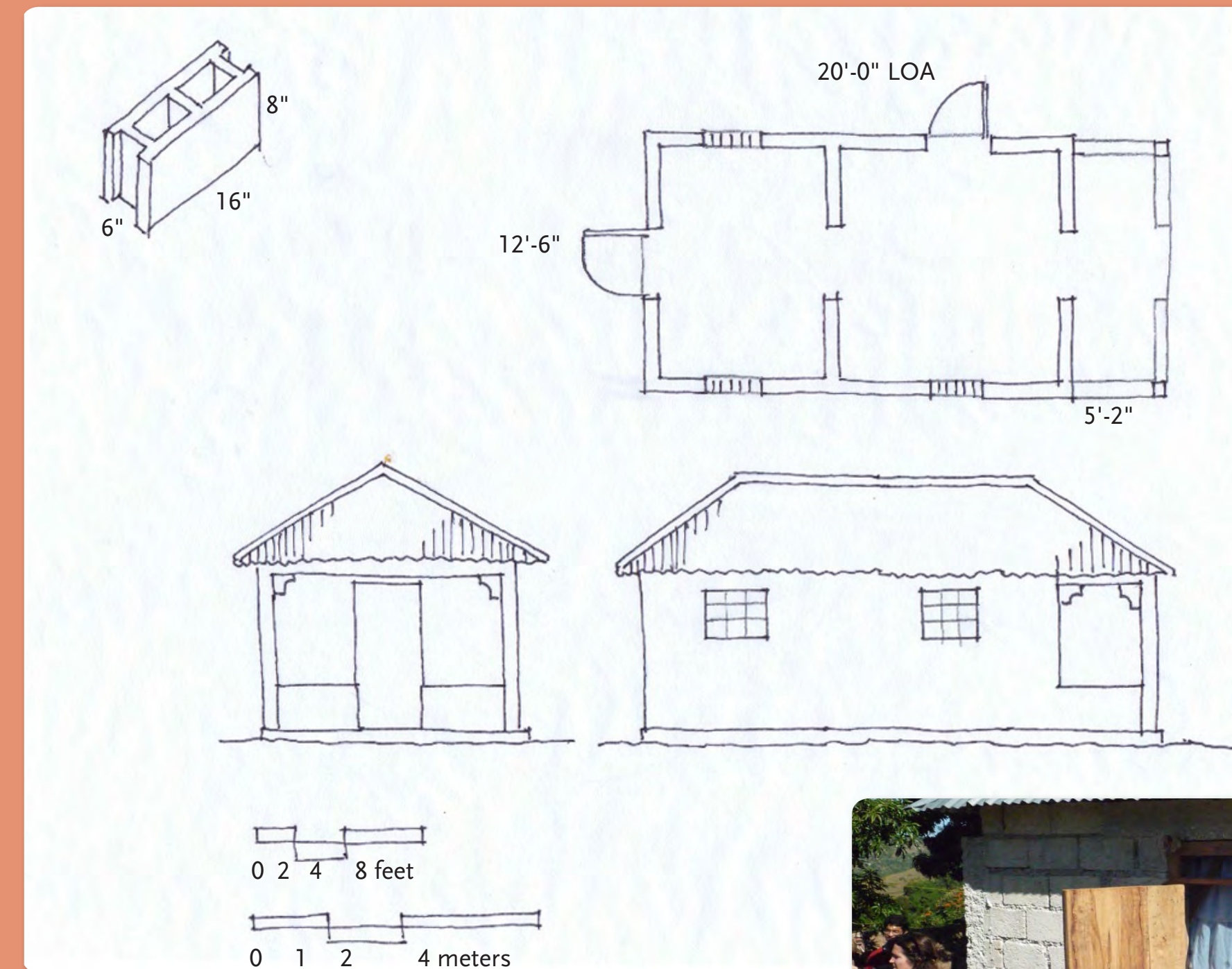


# Surveyed Households in the Area of Fond des Blancs

In September 2011 an interdisciplinary team from Dartmouth traveled to Haiti to gather information on the possibility of developing collaborative projects involving engineering, business, environmental studies, healthcare delivery and design. The team traveled to Port-au-Prince, Fond des Blancs and Mirebalais to meet with Haitian partner organizations GHESKIO, St. Boniface Haiti Foundation, and Zamni Lasante (*Partners in Health*).

As a follow-up to this trip and in association with the \$300 House Project in Haiti developed by Professor Vijay Govindarajan of the Tuck School of Business and Jack Wilson of the Studio Art and Engineering Science departments and in collaboration with the community development program of the St. Boniface Haiti Foundation, Tuck commissioned a survey of thirty households in the area around Fond des Blancs, in the center of the Southern Peninsula of Haiti. This survey was conducted in coordination with the Tuck School's First Year Project Program as a means to gather information on the possibility of implementing an affordable housing project in this area.

A second team traveled to the Fond des Blancs area in December 2011 and visited ten of the thirty surveyed households conducting interviews and measuring and documenting existing housing. The team also conducted community meetings with over 100 residents and community leaders of the Fond des Blancs area. This documentation was essential to gain an understanding of community expectations for infrastructure development and affordable housing and to assemble essential information needed to move the project forward. Perhaps the most important lesson learned in this phase of the project was that it was critical to engage the community in every aspect of the project and that they are enabled to see themselves as leaders in the process.

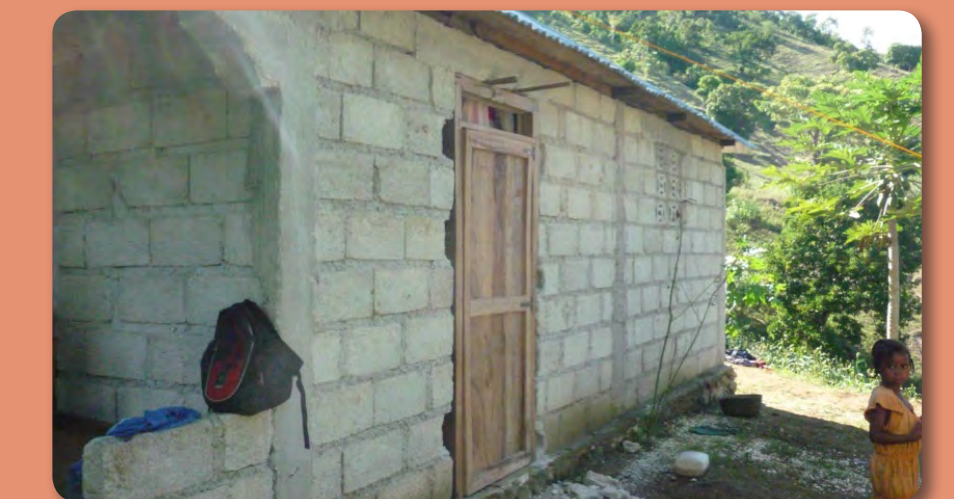


Plan and Elevations

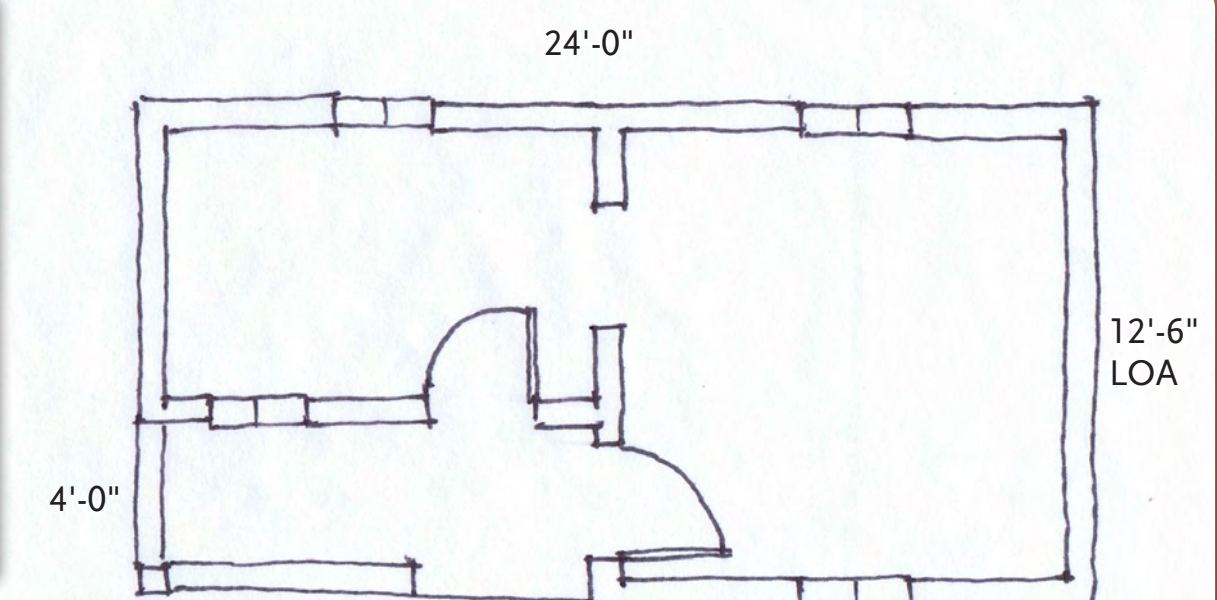
Madame Toussainte, Fond des Blancs  
New construction in a Lakou complex of approximately 50 residents.  
±250 square feet including gallery. Construction cost to date approximately \$1,800 USD.



Entry and Galri



Storage shed

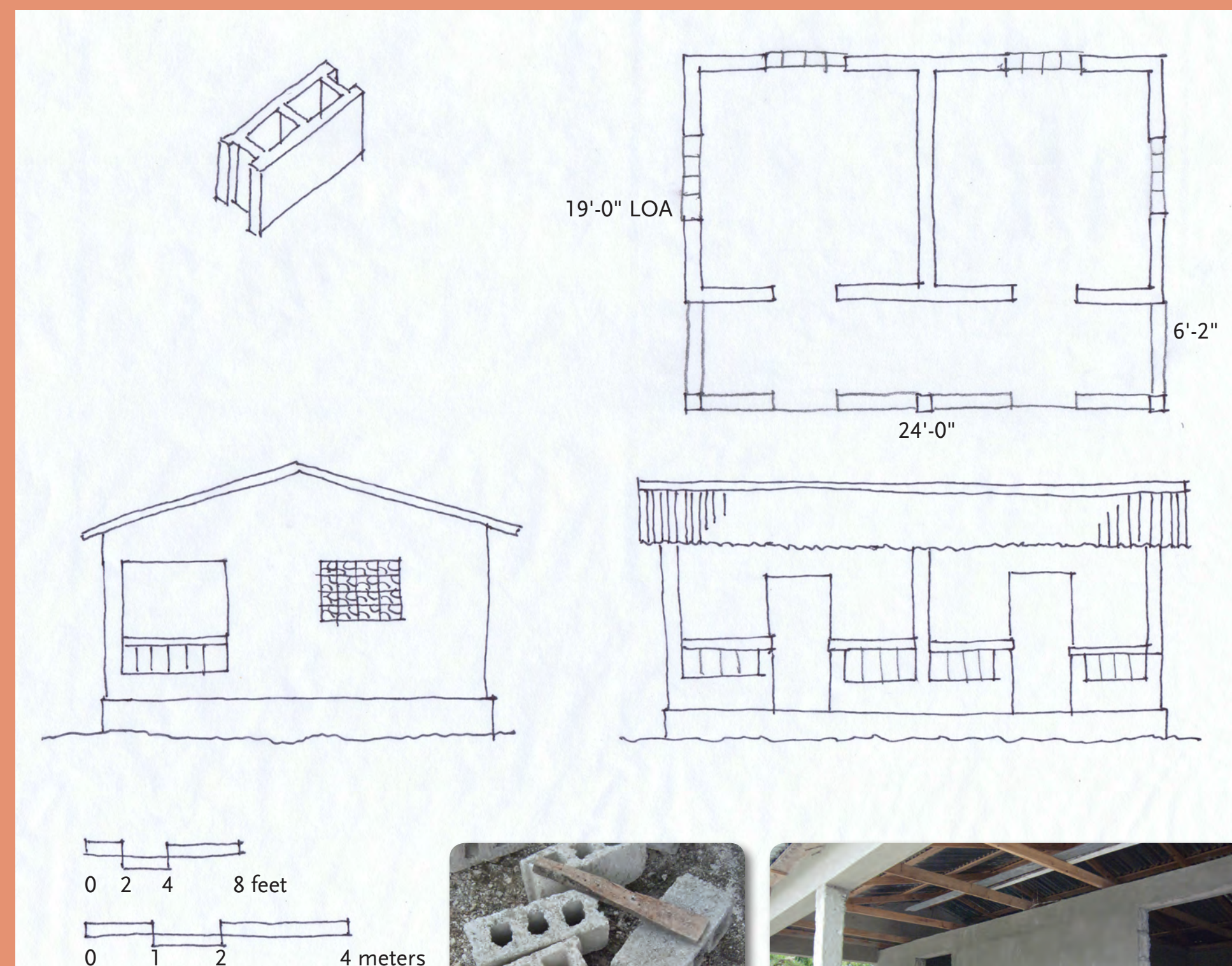


Entry and Galri

Food for the Poor Housing Development, Cha Cha, Fond des Blancs  
±312 square feet including gallery. Construction cost \$5,000 USD each.  
Limited success because of community layout, plan layout and construction detailing.

Plan and Elevations

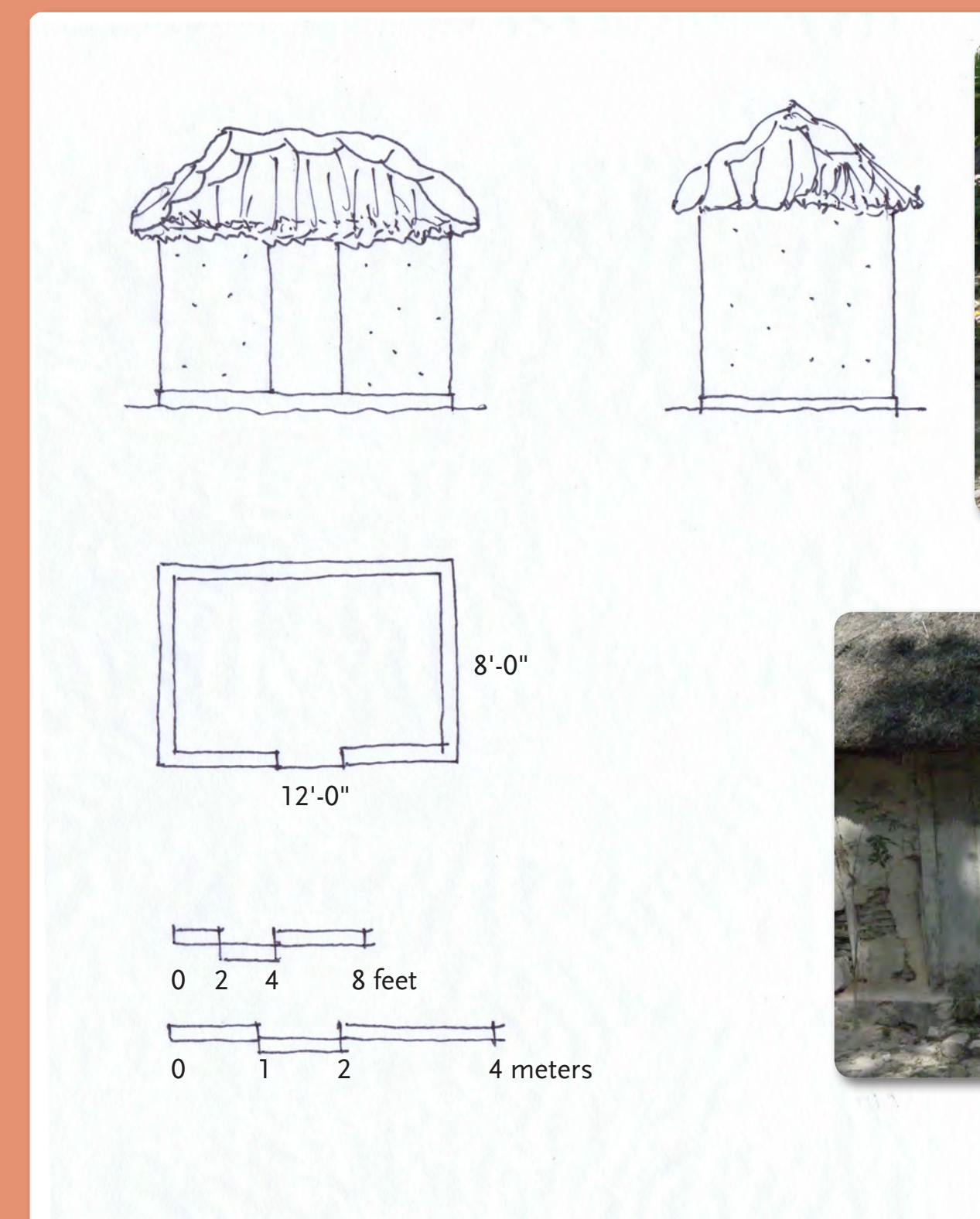




Plan and Elevations



Elderly housing under construction by St. Boniface Haiti Foundation  
Addition to existing complex with shared cooking and latrine facilities  
±460 sf cost estimated to be \$8,000US



Plan and Elevations



Newly constructed stand alone bedroom



Bathing area, no latrine

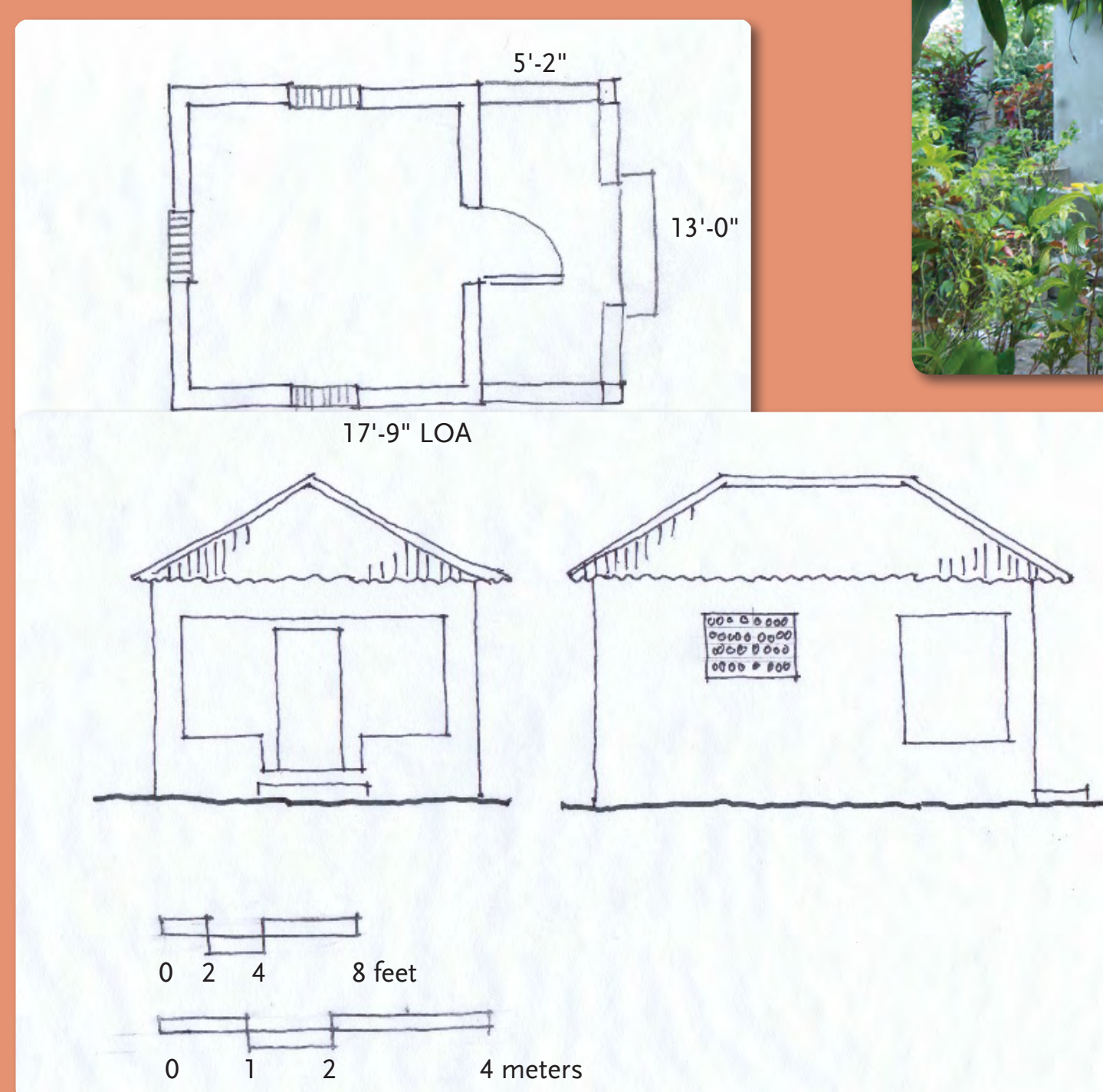


Older house damaged by earthquake



Interior of older house damaged by earthquake

Lahmonde, Fond des Blancs, Family Lakou  
Newly constructed stand-alone bedroom.  
±96 sf construction cost approximately \$200 USD, 2010 post earthquake.



Plan and Elevations



Front view with landscape



Galri



Kitchen



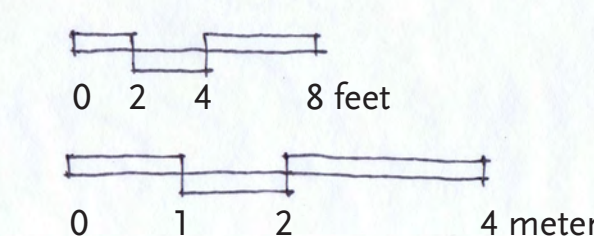
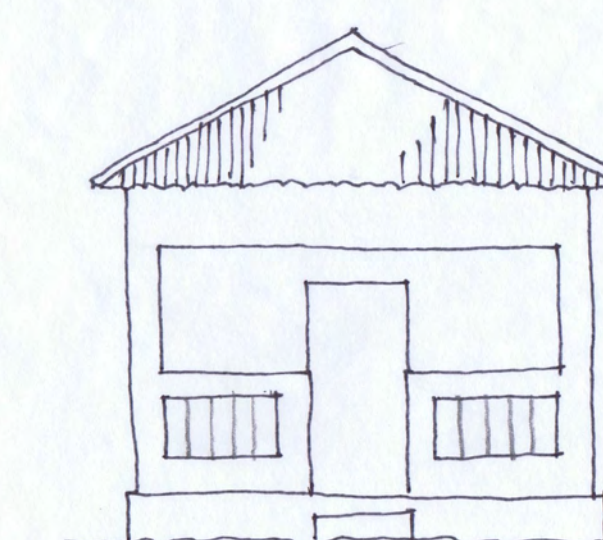
Entry



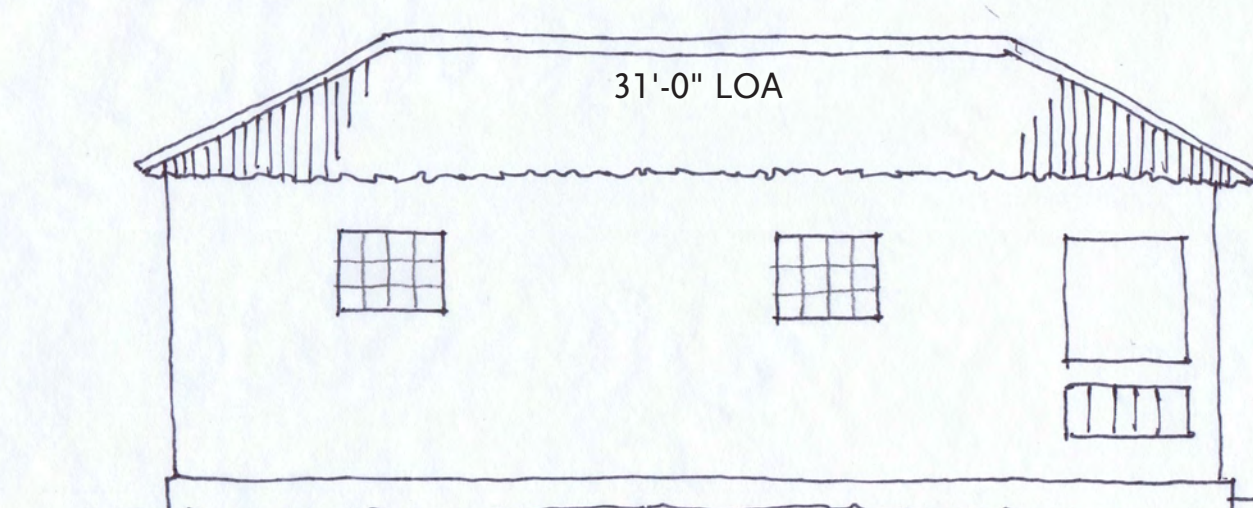
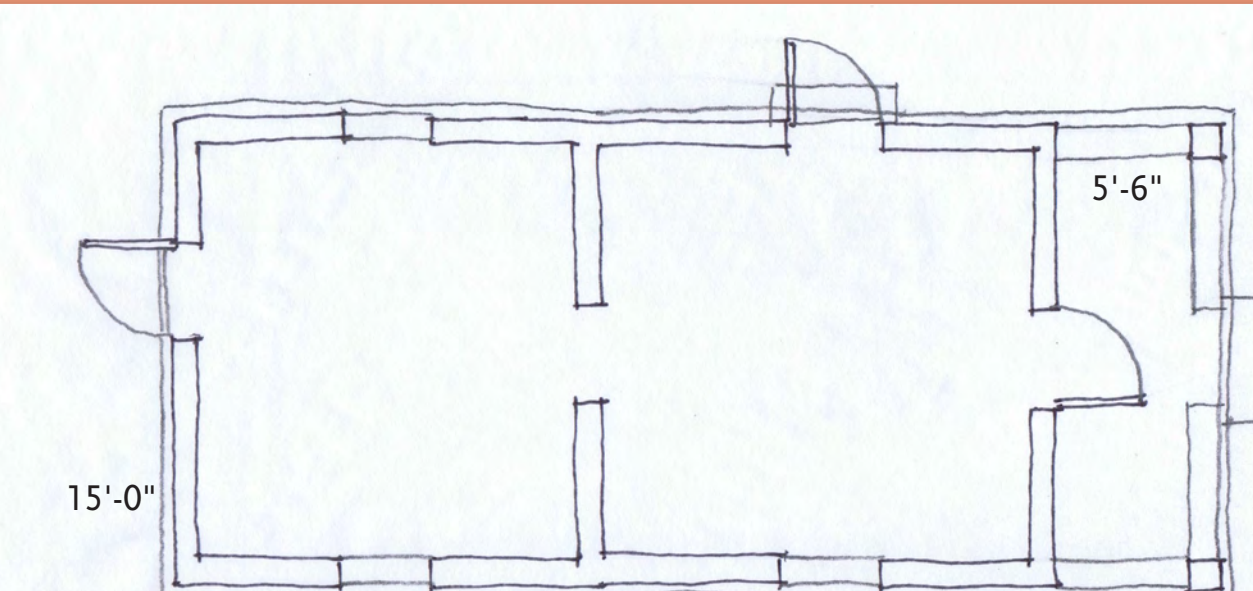
Kitchen



Galri



Plan and Elevations



Latrine



Gaspard, Fond des Blancs House  
built for a family of six by St. Boniface  
and Ratrap Cooperative in 2003  
±465 square feet including gallery  
Construction cost approximately  
\$4,000 USD, 2003



# Urban Architecture

The cities of Haiti are a blend of European urban planning principles and a more spontaneous settlement pattern. The typical town house is a two-story structure with tall rooms and a porch fronting the street, acting as the interface between public and private realms. While some older urban areas retain a more formal organization, the development of the *bidonvilles* (shantytowns) has taken place not only around their borders but also in their back alleys and open lots. This mixture represents the dynamic expression of urban life in Haiti and will inform the redevelopment of cities.



Martissant Bidonville, Port-au-Prince



Cite de Dieu Bidonville, Port-au-Prince



Market Cite de Dieu Bidonville, Port-au-Prince



Iron Market, Jacmel



Streetscape, Jacmel



Townhouse, Jacmel



Hotel Florita, Jacmel



# Rural Architecture

The small house – *ti kay* – is the building block of rural Haitian communities. About twelve to fifteen feet wide, the plan is usually two rooms, one behind the other, fronted by a porch, and with a separate outdoor kitchen and latrine. Traditionally built from wood-lattice covered with plaster, these simple structures are readily adapted to a variety of construction methods. Extended families group these homes together in the lakou, which houses common facilities and resources. This housing type is a key component in the regeneration of rural Haitian communities.



Gaspard



Gaspard



Gaspard



Fond des Blancs



Fond des Blancs

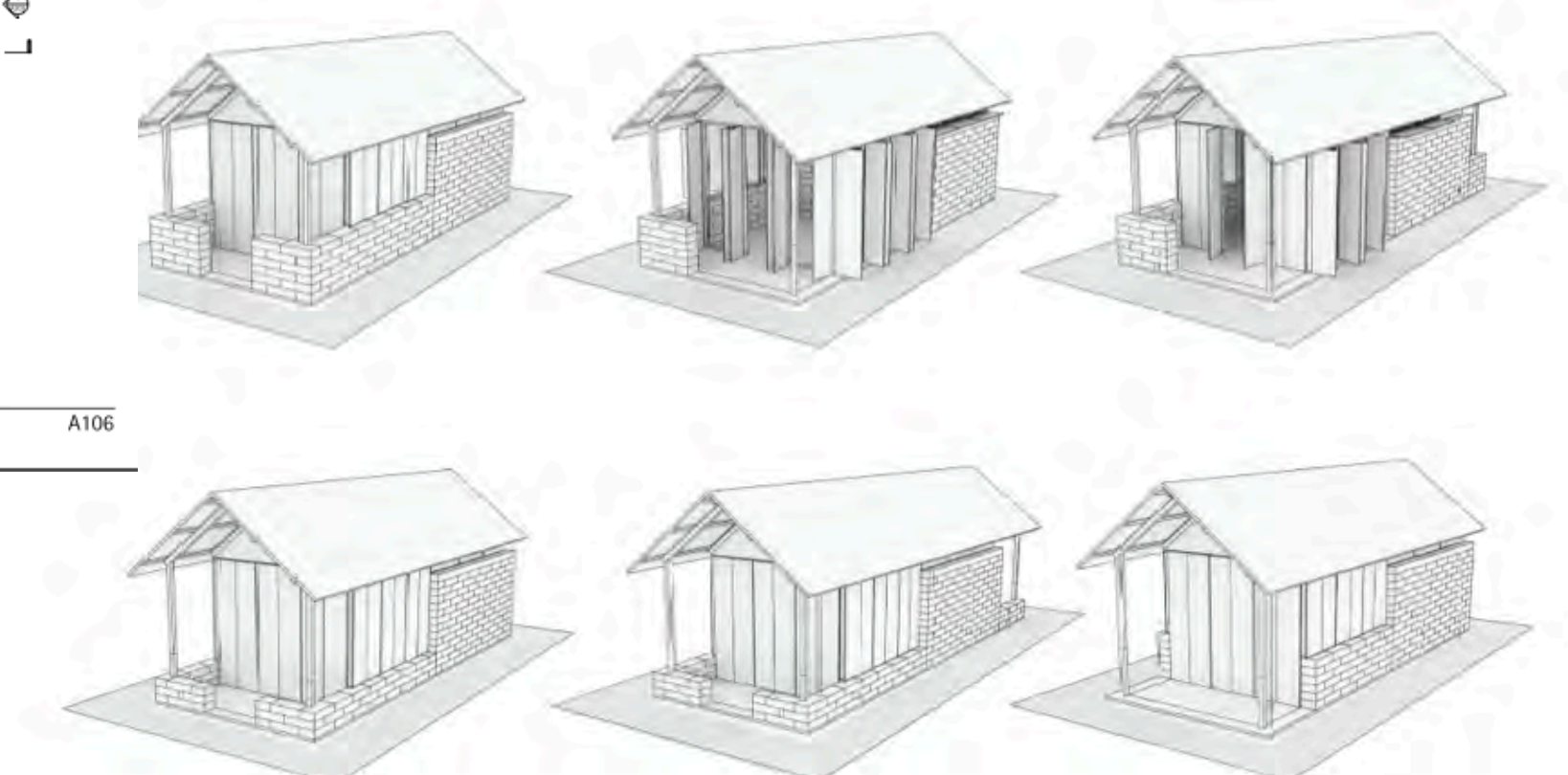
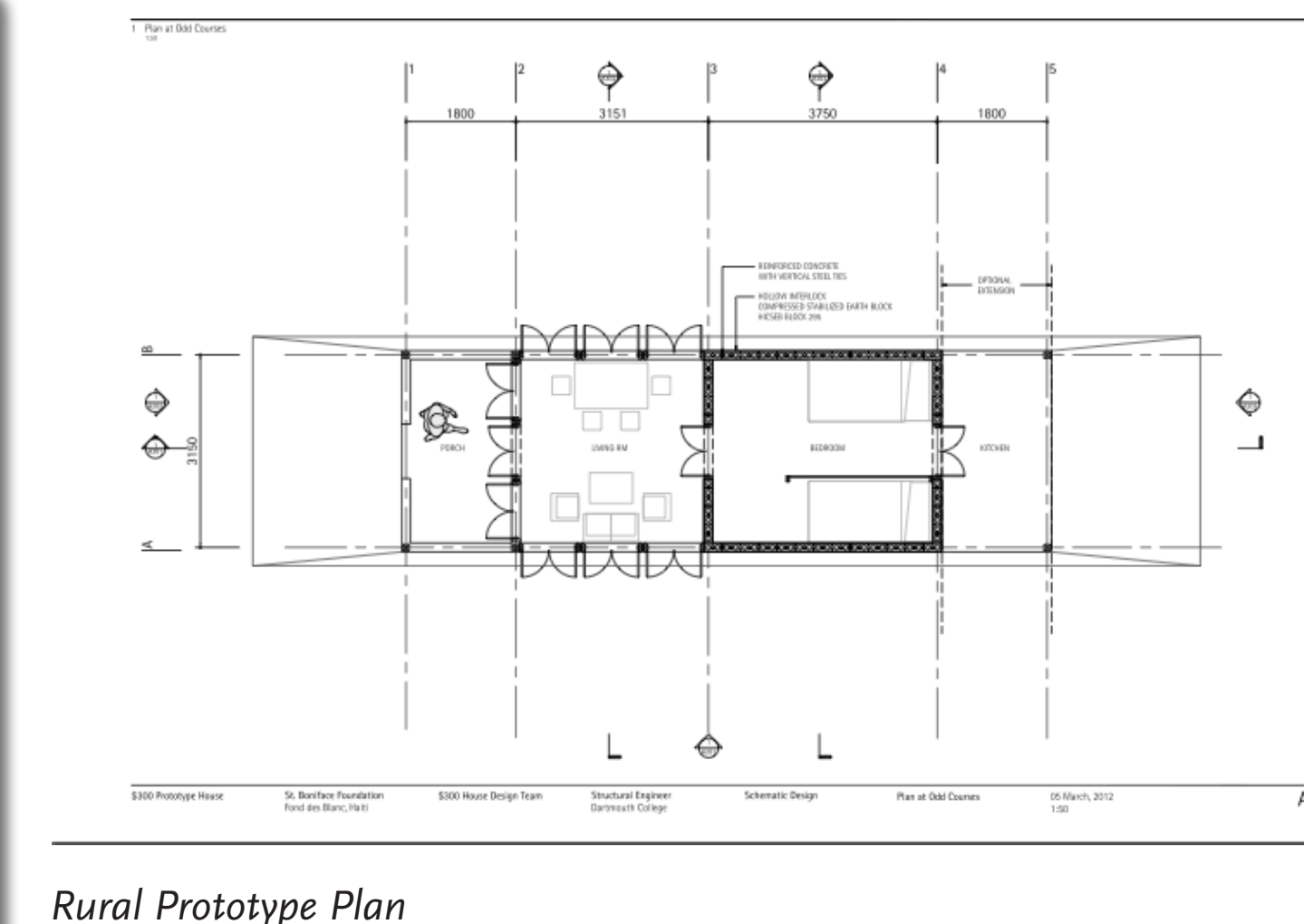
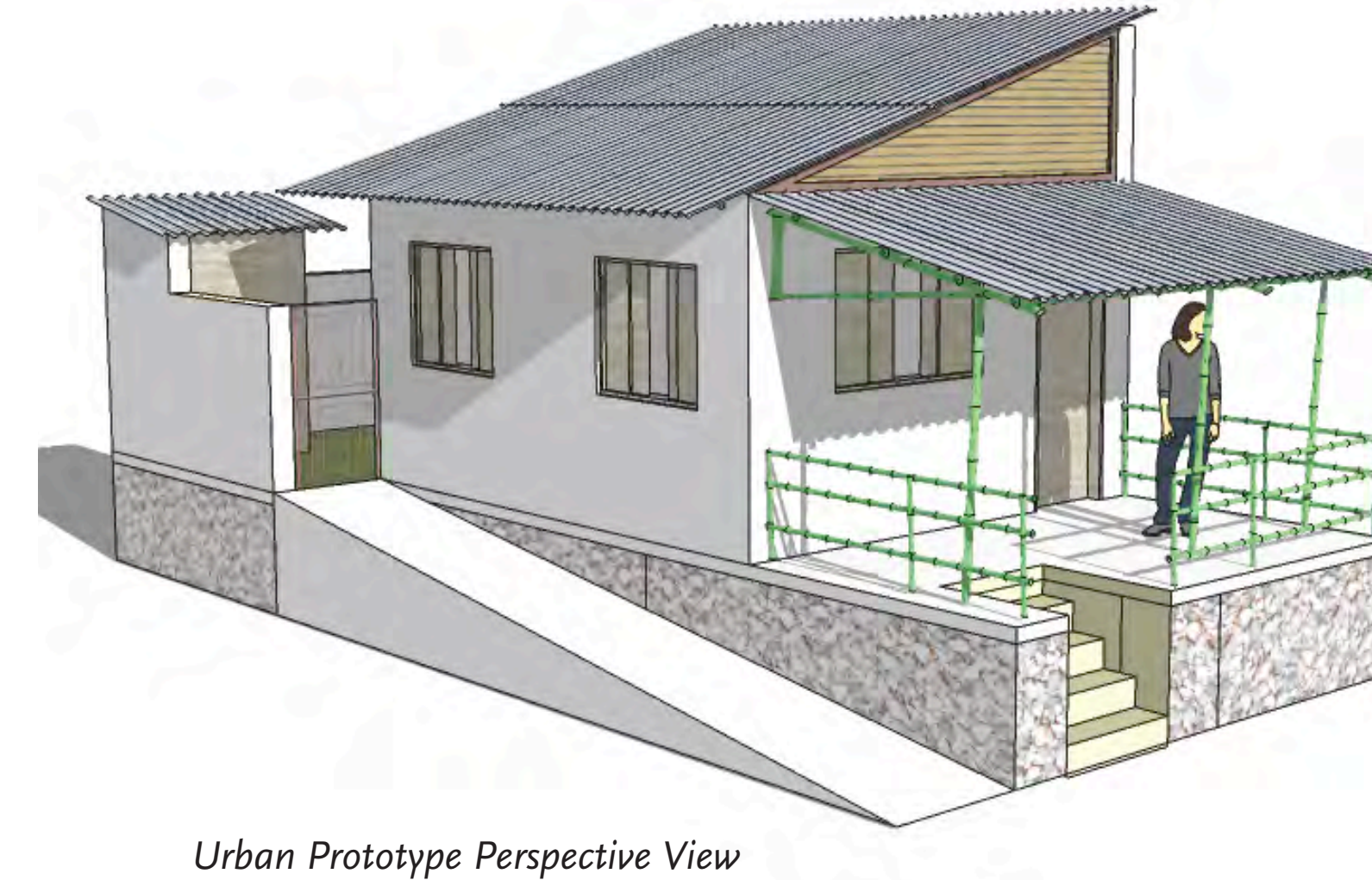
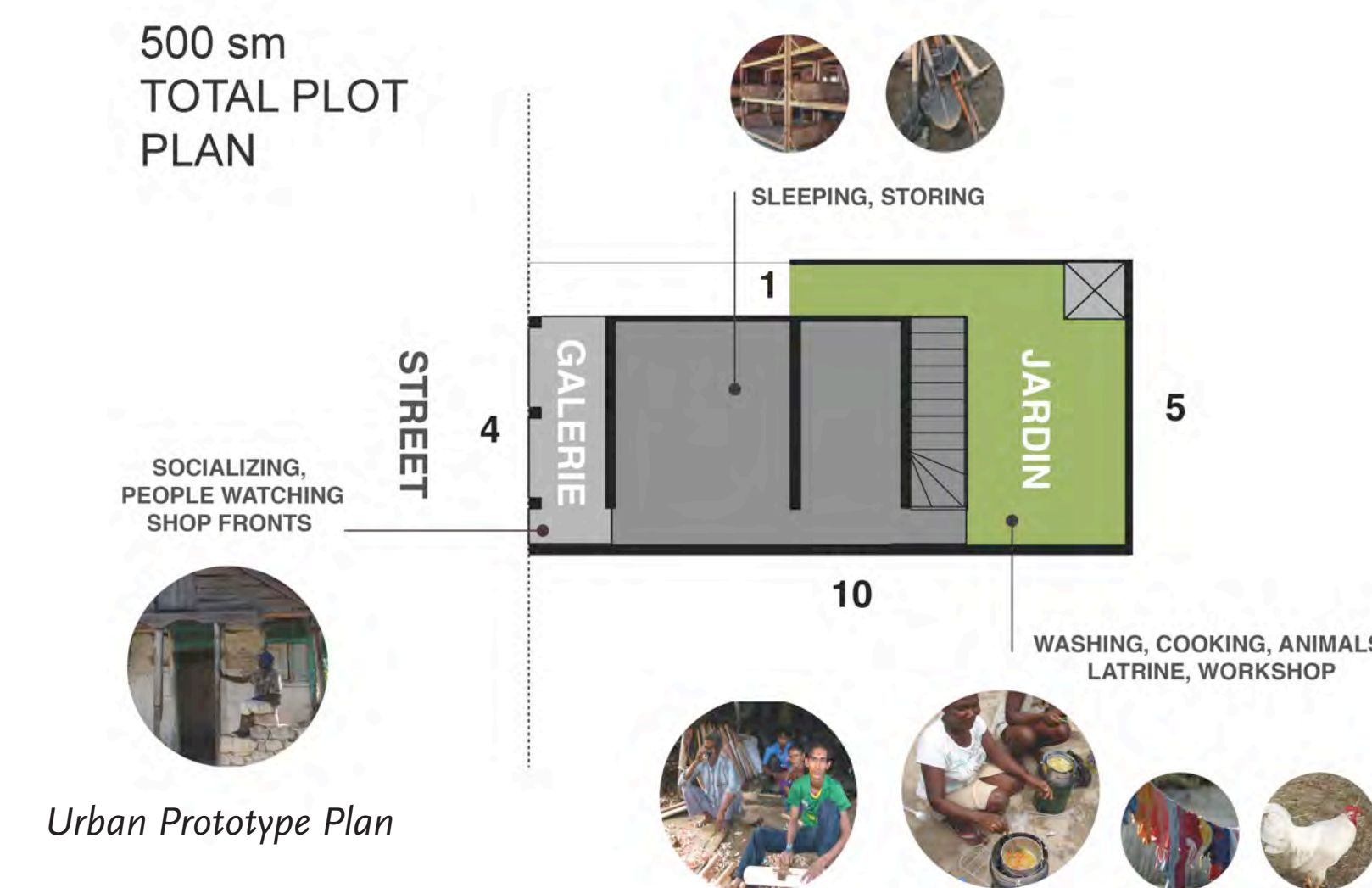


Lahmonde



# Affordable Housing Prototypes

In February 2012 a four-day workshop was held at Dartmouth to investigate the idea of developing both an urban and a rural prototype for affordable housing in Haiti. This workshop was the result of a blog called *The \$300 House* posted on the Harvard Business Review website by Tuck School Professor Vijay Govindarajan. His purpose was to challenge designers to think innovatively about addressing the problems associated with poverty and housing. An interdisciplinary team of over forty designers, engineers, healthcare professionals, faculty and students, including many Haitians formed four working groups to take on the challenges of the urban design, the rural design, community development and the creation of a business plan. The outcome was the development of two prototype designs to implement affordable housing projects in both urban and rural Haiti.





# GHESKIO

GHESKIO, the Haitian Group for the Study of Kaposi's Sarcoma and Opportunistic Infections, was the first institution in the world dedicated to the fight against HIV/AIDS. They have provided continuous medical care in Haiti since 1982, receiving approximately 100,000 patient visits annually and never charging fees. GHESKIO'S CORE mission includes maternal and child health, nutrition, the provision of clean water and sanitation, primary education, vocational training and microfinance programs. Dartmouth has collaborated with GHESKIO on numerous projects ranging from healthcare to sanitation to housing and economic development. Dr. Peter Wright of the Dartmouth Hitchcock Medical Center and Geisel School of Medicine has been associated with GHESKIO since shortly after their founding.



GHESKIO, Elementary School, Port-au-Prince



GHESKIO, Cite de Dieu, Port-au-Prince

# FOKAL

The Knowledge and Freedom Foundation (FOKAL) is a forward looking Haitian non-profit organization headed by former Prime Minister Michele Pierre Louis. Martissant is one of the poorest districts in Port-au-Prince and has become the focal point for one of FOKAL's important projects, the Martissant Park. Covering approximately 20 acres, it is the focal point of a delimited development zone, or ZAC, which spans two square kilometers and has approximately 30,000 residents.



Martissant Park, Port-au-Prince  
Photo Google Earth



Martissant, Port-au-Prince

The park itself has been designated as an area of national interest by the Haitian government and custodianship of the park has been delegated to FOKAL. An additional goal is to redevelop an abandoned hotel structure into the site of an advanced program in environmental studies. Within this context FOKAL is open to the idea that they partner with Dartmouth on the urban \$300 House Project in Haiti to construct prototype housing within the park to serve the needs of the park security staff and administrators and to act as a model for the type of housing that can be implemented within the surrounding area to help to develop the Martissant neighborhoods into places of community and security.



# St. Boniface Haiti Foundation

The St. Boniface Haiti Foundation (SBHF) was founded in 1983 and has developed a deep and trusted relationship with the community of Fond des Blancs. At the St. Boniface Hospital they provide free medical services to a catchment area of over 250,000 people and have over 50,000 patient visits per year. SBHF is also deeply invested in education and community development projects and has extensive experience in construction of medical facilities, schools, and housing. Their primary goal is to create a model of successful, sustainable development that relies on local leadership and workforce that can be replicated throughout the country. They have proven to be an excellent partner to Dartmouth in projects ranging from community health worker education to physician training to supply chain management to affordable housing and water supply infrastructure.



*St. Boniface Hospital, Fond des Blancs*



*Schoolchildren, Fond des Blancs*



*St. Boniface Hospital, Fond des Blancs*

# Partners in Health

Zanmi Lasante, Partners in Health, operates clinics and hospitals at 12 sites, including the newly opened national teaching hospital in Mirebalais and is the largest NGO healthcare provider in Haiti, serving a catchment of 1.3 million people with a staff of 5,400 Haitians. They pioneered the use of community health workers to care for HIV and TB patients throughout the country, especially in remote rural locations. PIH is a global nonprofit based in Boston, founded and led by Dr. Paul Farmer and Dr. Jim Yong Kim. Dartmouth became closely associated with Zanmi Lasante following the earthquake of January 2010 when the college sent 60 healthcare professionals along with 40 tons of medical supplies supported by \$1,500,000 in donations from the Dartmouth community.



*Dartmouth, St Boniface Haiti Foundation and Partners in Health Team, Mirabalais*



*University Hospital of Mirabalais  
Photo courtesy Partners in Health*