Chapter Three

Creation of A Common Ground

"In the early 1900s, Haitians sugarcane cutters, lured by the promise of work, began the seasonal migration to the Dominican Republic—the Haitians were willing to do this low-wage, back-breaking work whereas most Dominicans were not. Over the decades, many of these sugarcane workers did not return to Haiti at season end, and thus created a large, permanent population of Haitians in the Dominican Republic—a population that was not welcomed."

- Children of the Nations



Three • Introduction to the vernacular building styles of the Dominican Republic

When immersing oneself within the pure environment of vernacular architecture, it seems impossible to impose change. Through cultural analysis and research it seems through the understanding of how a different culture and small communities within that culture construct their own environments, it is possible to create new environments that can be accepted by these communities. Vernacular architecture speaks clearly to the region of Barahona, as the majority of construction, especially within the Bateys and Barrios, deals with the use of locally available resources and traditions. The houses of the Bateys reflect the environmental, cultural and historical context in which these families live within. The houses built within the Bateys are also seen throughout the Barrios and also within the main town of Barahona. Families build their own homes from the knowledge of construction that has been passed down through generations, which is an immediate comparison to the geometrical and physical calculations that create the architecture designed by architects. Vernacular architecture is of a major consideration and learning path for the development of this thesis, design wise. As an architect it is important to take all the information gathered upon numerous trips to Barahona in order to proceed forward with a design that is suited specifically to the people and may benefit their knowledge of their traditional vernacular homes.

R.W Brunskill defines the ultimate in vernacular architecture as: "...a building designed by an amateur without any training in design; the individual will have been guided by a series of conventions built up in his locality, paying little attention to what may be fashionable. The function of the building would be the dominant factor, aesthetic considerations, though present to some small degree, being quite minimal. Local materials would be used as a matter of course, other materials being chosen and imported quite exceptionally."¹

To better understand the buildings designed by the 'amateur' it was viable to look to the different vernacular building styles of the Dominican Republic. Not only looking at the region of Barahona, but to look to the capital city Santo Domingo, which contains rich historical colonial architecture from the discovery of this beautiful country. • Santo Domingo_ colonial architecture



Fig. 3.1_16th Century building techniques



Fig. 3.2_ House of Christopher Columbus



Fig. 3.3_ Different architectural styles



Fig. 3.4_ Apartment building in colonial city

• The Bateys

Algadon / Altagracia / Los Robles



Fig. 3.5_ Houses constructed with palm leaf roofs



Fig. 3.6_ House with text along the walls



Fig. 3.7_ House with major structural issues



Fig. 3.8_ Bright colors used individually identify the homes

• The Barrios

Don Bosco / Pueblo Nuevo



Fig. 3.9_ Typical metal siding house



Fig. 3.10_ Wooden frame addition to a smaller house



Fig. 3.11_Typical CMU block house



Fig. 3.12_ Abandoned CMU block house

Upper Class Residential Homes



Fig. 3.13_ Residential home



Fig. 3.14_ Residential home



Fig. 3.15_ Residential home



Fig. 3.16_ Residential home

Lower Class Residential Homes



Fig. 3.17_ Apartment building



Fig. 3.18_ Small wooden residential houses



Fig. 3.19_ Small residential house



Fig. 3.20_ Painting on the side of a residential wooden house

Architecture of the Sugar Industry



Fig. 3.21_ Office for the sugar factory



Fig. 3.22_ Original office of the sugar factory



Fig. 3.23_ Traditional wooden sugar workers home



Fig. 3.24- Rear of abandoned sugar factory office

Vernacular homes built by Americans when the sugar industry began to boom within Barahona.



Fig. 3.25_ Traditional wooden sugar workers home



Fig. 3.26_ Traditional wooden sugar workers home



Fig. 3.27_Traditional wooden sugar workers home



Fig. 3.28_ Traditional wooden sugar workers home

Schools & Universities



Fig. 3.29_ New university of Barahona



Fig. 3.30_Vocational high school in Barahona



Fig. 3.31_ Local middle school in Barahona



Fig. 3.32_ Local high School in Barahona

Churches & Cathedrals



Fig. 3.33_ Local church in downtown barahona



Fig. 3.34_ Local church in downtown barahona



Fig. 3.35_The first church of Barahona

Hotels



Fig. 3.36_ Hotel Costa Larimar



Fig. 3.37_ Hotel Costa Larimar



Fig. 3.38_ Hotel Guarocuya



Fig. 3.39_ Hotel Guarocuya

Food Supply Stores & The Market



Fig. 3.40_ Local market selling spices



Fig. 3.41_ Local market selling potatoes and onions



Fig. 3.42_ Local fisherman selling fresh fish



Fig. 3.43_ Local fresh chicken

Local Services



Fig. 3.44_ Local fire station



Fig. 3.45_ Local phone company store



Fig. 3.46_ Local store



Fig. 3.47_ Local opticians

Construction Suppliers



Fig. 3.48_ Local metal shop



Fig. 3.49_ Interior of local metal shop



Fig. 3.50_ Local construction materials shop



Fig. 3.51_ Local cement and CMU block producers

• Diagram_ Transportation Routes of Barahona

Here you can see the entire city of Barahona. Within Barahona there are many streets, the majority of which are not paved roads. The main paved streets used by the people of Barahona are seen here in red. The local airport is shown in orange. The unpaved streets are usually unpaved narrow back alleys that lead to many houses. These roads change due to population growth, thus shown here by a dotted line. It is clear that there is one main road that takes you in and out of the town center. This road is important as it connects the downtown area of Barahona to the proposed site.





• Diagram_ Public Recreational Fields and Public Parks in Barahona

Public Baseball Fields

Public Basketball Courts

Public Parks

Here you can see the entire city of Barahona. Within Barahona there are many public recreational areas. This diagram shows the number of different recreational areas as well as the variety of types of recreational areas that are currently available for the children of Barahona to use. The number of basketball courts are exceedingly higher than expected. Whereas the number of public parks is quite low for the entire town. The community complex will house new recreational areas, such as these, that will be available for the public to use. L





Three • Determination of Site

Micro-climate Conditions

The Dominican Republic is known for its beautiful tropical weather year round. The average annual temperature is approximately 77°F. There are only slight variations between the summer and winter months. The winter seasons run from November until April, in which the humidity is much lower and the evening temperatures cool down.² (figure 3.52)

Regions such as Barahona, which is located in a coastal area generally experience highs of around 83°F (28°C) during the days, experiences lows of about 68°F (20°C) in the evenings.³ The interior of the Dominican Republic is rather mountainous and temperatures within this region are considerably cooler, sometimes dropping below freezing at the high peaks within the island. The summer season of the Dominican Republic runs from May to October. Temperatures in regions such as Barahona, which is located in a coastal area rise to around 87°F (31°C) during the day, dropping down to about 72°F (22°C) at night.⁴ Due to the higher humidity within the summer season it feels to the human body much hotter during this season.

The coolest areas in the Dominican Republic are the Cordilera Central mountain regions, where the average highs can hover around 61°F (16°C).⁵ The desert regions which are located in the southwest of the Dominican Republic experience some of the highest temperatures on the island, reaching up to 104°F. The northern parts of the Dominican Republic see the most rainfall year round, mostly between the most of October and April. In comparison the southern regions, such as Barahona, receive the most rainfall within the months of May through November.⁶



• Maximum & Minimum Temperature

• Average Precipitation



Comparative Climate Graph





• 135

Fig. 3.59



• Sun Path Diagram

• Yearly Wind Rose Diagram

136 •

Latitude: 18°N



March Wind Rose Diagram

• June Wind Rose Diagram



• September Wind Rose Diagram

• December Wind Rose Diagram

Three • Trip One

Personal Journal

The region of Barahona is one both full of beautiful greenery, but also of many poverty stricken Bateys, Barrios and villages. Working within this region is of great importance as it is clear that the southern region of the Dominican Republic has the greatest need for independence. The exploration into the social and cultural aspects of this country and its housed inhabitants of differentiating cultures is the premise upon which the design work will begin and continue into production.

Driving along the long narrow roads from Santo Domingo to Barahona, the views vary from greenery to large rivers full of many locals, taking a cool dip, as shown in figure 3.62. Although the road taken upon is a main access route from the capital to the southern region, the size of this road is only barely wide enough for two lanes. Crossing the small trucks full of bananas and the mopeds transporting up to four people, creates a journey of one which is a cultural experience. (figure 3.63)



Fig. 3.66_ Locals swimming in the river



Fig. 3.67_Typical form of transportation

Three • Introduction to the Site

• Location and Proximity

The site chosen for the design of the community complex was selected by members of the board for Children of the Nations. After the initial site visit, it became clear why this site had been chosen for such a large project to be built upon. Though the research of other potential sites, it is evident that this site is of the best option within Barahona for this project to be completed. Its location and proximity to the Bateys, Barrios, downtown Barahona and the facilities of Children of the Nations is also of great importance. This corresponds very well with all these factors. The land sits upon the road which leads to Haiti from the security checkpoint which allows you into Barahona. This security checkpoint is the point at which many buses and cars are checked for transportation of illegal persons and drugs. This security checkpoint is a significant point because all Haitians entering into this region of the Dominican Republic travel upon this road that leads to this checkpoint. The land is also located in between the downtown area of Barahona and the location of the Bateys, which are further north. This is very important because currently all facilities owned and operated by Children of the Nations are within the Downtown area. This makes it somewhat difficult for the families living in the Bateys to make the longer journey to reach the clinic, the recreational fields, the office and the mission house. Through the design of a new community complex for Children of the Nations all of these facilities will be located in closer proximity to the Bateys and will be within one central location. This site is certainly most suited to the needs of the community complex and also more importantly the people of Barahona.

Documentation of Site

Upon the first site visit in July 2009, it was important to document the land and the natural features. This land was originally presented as a 24 acre site in total. The portion of the land to the East contained more large rocks and an uneven soil surface. Whereas the land to the west contained vast open spaces that would be great areas for the placement of the community complex. Noting and documenting the trees upon the site was stressed as it is illegal to remove trees within the Dominican Republic, due to past events of deforestation in the neighboring country of Haiti.

After a second site visit, it was apparent that this site was much larger than 24 acres. After calculation from legal documentation the site is a total of 144 acres.



Fig. 3.68_ Panoramic view of open space within parcel 209



Fig. 3.69_ Shaded area within parcel 209 that contains a natural well



Fig. 3.70_ Panoramic view within parcel 209 showing the vegetation and natural winding pathways



Fig. 3.71_ Owner of parcel 209; Claudio



Fig. 3.72_ Beautiful trees on the site

• Topography and Flora



Fig. 3.73_View on site to the mountains in the south



Fig. 3.74_ Natural winding pathways upon site



Fig. 3.75_ Different trees upon the site



Fig. 3.76_Wild horses roaming the land



Fig. 3.77_ Tropical flowers upon the site



Fig. 3.78_ Hibiscus flowers upon the site



Fig. 3.79_Tropical flowers upon the site



Fig. 3.80_Tropical flowers upon the site

• 145

Three • The Site

• Location of Site in Barahona







Three • The Land

• Parcel Number 209

Parcel 209 has been sub dived over the years since purchased as a whole. The buildable area for this thesis is the area within these now privately owned parcels, which are listed and detailed below.



This parcel of land is privately owned and upon this land sits a water-pumping station. *total area: 4.07 acres*

Parcel N^o 209 - B

This parcel of land is privately owned and upon this land is an abandoned large hotel, which is currently owned by the bank. *total area: 2.5776 acres*



Parcel N^o 209 - C

This parcel of land is privately owned and is currently occupied by a small residential structure and a large abandoned commercial structure. *total area: 3.1044 acres*



Parcel N^o 209 - H

This parcel of land is rented on a monthly basis by the owner of the original parcel 209. It is currently used by a Salt Factory for storage of materials.

total area: 8.26197 acres



Parcel N^o 209 - A

This parcel of land is privately owned and is currently occupied by a residential structure. There is also a radio tower located upon this piece of land.

total area: 0.898 acres

• Parcel N^o 209 - A



Fig. 3.84_ Radio station tower and entry to residential property



Fig. 3.85_ Residential house within the property

• Parcel N^o 209 - A

• Parcel N^o 209 - C



Fig. 3.86_ Abandomed commercial structure on privately owned piece of property



Fig. 3.87_ Residential house on privately owned piece of property

• Parcel N^o 209 - C

• Parcel N^o 209 - H



Fig. 3.88_View of salt storage area upon a rented piece of property



Fig. 3.89_ Abandoned hotel upon a privately owned piece of property

• Parcel N^o 209 - B

• Parcel N^o 209 - B



Fig. 3.90_ Entry to the hotel



Fig. 3.91_ Parking lot of the hotel

• Parcel N^o 209 - B

Three • *Site Analysis*





Three • Site Analysis



• 155

Three • Site Analysis





Three • *Site Analysis*





Three • *Site Analysis*







• 159







Three • Site Analysis





















Good view toward open land and mountains

Three • Summary Statement

Chapter three mainly deals with the analysis of Barahona, and more specifically the chosen site for this thesis to be designed upon. It is necessary to analyze the downtown area of Barahona, because this area is currently the home to 'Children of the Nations' operational buildings, as well as the practice fields for 'I Love Baseball'. The downtown area of Barahona contains many of the needs for the people, but these needs are not readily available for the uses of the families and children living in the Bateys.

Looking to the building typologies of the area begins to paint a clear picture of the differences of architectural styles and more importantly the standard of living for different social classes. The need to identify the architectural types of the lower class areas is important due to the outcome of this thesis will look towards educating the people within the area of architecture and construction.

The site analysis of the land to be used for the design of the community complex is very important as this land is looking to be purchased by 'Children of the Nations' based on the main factor of if it will be the best site available to build. Through immense site analysis and research it becomes very clear that this site is perfect for the goals of the project to be completed. Pre-site analysis is was thought this land was approximately twenty-four acres in size. Post-site analysis it has been calculated from the original site plans that the total land area is approximately one hundred and forty-four acres. After this information was calculated the site analysis for this project took to new heights, identifying the most important aspects naturally available and how factors will affect the design of the complex. It has been determined that all natural site features and other factors work will in correspondence with the design goals for the community complex.

Three • Endnotes

 $^{1}\,$ R.W. Brunskill, 'Vernacular Architecure: An Illustrated Handbook, (Faber &

Faber, 4th ed, 2000), pp.27-28, ISBN 0571195032.

³ "Climate in the Dominican Republic by Hispaniola.com." Dominican Republic

Travel Guide. N.p., n.d. Web. 9 Nov. 2009. <http://www.hispaniola.com/do>

⁴ Ibid.

⁵ Ibid.

⁶ Ibid.