COMPANY TOWNS REVISITED:
HISTORIC TYPOLOGIES AS A MODEL FOR GROWTH AND STABILITY IN
DEVELOPING COUNTRIES

A Thesis

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by

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PREFACE

In 1338 the Italian painter Ambrogio Lorenzetti was commissioned to paint a mural representing the effects of good government as a lesson to the city of Siena. While the intent of the painting is to address issues of politics during a tumultuous period, it is worth noting that the people are framed within the context of buildings and their relationship to the surrounding land. On the other hand, the renaissance painting *View of an Ideal City*\(^1\) conveys a scene of great beauty where buildings and space are emphasized while the few people shown are relegated to the role of accessories. Although they vary greatly in style and approach, both paintings convey the message of a better world through the medium of art. It is this concept of living together well in beautiful places that I hope to explore in both the research and design phases of my thesis.

Figure 1. Lorenzetti’s *Effects of Good Government*

\(^1\) Painting by an unknown artist, from Tuscany in the Walters Gallery, Baltimore.
While designers should always strive for the ideal, reality dictates that we must account for a world that is less than perfect. In order to make successful use of architecture and urbanism, designers must address a given set of problems and resolve them to the greatest degree possible. For the purpose of this project the author has chosen to confront the issue of poverty in developing countries by focusing on Haiti as a given location with unique variables of politics, geography, and social structure. The goal is to develop a strategy for designing communities based on the historical model of company towns that will increase people’s quality of life through architecture, urban planning, and site design. Each of these design disciplines will be subject to the circumstances of the site as influenced by the politics and culture of Haiti as well as geography.

There is substantial reason to believe that natural resources and local industries can support an economically viable community long enough to foster stability and growth on a small scale as seen in the myriad examples of company towns world wide. This stability and growth can in turn serve as the foundation for continuous employment, education, and other necessary welfare programs for a largely unskilled labor force. By
providing jobs and supplying shelter company towns could drastically improve the lives of employees while generating a useful and hopefully profitable product.

Several aspects of this proposal must be understood prior to considering design solutions. First, the purpose of a company town is to generate wealth. Traditionally this wealth would be acquired for the personal gain of the owner of the company. This inquiry presupposes that the company must put the interests of the employees before those of the employer, essentially a not-for-profit company that redistributes acquired wealth. Second, the company town must isolate and insulate itself from politics on a local and national level. In third world countries, politics are often the source of rampant poverty and destabilization. Finally, any new company town must account for its own unique site and circumstances. This includes, but is not limited to, resources, geography, climate, culture, and history.

Figure 3. A company town in Arizona (Ajo)
After the economic and social concerns have been identified they can be considered in terms of town planning and architecture. Unlike the popular towns of New Urbanism, these company towns would require development in quality as well as quantity. Whereas towns such as Seaside, Ion, and Poundbury are the products of established middle-class economics, company towns in developing countries would aim to develop wealth through the sale of their products. As a result, the town itself would aspire to developing the quality of spaces and buildings in an evolutionary manner. What unites the concept of proposed company towns and existing New Urban towns is the role played by design. Architecture, urban design, and site planning would presumably develop along with wealth, thereby improving the aesthetic quality of the town in proportion to the economic success it creates.

The ideas encompassed here represent a struggle to overcome the realities of an imperfect world in hope of attaining an ideal one. If company towns in developing countries manage to provide a stable economic and social environment, then they can begin their growth towards an ideal city.
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The faculty and staff have all been tremendously helpful either in making recommendations, insights, or offering a friendly word during the busy school semesters. I owe a specific debt of gratitude to Fr. Richard Bullene, C.S.C. for his role as thesis advisor in addition to professors Robert Amico and Victor Deupi who served as readers for this thesis.

Finally, I owe a debt of gratitude to my family and my wife, Allison, for their constant encouragement and contributions to these memorable two years at Notre Dame.
INTRODUCTION

In the early morning of August 29, 2005 Hurricane Katrina made landfall just east of New Orleans causing unimaginable destruction. Early estimates place death tolls in the thousands and property damages in the tens of billions. As the city struggles to recover from the tragedy, a troubling reality has emerged from the ruins: poor people of the area are the ones who by far suffered the most.

While the middle and upper classes must deal with the frustration of insurance and damages, they are at least safe because they had the means to evacuate. Images of the poverty stricken people left behind tell a different story. They remind Americans of countries who are used to seeing hungry, exhausted, and desperate people on the covers of newspapers: third world countries like Rwanda, Ethiopia, and Haiti.

This situation is not new however. Just last year Tropical Storm Jeanne struck Haiti killing over three thousand people. Several days later the same storm, strengthened to a Category 3 hurricane, hit the East Coast of Florida and killed five people. During that entire storm season, four hurricanes accounted for 112 deaths in the state of Florida. The disparity in deaths between the United States and Haiti can directly be attributed to the difference in resources, showing the effects of nature on wealthy countries versus those that are poor.
Having lived in Florida for three years and seeing my former hometown struck by two hurricanes prompted me to consider the situation. While Florida had the support of federal aid and nationwide volunteers, Haiti had little if anything. At this point I began contemplating how I could use my research as a means to understanding the circumstances of third world poverty and how design can improve the lives of extremely poor people.
My inquiries led me to the Haiti Program for Notre Dame where I found a possible client for what has now become the subject of my thesis. The Haiti Program, begun by Fr. William Streit, C.S.C. and endowed by the Gates Foundation, is an effort to introduce medicine and minerals to the Haitian diet as a means of combating disease and malnutrition. These medicines are distributed as a supplement to salt which will be harvested and prepared by the program. In order to accomplish their goals, the program will need facilities for collecting, processing, and packaging the salt along with distribution and administration requirements. These facilities represent the impetus for developing a sustainable community based upon urban planning and architectural design for a third world community.

My goal for this project is to design what is commonly known as a company town, a community built around a single industry or company, and to develop urban planning and architectural solutions that could realistically be implemented to improve the lives and conditions of third world people. In order to accomplish this goal I have prepared the following chapters to explain both the current problems and potential solutions involving Haiti, company towns, urban planning, and architecture.

The first chapter focuses on the geography, history, politics, and culture of Haiti. This information explains how the terrain and weather help determine the evolution of architecture on the island of Hispaniola. The buildings are a byproduct of inhabitants, who are described in the sections on history and politics. These sections are fundamental to understanding the current circumstances of Haitian poverty and represent many of the design considerations in terms of social conditions of the present day. Additionally, the culture that has developed on the island comes to bear on the design process and is
addressed along with the rest of the background information. This includes religion, arts, food, and ceremonies.

The second chapter explains what company towns can serve as a model for localized development in unindustrialized countries. It explains what exactly company towns are and how they have changed over the last three centuries. Precedents for these towns have been selected for their contribution to each significant aspect of company town history. As with the development of these towns as a type, factors are considered in order of economics, social improvement, and the role of design. The second part of the chapter is a description company towns can be used as a means of development for poor countries.

The third chapter addresses the issue of town planning through examples of urban design. This includes examples of ideal cities, planning strategies, and company towns noted for their planning. The physical structure of the proposed company town will also be described for further development into architectural design.

Architecture is the focus of the fourth chapter and includes information on Caribbean design history, precedents, and a proposal for my design. It should be noted that both the urban design and architecture are considered part of a developmental process. This thesis suggests that the buildings, streets, and spaces must evolve from the rudimentary structures of third world poverty into something more closely approximating first world standards. Just as architecture represents the development from mere construction to craft, this proposal assumes developing standards of living.

The final chapter shows how the research information has been applied to an actual design solution. It includes drawings and notes explaining the incorporation of
town planning, architecture, and technology in three distinct stages of development. The drawings begin with the essential core for the establishment of the company town and continue with increasingly ideal designs.

By combining all of the research and the proposed design strategies the intent is to generate a plausible model for future use in places such as Haiti. The issues facing developing countries are daunting and complex but they can be addressed. While poverty and violence are a terrible part of this world, they should never prevent communities from striving towards their own realized version of an ideal city.
CHAPTER 1

SITE AND CIRCUMSTANCES OF HAITI

1.1 Understanding the Site

The goal of this thesis is to provide a model for regional development in developing countries by focusing specifically on the issue of a healthy community. While the overall concept is not bound to a particular site, each potential solution would face issues unique to its geographic situation and political influences. These influences are explained in the specific context of Haiti for the purposes of the accompanying design project. The following sections describe the geography, climate, economy, and history of Haiti as contributing factors in the design process for this proposal.

1.2 Geography and Demographics

The country of Haiti occupies the western third of the island of Hispaniola, located midway in the archipelago of islands dotting the Caribbean Sea. Its mainland territory consists of two peninsulas separated by the Gulf of Gonave. Haiti also includes the islands of La Tortue, La Gonave, Ile de la Vache, Cayemites, and La Navase. The combined area covers just over 10,700 square miles, comparable to the state of Maryland.

Neighboring countries include the Dominican Republic on the eastern part of the island, Cuba 50 miles to the immediate Northwest, Jamaica 130 miles west, and the

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United States located 600 miles to the northwest. The area between Cuba and Haiti is known as the Windward Passage, which serves as the primary shipping route between Latin America and transatlantic countries. This passage leads directly to the Panama Canal and the Pacific beyond, which historically has drawn much international attention to the southern coasts of Cuba and the northern peninsula of Haiti.\(^3\)

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**Figure 5. Map of Haiti**

Of all the Caribbean islands, Haiti is by far the most mountainous. More than seventy percent of the land has a slope of ten percent or higher.\(^4\) The highest point of the country is the Pic La Selle at an altitude of 8,793 feet. As a result of the steep terrain, the

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\(^4\) Weinstein and Segal, p. 15
many rivers of Haiti are rapid and cannot be traveled upon. The Artibonite River running east-west through the middle of the two peninsulas is navigable in portions.

Natural resources include bauxite, gold, silver, copper, nickel, and sulfur. Most of these resources have been exhausted or are not economically feasible to mine. Haiti depends upon wood as its primary source of combustible fuel and this has lead to crippling deforestation. Hardwood trees include cedar, mahogany, and oak. The island’s fruit bearing trees are guava, orange, grapefruit, mulberry, lime, breadfruit, and mango.

Despite its location in the beautiful Caribbean, Haiti faces a multitude of problems stemming from geography. Individually the issues are difficult to manage, and when combined the results are terrible. As mentioned before, deforestation has stripped much of the area of vegetation. Without trees and their root systems, the steep slopes of Haiti accumulate great masses of muddy soil. Under heavy rains or seismic activity, these mud slides are unleashed upon the heavily populated lowland areas.

The heavy rains are usually brought by tropical weather originating off the Western coast of Africa. Located between the 69th and 74th degrees latitude, Haiti sits in the frequent path of tropical storms and hurricanes. These storms have killed thousands of people as recently as 2004. Earthquakes have also caused significant death and destruction.

1.3 People

Haiti is home to approximately eight million people. Due to the adversities of politics and poverty, one in eight Haitians lives abroad. It has the highest population density in Latin America, half of which is unemployed and a large majority lives in abject
poverty. According to the U.S. State Department, the Per Capita Gross National Product was $425 in 2002. 95 percent of Haitians are descended from African slaves; the remaining five percent are comprised of mulatto or foreign backgrounds\(^5\).

Figure 6. Housing in rural Haiti

French and Creole are the two official languages. While French is spoken by only ten percent of the people, Creole is known by nearly everyone. Only half the adult population is literate in either language. English has also become popular among younger Haitians and in the realm of business.

Roman Catholicism became the state’s official religion in 1861 through a concordant with the Vatican City. Voodoo is also commonly practiced, combining aspects of early Indian and African gods and rituals. Haitians generally view the two religions as compatible, many of them practicing both.

Health statistics regarding Haiti are startling. The average life expectancy is an appalling forty-nine years. Only 34% of the total population has adequate sanitation. Just more than half have access to improved drinking water. Just 11% of Haitian families use iodized salt, whose benefits drastically improve general health and mental development. In 2002, 280,000 Haitians were afflicted with AIDS.

1.4 Economy

According to State Department statistics, the economy of Haiti is lead by services, followed by agriculture and industry. The State Department also suggests that Haiti’s reports are inaccurate and incomplete. By most accounts, agriculture drives what little economy there is.

Crops include sugarcane, rice, sorghum, yams, corn, and plantains. The majority of people are rural farmers whose primary focus is to sustain their families on small isolated farms. Increasing population, decreasing arable land, and deforestation all contribute to the increasing pressure on these farmers\(^6\).

Haitian industry consists of light manufacturing. The products from Haiti are refined sugar, textiles, cement, liquors, leather goods, and soap. Mining industry provides bauxite and copper in small quantities, while other minerals and valuable metals have hardly been sought after.

For decades the United States has been the primary trading partner with Haiti until recent sanctions were imposed under the Bush and Clinton administrations. These sanctions are the result of political chaos that has recently plagued the country. Such problems are not new.

1.5 History

Haitian history can be categorized in four parts: pre-Columbian, colonial, independent, and modern. Described in brief, the arrival of Columbus in 1492 triggered a long history of violence and exploitation that continues to this day. The location of the country along the Windward Passage ensured that European and American interests would play a major role in the development of Haiti.

1.6 Pre-Colombian History

Prior to the arrival of Columbus, the island now known as Hispaniola was home to the Tainos/Arawak Indians7. Arawak describes the common language of Indian tribes as far South as Venezuela and North to Florida. The name Tainos is given specifically to the inhabitants of Hispaniola. These early inhabitants referred to the island as Kyskeya, Bohio, or Haiti. The Tainos and Arawak people inhabited islands throughout the Caribbean and have left traces of their civilization behind through language and building8.

The Tainos were predominately a peaceful tribe who lived in patriarchal communities. Their culture was hierarchical, distinguishing tribal leaders from the common populace through customs and building. Community leaders lived in large rectangular buildings made of trees, straw, and palm leaves. Built of the same materials but on a smaller scale, the rest of the people lived in round buildings with as many as 15

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7 Weinstein and Segal, p. 15
8 World History Archives. 16 September 2005.
< http://www.hartford-hwp.com/archives/43a/100.html>
men and their entire families. These early building types were passed on to the African slaves who introduced wattle and daub methods of construction.

The original population of the Tainos people varies greatly according to different sources. Before Columbus landed, estimates typically range from 100,000 to as high as 600,000. Regardless of the actual number, the population was certainly substantial. By 1507 the population was reduced to 60,000 and in 1531 the number was as low as 600. There are no surviving descendants of the tribe. By definition, the Tainos Indians are victims of a complete genocide via forced labor and the introduction of European diseases.9

1.7 Colonial Haiti

December 6, 1492 marks the date that Christopher Columbus landed on the island of Mole St. Nicholas. On Christmas Eve of that year, the Spanish founded the first New World settlement of La Navidad on the north shore of Haiti. On his second visit, Columbus required a tribute of precious metals or cotton from the Tainos, and failing payment, the people were subject to forced labor.10 Under harsh working conditions and suffering from foreign diseases, the diminishing population gave need to new laborers. As a result, the first official arrival of African slaves occurred in 1510.11

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9 World History Archives. 16 September 2005.
10 Ibid
11 Weinstein and Segal, p. 16.
Early cities included Santo Domingo and Cap Haitien. Since its founding, the city of Santo Domingo served as the principal port for the Spanish in the New World between Mexico and Spain. The port city was a frequent target of pirates and was sacked by Sir Francis Drake in 1588.12 Spanish rule of the island continued until the Treaty of Ryswick of 1697 divided the island into French controlled St. Domingue and Spanish Santo Domingo.

Under French rule, the number of slaves reached almost 800,000. This figure surpassed other Caribbean slave populations by more than 125,00013. These laborers propelled the island to becoming the leading export colony for all of France, sending shipments of coffee, sugar, cotton, and other products. Things changed dramatically on the island with the beginning of the French Revolution and shifting ideas of freedom.

12 Ibid.
In 1791 a spontaneous slave rebellion took place which gave rise to the military leadership of Toussaint Louverture. By 1801 Louverture had taken the entire island, and began preparing for its defense against further European occupation. Napoleon Bonaparte sent a naval force in 1802 under the direction of his brother-in-law Admiral Leclerc to reclaim the territory. Louverture was taken prisoner by the French and replaced by his lieutenant Jean-Jacques Dessalines, who defeated the French invasion. On New Years Day, 1804 Dessalines declared formal independence, naming the new country Haiti.

1.8 Independent Haiti

From the onset of its independence Haiti has been characterized by tumultuous governments, numerous coups, and constant international threats. The country’s first emperor, Jean-Jacques Dessalines set an example of violent rule that has seems to plague each successive regime. In 1804, with his newly won independence, Dessalines ordered the massacre of all white inhabitants of the island. This order alarmed many of the black and brown skinned people Haiti who feared retaliations and international sanctions and eventually lead to Dessalines assassination in 1806.

At this juncture the nation was split into two along racial lines. Henri Christophe was declared king of the Northern area and represented black interests. His contributions included educational reform and the historic Sans Souci palace. To the south, General Alexander Petion (a lieutenant of Dessalines) was named President of the Republic. As a person of mixed racial background, Petion was of fairer skin and represented people of

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14 Weinstein and Segal, p. 16.
15 Ibid.
similar appearance. Despite their differences of race and politics, both Christophe and Petion agreed that all of Haiti must remain free of international rule\textsuperscript{16}.

In 1820 both regions of Haiti were united under the leadership of Jean-Pierre Boyer. The following year, after Santo Domingo declared its independence from Spain, he invaded the country and unified rule on the island until 1844. Boyer’s rule lasted 25 years and remains as the longest term for one leader. Although this period is considered stable by Haitian standards, it created a new problem of economic dependence from which the country has yet to escape. Boyer agreed to terms with the French that gained official recognition at the price of 150 million francs.\textsuperscript{17} In the following decades the government required an additional 70 million francs in loans to pay the indemnity.

The decade of the 1860’s brought official recognition from the United States (who named Frederick Douglas as Consular Minister) who at the time was dealing with civil war. It also marks the beginning of an official relationship with the Vatican that lead to Catholicism being named the state religion\textsuperscript{18}.

In 1915 Haiti’s sovereignty was brought to an end by a United States occupation under the orders of President Woodrow Wilson. There are several factors that led to this, most significantly an American fear of German interference in the Caribbean and an expanded interpretation of the Monroe Doctrine inherited from the Roosevelt Administration. U.S. occupation continued until the withdrawal of American forces in 1934\textsuperscript{19}.

\textsuperscript{16} Weinstein and Segal, p. 19.

\textsuperscript{17} According to the Embassy of Haiti in Washington D.C.

\textsuperscript{18} Weinstein and Segal, p. 20.

\textsuperscript{19} Weinstein and Segal, p. 28.
1.9 Modern Haiti

Haiti tried to hold democratic elections in the decades following the U.S. occupation, but was primarily unsuccessful. After one such attempt failed, the popular Dr. François Duvalier was elected by the military supervised election of 1957. In 1964 Duvalier declared himself President-for-Life and created the infamous paramilitary group named the Tonton Makout. Under the dictatorship of Duvalier, and later his son Jean-Claude, thousands of people were killed or exiled. It was this period that has formed much of the current national psyche\textsuperscript{20}.

Like almost every other Haitian dictatorship before them, the Duvaliers were eventually driven from power by threat of their own device – violence. Since their exile in 1986 Haiti has operated under constant political opposition and chaos. Jean-Bertrand Aristide was elected by a surprise landslide in democratically held elections of 1990 via the support of grassroots organizations. Aristide’s government continued the systematic human rights violations, only the focus was on eliminating supporters of Duvalierism. The Tonton Makout managed to force his exile in 1991 until he was reinstated behind international support in 1994. In 2004 Aristide was exiled once again and another round of democratic elections is in preparation for late 2005\textsuperscript{21}.

1.10 Dichotomy of a People

The result of political abuse throughout Haiti’s history creates a predictable outcome: people either struggle to attain power through politics or they stay as far away

\textsuperscript{20} Weinstein and Segal, p. 39-49.

\textsuperscript{21} U.S. Department of State. Background Note: Haiti. February. 2005
from it as possible. Dating back to the first slave revolts, groups of people have sought
refuge from exploitation in the remote forests and mountains. To this day, many Haitians
live among their families on isolated farms away from any other group of people.

Brian Weinstein and Aaron Segal explain this dichotomy of people as two distinct
worlds within the country. The “first world” controls the operation of the country. This
group is recognizable as French speaking businessmen who take pride in their
connections to America and Europe. According to Weinstein and Segal,

This first world is exploitative and paranoiac, seeing politics and economics as a
zero-sum game with all the spoils going to the winner and disgrace, often exile or
death to the losers. This world is manipulative and arbitrary, relying on a
hierarchy of patronage-client relations and coercion for control. It despises and
fears democratic values, about which it is very ignorant.22

The middle and upper class first world accounts for ten percent of the entire population
and almost all of the wealth in the country.

The “second world” consists of the people who lack education, jobs, food, and
live off what little land they have. They are illiterate Creole speaking people who have
suffered under the yoke of the first world. Struggling against poor sanitation, a severe
shortage of potable water, and widespread disease, the people of the “second world” face
constant struggles to survive knowing full well that the government either cannot or will
not help. Their suffering can be understood simply by recalling the life expectancy of
Haitians: forty nine years.

Relationships between the politically minded first world and struggling second
world are characterized by a deep mistrust of one another. The first world maintains
influence and wealth at the expense of the poor, all the time knowing that popular
(second world) uprisings lead almost certainly to exiles and deaths for those in power.

22 Weinstein and Segal, p. 7-10.
Seeking to avoid exploitation, the poorer population has adopted a survival strategy of isolation from political influence. In reality, “the absence of government services makes the state irrelevant in peasants’ thoughts. Irrelevance is a form of protection from the first world…they would sooner turn to foreigners if they want beyond what their families can provide.”\textsuperscript{23} In order to effect change, solutions must be sought outside of government services, and if possible, remain isolated from the destabilizing influence of corrupt politics.

\textbf{1.11 Design Considerations}

The history, culture, and politics of any site will offer insights as well as obstacles to the design process. Each individual community must recognize their primary goals for development and organize strategies for accomplishing the desired results. For the proposed company town of this thesis, the critical goals are to provide safe and healthy living conditions, create employment opportunities to combat poverty, and to use design as a means of elevating the beauty of a developing community.

In order to do so, the positive influences in Haiti must be incorporated while negative pressures are kept at bay. The planning and architecture, drawing from local precedent, can draw from the rich cultural past of the Tainos Indians, the French, Spanish, and other Caribbean countries. Haiti has the benefits of a sunny, tropical climate that should be reflected in the design of buildings and open spaces. Once developed beyond rudimentary shelter, buildings can take advantage of open porches and breezeways, courtyards for outdoor activities, and abundant natural light indoors.

\textsuperscript{23} Weinstein and Segal, p. 7-10.
Considering the beauty of places like Key West, San Juan, and historic Havana it is easy to understand the potential of Caribbean planning and architecture.

Negative aspects of Haitian life must also be accounted for so that the uplifting characteristics can take root. First and foremost, the proposed company town must be isolated as much as possible from local and national politics. The disruption caused by political violence and exploitation would probably cripple any hope of developing a new town. As such, financial support must come from foreign sources or private companies within Haiti.

When thinking of how a community could be created from nothing, it is important to keep in mind the way of life and concerns of the people this project is intended to help. They have every reason not to trust people outside their families. Their survival traditionally has depended on clinging to their culture, their land, and their relatives.

Outside the realm of social and political problems, hurricanes, earthquakes, mudslides, and floods must be considered as well. This means that storm shelters must be provided to accommodate large numbers of people. It requires seismic design for structures to avoid the devastation previously seen in many Haitian cities. Finally, it requires strategies to counter the effects of deforestation that has lead to mud slides and terrible flooding.
CHAPTER 2

COMPANY TOWNS: DEFINITIONS AND POSSIBILITIES

2.1 Origins

As explained in the thesis statement, it is the author’s believe that company towns can provide an impetus for development in the third world. What is it that distinguishes company towns from new towns or existing cities? According to the Encyclopedia of Social Sciences, a company town is “a community inhabited chiefly by the employees of a single company or group of companies which also owns a substantial part of the real estate and houses”.\(^{24}\) Accepting this definition, the two unique characteristics of a company town are the dominance of a single company or industry and property ownership by the company.

The concept for company towns in America originated as a response to the economic and social environment of the nascent country dating back to the Braintree Iron Works in 1645\(^{25}\). Company towns by nature are unique to their time periods, with each town addressing different issues while trying to accomplish different goals. In some cases, the only motivation is for personal profit; while in others the goals are based on

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communal well-being. Successful company towns tend to strike a balance between profit for the company and providing benefits for the residents of the town.

There are several reasons to believe that company towns, as opposed to new towns, can be successful in struggling countries. First and foremost, a company town instantly creates the nucleus for a town (a topic to be addressed in Chapter 3) by providing large scale employment as well as buildings, streets, and squares. Unlike new towns where employment and commerce are dependent upon attracting new businesses and their subsequent growth, the primary source for employment already exists from the outset of company towns.

Figure 8. Evaporative salt ponds, a potential for industrial development

Another advantage of company towns has to do with ownership, namely who profits from incoming residents. In the case of new towns, people either buy or rent
property from a developer who offers no additional benefits. Company towns are dependent upon retention of their workers and must keep them content in the place they live and work. As a result, in nearly every successful company town the company has provided public buildings and resources for the health and happiness of the inhabitants. Few developers would ever build public libraries, town halls, churches, or medical facilities out of their own money for the benefit of the residents of a new town.

Unfortunately, social and economic issues lead to several famous failings of company towns in the late 19th century that had lasting impacts on the concept of single ownership cities. Social intervention became taboo for the companies who in turn focused on aesthetic beauty coinciding with the city beautiful movement. While these trends will be discussed in this chapter, it is worth noting that the term “company town” still carries a pejorative connotation that will have to be addressed in any future design proposal.

The following sections explain the history of company towns and their adaptation to local circumstances in the United States. It should be remembered that many of the most successful American company towns were begun during the country’s formative years, long before the nation enjoyed the economic stability of the modern era. In this sense, the precedents examined here have a similar spirit of hopeful enterprise balancing the tension of an unpredictable environment. In addition to studies of company towns with regard to their individual circumstances, the author has singled out several specific examples that illustrate broader issues of company towns in general. Based upon this study of company towns in their social and physical makeup, guidelines for the design process will be explained in regards to the proposed Haitian site.
2.2 Historical Background of the Company Town

Examples of mono-functional communities based on an industry exist as long ago as the Middle and New Kingdoms of Egypt in locations such as Kahun, Deir-el-Medina, and Tel-el-Amarna where artists lived and worked together. While they resemble company towns, these communities, like later examples from Ghent (14\textsuperscript{th} century) and Augsburg (15\textsuperscript{th} century) more closely resemble suburbs than a town within themselves\textsuperscript{26}. Although no particular town seems to be recognized as the origin of the type, Braintree represents one of the very earliest company towns, yet the town is hardly notable beyond that distinction. What separates Braintree and more widely publicized company towns is the influence of social experimentation or the role of design. The earliest examples of planned company towns as defined by the \textit{Encyclopedia of Social Sciences} are places such as Nuevo Bastan, Spain (1709, designed by Jose Benito Churriiguera) and the famous Arc-et-Sanans, France by Claude Nicholas Ledoux (1775)\textsuperscript{27}.


\textsuperscript{27} Garner, p. 4.
2.3 Company Towns and Industrial America

In America, the company town as a model for industrial output was first explored on a grand scale by Alexander Hamilton in 1792\textsuperscript{28}. As Secretary of State, Hamilton viewed industrial expansion as a primary means of competing with Europe in terms of economy and future security. He hired Pierre L’Enfant, designer of the Plan for Washington D.C., to create a monumental town on the Passaic River in New Jersey. Pierre L’Enfant proposed a grand scheme in the tradition of capital cities that in retrospect was far too ambitious for a single industry city. The project was never realized due to the enormous capital required to start such an undertaking and a stock market crash, but it planted an idea in the minds of American entrepreneurs.

\textsuperscript{28} Crawford, p. 13-15.
Thomas Jefferson opposed the ideas of a centralized power and mega-scale industry and instead suggested smaller, more dispersed company towns that could be realized without gambling on huge investments of land and infrastructure. Jefferson’s model of localized industry found its fruition in the southwest Connecticut town of Humphreysville. Colonel David Humphreys, Ambassador to Spain and friend of Jefferson, envisioned a mill town that could improve the social order of a community as a response to industrial cities he had seen in Europe.

Humphreysville marks a significant point in the history of American company towns for both its success as an industrial prototype and the beginning of paternalism and moral guardianship. David Humphreys focused on the moral guidance of religion, the importance of education, and the physical benefits of labor. He supplied the housing for his employees (including strict boarding houses for the women) and required classes after work as well as regular church attendance.

The success of the town was widely acclaimed, drawing praise from figures such as Timothy Dwight who served as President of Yale. Dwight wrote that “the town established three fundamental points about industry: that manufactures could be carried on with success; that workmen could remain healthy; and that a deterioration of morals was not necessarily inherent in manufacturing activities”\(^\text{30}\). An interesting point about Humphreysville is that it embodies both the positive and negative aspects of paternalism. On the positive side, contemporary accounts suggest that employees were taken care of in nearly all aspects and resembled a healthy, happy family.

\(^{29}\) Crawford, p. 15-18.

\(^{30}\) Crawford, p. 17.
Despite all of the apparent benefits from benevolent paternalism, others have argued that even at its best paternalism stifles independence and mandates loyalty and subservience. At any rate, Humphreysville highlights the two primary themes of 19th century company towns: industrial growth and social intervention.

The decades between 1850 and 1880 are marked by an increasingly industrialized United States based not upon textiles, as in the past, but upon the iron and steel industries. As the needs for available land increased companies began expanding beyond existing cities and pushed outward to the west and south, bringing large numbers of immigrant laborers with them\textsuperscript{31}. As companies moved beyond the traditional industrial cities of the east they began to become more and more isolated; a characteristic that continued into the 20th century.

With the increasing number of unskilled immigrant laborers, most company towns of this period ceased paternalistic programs and focused solely on the industry. In other cases, such as Peace Dale, Rhode Island and Hopedale, Massachusetts the idea of improving employees’ conditions was emphasized in the building programs instead of social ones. For the first time in America company towns began exploring ways that architecture could play a positive role in shaping their communities. The most famous of these towns is Pullman, Illinois for more than just its architecture.

### 2.4 Success and Failure in Pullman

In 1880 George Pullman began a town for his Pullman Palace Car on the southeast outskirts of Chicago near Lake Calumet\textsuperscript{32}. The founding date came just three

\textsuperscript{31} Crawford, p. 29.

\textsuperscript{32} Crawford, p. 37.
years after the first mass strike in America and labor issues were at the forefront of Pullman’s concerns. Pullman borrowed from the examples set by contemporary towns in New England and instituted a variety of welfare programs including accident insurance, doctors, schooling, athletic clubs, bands, and social clubs. In addition to the welfare programs, he had a vision for the architecture that would stress aesthetics and quality construction.

All of the buildings were built of traditional Chicago red brick in the Queen Anne style to give a sense of continuity and beauty that was so sorely lacking in other company towns. Things began so well for Pullman that an 1885 report from the chiefs of state bureaus of labor statistics claimed “For comprehensive plan, for the beauty of the executed plan, for the financial and social success thereof, Pullman City stands at the head33”. This early success may have attributed to George Pullman solidifying his control over employee’s lives to the point that it began to hurt labor/management relations.

Pullman’s restrictions included bans on liquor and smoking, an evening curfew, and severe limitations on what people could do with rented properties. Although employees had access to such generous welfare programs, the limitations on their personal lives caused workers to look for other communities to live in away from such overbearing control. As a result, what was supposed to be a city became a community of people who resented the place they lived and worked in\textsuperscript{34}.

During the years of 1893 and 1894 economic conditions in the United States began to fail once again and a major division was drawn between major companies and the unions representing the laborers. Strikes began nationwide and layoffs started happening in increasing numbers. George Pullman was in a unique position that placed

\textsuperscript{34} Crawford, p. 40.
him in control of both his employee’s jobs and their homes which made for a volatile combination. After refusing to negotiate with the unions, Pullman decreased the salaries of his workers but would not decrease their rent. The resulting railroad strikes led to mob violence that required Federal troops to suppress and included twelve deaths and hundreds of arrests. In 1898 Pullman began disposing of the town that had so recently been the envy of company towns world wide35.

Figure 11. Pullman riot control

Immediately following the collapse of Pullman many other companies took caution at the thought of mixing the roles of employer and landlord. The failure of Pullman serves as a reference point in the history of company towns; marking the point in time where the term “company town” began carrying a pejorative connotation. In current usage the historic model of company towns are remembered more for overbearing paternalism, abuses in the company stores, and general exploitation of workers than anything else. Only after mentioning successful towns such as Hershey, Pennsylvania,

35 Crawford, p. 43.
Sugarland, Texas, and Kohler, Wisconsin do most people realize that modern company
towns can exist and thrive socially and economically.

During the same period of Pullman’s demise, social reformers and designers
began to take a closer look at the problems overwhelming contemporary city life. Many
cities in the United States and Europe were notorious for overcrowding, unemployment,
and terrible health conditions that seemed to crush the human spirit of the people living
there. The answer, according to Ebenezer Howard, was to rethink the way our cities are
organized so that the beneficial aspects of city life and country life could be combined
Reform*, sparked a rapidly growing movement known as the Garden City.\(^{36}\)

The goal of the movement was to improve urban life by decreasing the scale of
cities and using design (as George Pullman suggested) as a means for improving people’s
way of life. The combination of small cities, urban design, and architecture that were the
main selling points of garden cities were quickly incorporated into the creation of new
company towns at the beginning of the 20th century.

While architects in the United States were struggling to solidify their profession in an increasingly specialized environment, town planning offered one more outlet to validate the importance of professional designers in the modern world\textsuperscript{37}. The ensuing relationship between world-class designers and burgeoning company towns proved mutually beneficial as can be seen in the numerous new towns in the early decades of the 20\textsuperscript{th} century.

\section*{2.5 Professional Designers}

At the turn of the 20\textsuperscript{th} Century many architectural firms recognized company towns as an opportunity to expand their influence while generating profitable

\footnote{\textsuperscript{37} Crawford, p. 61-67.}
commissions. By asserting themselves in the realm of community planning, these firms became an influential part of a new and growing design industry.

An early example of this shift in the profession is the project that McKim, Mead, and White took on in Niagara, New York. The Niagara Power Company hired the New York firm to design both the industrial buildings and a neighborhood plan for housing the employees. Stanford White took charge of buildings including the corporate offices, powerhouses, and colonial homes for the employees offering a variety of unique yet complimentary buildings within the town. Despite the accomplishments of Stanford White for Echota, the Niagara Power Company chose to have their engineers design the road network that resulted in a monotonous grid that stifled the architectural variety. Judging from the company towns built shortly thereafter it was apparent that both the architecture and street planning had to work in unison for a truly pleasing effect.

Figure 13. Echota, New York power station by Stanford White

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38 Crawford, p. 78.
The Apollo Steel Company tried took a different approach and hired Frederick Law Olmstead to design a picturesque plan for their new town of Vandergrift, Pennsylvania in 1896\(^{39}\). Limited by small plots of land and a need for high building density, Olmstead’s curvilinear design led to higher costs and decreased efficiency which in turn led to Apollo abandoning the design while the town was only half built.

During the same year, the Draper Company (founders of the textile town of Hopedale, Massachusetts) hired two of Olmstead’s former employees to add the suburbs of Bancroft Park and Lake Point to their town\(^{40}\). Like Olmstead, Warren Manning and Arthur Shurtleff designed picturesque neighborhood streets with elaborate landscaping in stark contrast to the existing town’s grid. An imbalance between street planning and architecture once again stifled the benefits of design as the Draper Company insisted on high building density and hired mediocre architectural designers. The common problem between the towns of Echota, Bancroft Park, and Lake Point was that the companies made poor choices when hiring either town planners or architects. Each of the three communities could have been exemplary had the companies recognized the importance of harmonious design between streets and buildings.

Labor issues continued into the early years of the 20\(^{th}\) century, just as design professionals were beginning to cement their roles in town planning. Recognizing the value of these designers, companies began to entrust architects and urban planners with more control over the physical aspects of their towns. Practical considerations in respect to labor mandated that traditional planning and design be made available at reasonable costs to draw and maintain employees in company towns. The towns of Fairfield,

\(^{39}\) Crawford, p. 78.
\(^{40}\) Crawford, p. 79.
Alabama; Torrance, California; and Goodyear Heights all embraced this philosophy and in turn enjoyed great success⁴¹.

### 2.6 Decline of the Typology

The period between 1885 and 1915 marked a Golden Age for the relationship between company towns and design. Designers such as Stanford White, Frederick Law Olmstead, and Warren Manning were all involved in the evolution of a city type that saw at least portions of their designs accomplished. Other famous architects such as Bernard Maybeck (Brookings, Oregon) and Bertram Goodhue (Tyrone, New Mexico) also lent tremendous credibility to the possibilities of such towns despite the economic failure of the cities they planned. Unfortunately, company towns are extremely sensitive to the economic and social happenings of their time and the Golden Age came to an abrupt end with the outbreak of World War One.

![Tyrone, New Mexico plan by Bertram Goodhue](image)

**Figure 14.** Tyrone, New Mexico plan by Bertram Goodhue

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⁴¹ Crawford, p. 83.
After World War One America was faced with the Great Depression and found its solution in Roosevelt’s New Deal. The New Deal was decidedly in favor of the common working man and squared itself against anti-union companies who viewed company towns as a means for controlling labor\(^{42}\). Beginning with the Tennessee Valley Authority and continuing with World War Two efforts, the United States government became the principal developer of company towns until the middle of the 20\(^{th}\) century. Following World War II town planning found itself at the mercy of popular subdivisions and the money to be made in them. With more and more people looking for the “American dream” of home ownership company towns largely became an idea of the past.

Company towns have largely become historical foot notes in America as the economic models that traditionally created them are no longer viewed as practical or desirable to potential employees. Although this is the case in America for economic and social reasons, it does not mean that company towns are an intrinsically flawed concept. Given the right set of circumstances, the idea of a company town still offers all of the possibilities that drove early Americans to build them across the country.

2.7 Potential for Developing Countries

In developing countries, company towns have the potential to increase wealth, provide employment and welfare programs, as well as provide shelter in countries everywhere. Just as Alexander Hamilton and Thomas Jefferson believed company towns could industrialize their nascent country; it seems plausible to assume the same possibilities for other developing nations. In any struggling and unstable community it

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\(^{42}\) Crawford, p. 195.
may be difficult to accomplish, but there is no reason to believe company towns should be dismissed as a possible solution to many diverse problems.

In choosing to design a company town for this thesis the author is faced with the task of addressing two areas of concern: developing a practical and beautiful design that meets all the requirements for a successful community and overcoming the pejorative connotations that are currently associated with company towns. The first objective can be dealt with in terms of design; the second will have to generate a dialogue. The author has yet to find a definition of company towns that describes them as evil places of exploitation and abuses, although there are examples that fit that very description. If critics are willing to accept the beneficial possibilities of a company town with a measure of optimism then the focus will narrow to designing a beautiful and practical town.
CHAPTER 3

URBAN DESIGN:
CREATING ORDER OUT OF CHAOS IN THIRD WORLD ENVIRONMENTS

3.1 The Role of Design in Communities

The importance of urban design for company towns can be gauged by considering how long it has been a point of emphasis for the city type, which is to say nearly as long as company towns have existed. Dating back to Nuevo Bastan and Arc-et-Sanans (see Chapter 2), patrons have recognized the value of town planning and its contribution to the overall appeal of the places they create. By making a conscious choice to enhance the beauty of their towns, companies intuitively understand the importance of maintaining the wellbeing and happiness of their employees in the places they live.

In stable countries with established economies and government, urban design has become an established method for improving struggling urban areas as well as a highly desirable commodity for new towns. For developing countries, urban design appears either as an unattainable dream reserved for the wealthy, or as a practical way of improving conditions for people with many extreme needs. The author believes in the latter.
3. 2 Considerations for Communities in Haiti

Under the current circumstances in Haiti, any means of improving community life would be a welcome blessing to the people. This thesis takes a *tabula rasa* approach and begs the question of what constitutes the best urban design strategy for a new company town. Basic considerations include where to situate the town, how large should it be, and how the town would grow from the earliest phases to what might hopefully become a healthy, well balanced town. More involved issues will come to light throughout this chapter as well as in the design process.

When considering how to approach solutions for urban design it was decided that it would be best to look at other examples in and around the Caribbean. As company towns are generally much smaller than well developed multi-industry cities, the search was begun by looking at small cities notable for their urban design regardless of location or purpose. At the same time the author also sought out images of familiar cities whose beginnings were well recorded examples of specific urban design strategies. For the former, Italian hill-top towns, walled European cities, and “new towns” of the last several centuries were examined. With the latter, examples were found of European “New World” town planning in all corners of Latin America as well as American examples such as Savannah, Georgia in its earliest stages. It was these topics that lead to a discovery of the Laws of the Indies and a plausible approach to designing a company town in Haiti.
3.3 The Laws of the Indies

The Laws of the Indies consist of 148 articles codified under the Spanish monarch Philip II and are dated 13 July 1573\(^{43}\). These articles formalized the guidelines of town planning in the New World that had been in practice since the earliest planned town in the Americas, Santo Domingo in Hispaniola, was founded in 1496. By 1503 Ferdinand V of Spain published directives that “the city lots be regular from the start, so that once they are marked out the town will appear well ordered as to the place which is left for the plaza, the site for the church and the sequence of the streets; for in places newly established, proper order can be given from the start, and thus they remain ordered with no extra cost: otherwise order will never be introduced”\(^{44}\). Charles V followed Ferdinand’s lead by adding his own publications on city planning in 1521.

The Laws of the Indies were written under Philip II in order to accomplish three goals: establishment of new Christian societies, to maintain an absolute State, and to generate local economies\(^{45}\). While this thesis project is not mandating the first and outright rejects the second, the third objective holds great appeal for the possibilities of a company town. Having come across the Laws of the Indies as a legalized mandate for expansion in the New World, the impact they have had in Latin America is easily recognized. Cities based on these concepts include Quito, Lima, Buenos Aires, Bogotá, Santiago de Chile, and Valparaiso – namely all of the most important South American cities.

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\(^{45}\) Kostof, p. 444
King Philip’s contributions are undoubtedly an adaptation of the guidelines originally proposed by the Roman architect Vitruvius in his *Ten Books of Architecture*. The rulers of Renaissance Spain were certainly familiar with the work which was first introduced in 1526 and later edition was dedicated to Philip II in 1582. The Laws of the Indies (included in their entirety in the appendix) are summarized by the historian Spiro Kostof as follows:\(^{46}\):

The town is to be laid out ‘using cord and ruler.’ The main plaza is to be the starting point for the city-form. The plaza should be one-half times as long as it is wide, because this shape works better for fiestas in which horses are used. The size should be proportioned to the site of the town, making allowances for growth, but the plaza should in no case be less than 61 meters wide by 91 long (200 by 300 feet), nor larger than 162 by 243 meters (532 by 800 feet). From this

\(^{46}\) Kostof, p. 445
public space main streets are to issue, as follows: one from the middle of each side, and two from each corner forming a right angle. Around the plaza and along these principal streets, there should be arcades (portales). ‘for these are of considerable convenience to the merchants who generally gather there.” The streets running into the corners of the plaza are not to encounter these arcades, which are to be kept back, so that there is a sidewalk between the arcades and the public area of the plaza.

The main church has to be near the plaza but not necessarily within it. If the settlement is near the sea, the church should be sited so that it might be seen by incoming and outgoing vessels. Other public buildings specified are the royal council and town hall, the customs house, a hospital, all these grouped around the church, and then farther out slaughterhouses, fisheries, tanneries, and the like. These main buildings should be allotted full blocks, so that lesser structures do not abut them.

Building plots are to be distributed by lottery, from the plaza outward, and some should be held for late arrivals. No settler is to receive more than five peonies (a peonia being a plot of 15 meters in width by 30 meters in depth, or 50 by 100 feet), or three caballerias (these being house plots of 30 by 60 meters, or 100 by 200 feet). The settlers will be given grain, cereals, and seeds, and also animals. Any settler who has accepted a plot in the new town is obligated to build on it within a short period of time, work the land, and acquire hers and grasslands. Each house must be built so that horses and work animals can be kept therein, and each must have yards and corrals. As far as possible ‘the buildings [shall be] all of one type for the sake of the beauty of the town’ (Article 134). ‘The town shall maintain a plan of what is being built’ (Article 137).

3.4 Nucleation

The primary aspects of the articles that carried into practice across the Americas include the formal grid with a main square and a system of developing from that square outwards. This forming of a community center makes practical sense when considering that all towns must develop in some fashion; and in cases involving the Laws of the Indies the development begins with government and mercantile buildings in order to establish stability from the very beginning. Jacob Lozano describes this strategy as the principle of nucleation, which insists that “The first universal law of growth is the principle of nucleation or critical mass, which succinctly states that any structure has a
minimum size, which is its nucleus."47 Describing the model of Spanish New World development, Lozano asserts that “The foundation of their settlements, guided mostly by the laws of Indies set up by the Spanish Crown, clearly established a minimum nucleus within a community hierarchy, around which growth could and did occur. The results, considering the magnitude of their enterprise, cannot but be considered awesome."48 In the case of company towns I would argue that the industry along with public buildings and housing would create the necessary nucleus as Lozano describes it; and additionally that similar success could be expected in Third World Countries everywhere.

Figure 16. Plaza Mayor Mexico City, Mexico – an example of nucleation

47 Lozano, Eduardo E. Community Design and the Culture of Cities. New York: Cambridge University Press, 1990; p. 95

48 Lozano, p. 96
Recognizing the influence of the Laws in the Indies theoretically and historically, it seems perfectly logical to use them as the foundation of an urban design for a new company town. While this model may or may not work in other regions of the world with different cultures and histories, an adaptation of the grid plan and principle square in the Caribbean is not only reasonable, it is the most appropriate means of approaching urban design. Based upon this assertion, it opens the debate as to what form of grid and public squares would best meet the requirements of a new company town in terms of function and beauty.

3.5 Geometric Versus Picturesque Planning

It should be noted that the decision to use the Laws of the Indies marks a significant point in preliminary urban design with regards to attitudes towards geometric and picturesque planning as it requires use of the former. There has been an ongoing debate about the benefits and deficiencies of both geometric and picturesque planning which often leads to an either / or attitude. Le Corbusier famously described picturesque planning as “the pack-donkey’s way”49 while advocates of picturesque planning suggest grids are blasé and overbearing.

Leon Krier recognizes the value of both strategies based on their relationship to the proposed architecture. Krier uses a table showing the relationship of vernacular versus classical in architecture and urban planning to explain which pairings are most appealing based on examples of existing cities. According to his table, the proposed town at its outset would pair classical urbanism with vernacular architecture. Although Krier’s table suggests that this relationship might not be the most appealing, the

architecture of public buildings offers the possibility of balancing vernacular and
classical architecture to a more pleasing level as the town develops. At any rate, the
decision has been made to incorporate some form of grid, which presents the challenge of
making it work as well as possible.

City planning by means of a grid is one of the oldest strategies known world wide
and offers a large variety of approaches. Many people mistakenly think of grids only as a
collection of uniform blocks marching along at regular intervals. In reality, there is a
great diversity within grid precedents for reasons of topography, politics, or aesthetic
preferences. Spiro Kostof suggests that the only common aspect of grid cities is their
orthogonal plan.50 As such, the possibilities within a grid city include variations of block
and street size, block shapes, patterns, and interruptions among others. Barcelona, New
York, Savannah, Indianapolis, Chicago, and Havana may all be grid cities but anyone
familiar with them could readily attest to the diversity of their plans and appearances.

50 Kostof, The City Shaped, p. 96
On the surface, the Laws of the Indies are quite specific about how cities are to be laid out based on the main plaza and streets leading out of it. Most of the Spanish New World cities stuck to these general principals, yet they are quite different from one another in their strategies for locating secondary plazas and spacing of the streets. What
becomes obvious is that the Laws were not followed to such an extreme that all cities were reproductions of one another. Following the examples of Latin America, the intent is to obey the spirit and not the letter of the Laws. This approach will allow the necessary decisions to adapt to the various considerations of the site as well as the needs of a community in rural Haiti (the same would remain true regardless of location based on this thesis).

3.6 Ideal Cities and Utopias

At this juncture the decision was made to work within a grid plan based on the general principles of the Laws of the Indies and at the same time will make adjustments as necessary to work within the proposed site. Given such a large measure of flexibility, we are left with the task of deciding what might work best for a new company town. Phrased another way, one might ask what model could serve as a paradigm? The common sense answer is to learn from ideal cities and utopias whose goals were to create beautiful, healthy places that made people’s lives better. Most people would recognize that ideal cities and utopias both imply a better place in the world, but there are important nuances separating the two. In her book *Ideal Cities*, Ruth Eaton clarifies the differences as follows:

In Platonic philosophy, idea – which is often translated as ‘idea’, ‘form’ or ‘configuration’ and is analogous in derivation and original sense to species (from specere, ‘to behold’) – describes what is seen both by the physical but by the mental eye. It designates a general or ideal form, an absolute pattern, the eternally existing and purely intelligible essence of the sensible things in the ordinary world we inhabit, while the latter derive their existence from the archetypical ideas and are but imperfect copies of them. This Platonic use of the word ‘idea’ forms the premise to many of the ideal cities we shall encounter: their designers invented them in the conviction that they belonged to an elite capable of understanding the nature of these original patterns and hence of attuning the city
as closely as possible to their perfect harmony. Hence, the noun ‘ideal’ describes that which is presented as the absolute model, a standard of perfection, whereas the adjective ‘ideal’, whose source is the Latin idealis, defines that which is conceived and represented in the spirit, the implied meaning being: that which achieves all the perfection that can be imagined or hoped for, that which cannot be improved upon.

As opposed to utopias:

Utopian environments are intended to be realized through human effort without supernatural assistance. . . Often produced during times of profound social unrest by people frustrated by their lack of room for maneuver and power to change an actual scene, they are the intellectual dreams of would-be reformers. Their realization is often desired (although such longings may remain covert) and their inventor, impotent alone, often seeks a sort of marriage contract with a ruler who might implement the proposed plan – hence the numerous dedications of these projects to people in power.

Utopias are presented as alternatives to established situations which are perceived as chaotic and may be criticized, with varying degrees of explicitness, as such. Their ambition is the greatest collective happiness and harmony achieved through efficient social restructuring and-or scientific progress. They are mostly urban (or suburban) and laid out upon geometrical lines, suggesting humankind’s rational domination of the chaotic forces of nature. They are presented as absolute solutions, panacea applicable worldwide and indifferent to factors of local context whether historical, geographical, cultural or other. Utopias are usually implanted upon virgin or razed soil: it was Plato who quoted Socrates saying that the artists ‘will not start work on a city nor on an individual (nor will they draw up laws) unless they are given a clean canvas, or have cleaned it themselves.’

The proposed town represents a combination of both ideal cities and utopias. The planning itself will be based on the concepts of ideal cities and the historic models of grid design while the social impact (utopian aspects) will focus on the desired results. This combination refers back to the concept proposed in the thesis statement by comparing the paintings of ideal cities and good government. As such, the design of the town will be a product of ideal city precedents with a goal of creating a new utopia.

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3.7 Ideal City Precedents

In the early years of the 15\textsuperscript{th} century several developments in theory and technology led to a new understanding of cities as objects, not merely a collection of buildings, streets, and open spaces. The humanist interests at the time gave great importance to anthropomorphic relationships and increasingly turned to geometry as a means of organizing space, whether in buildings or cities. By 1457 the architect Filarete was already translating anthropomorphism and geometry into urban design in his project for the city of Sforzinda\textsuperscript{52}.

Figure 19. Sforzinda by Filarete

\textsuperscript{52} Kostof, The City Shaped, p.186
Regularized geometric city planning became a popular approach to improving existing conditions or the creation of new cities (as was the case with Sforzinda) with designers including the likes of Leonardo da Vinci. In the 16th century developments in military strategy and technology (namely the use of artillery) required new forms of fortification which eventually led to governments incorporating ideal city plans as fortified outposts to defend their territories.

Designers such as Vincenzo Scamozzi, Albrecht Durer, and Pietro Cataneo all developed schemes making use of moats and large ramparts to define the boundaries of their geometric plans. In 1593 the Venetian senate commissioned the construction of an ideal military town for their defense against Turkish threats from the East. This city, named Palma Nuova, represents the first ideal renaissance city to be built entirely of one plan. Other military towns such as Palma Nuova were eventually built, but the practice was rare due to their extreme costs and political instability. Although very few ideal military towns were built, they have contributed greatly to the discussion of ideal planning and its effectiveness in cities.

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53 Kostof, The Shape of the City, p.190
54 Kostof, The Shape of the City, p.160
Figure 20. An ideal defensive city by Scamozzi

Figure 21. Palma Nuova aerial view
3.5 Design Approach

The design of the town will combine the various aspects of site conditions, the Laws of the Indies, and ideal city plans. The site conditions include the relationship of the town to the coast as well as the general topography of the chosen site. The orientation of the town must account for sunlight and coastal winds as they are two primary contributors to the evaporation process of producing salt. Additionally, the strategy must offer solutions for controlling soil erosion from the steep hills and mountains surrounding the bays in order to avoid losing buildings to damage and the salt ponds from ruin.

As for town planning in this instance, the Laws of the Indies and ideal cities should be considered more or less of the same lineage. Latin American precedent is an obvious source leading the design towards grid planning, but there is also a conceptual reasoning behind the decision to use a grid as well. In developing countries where common people have little or no control over the situations in their lives, a grid plan offers one simple means of producing order in what must otherwise appear as a totally chaotic world. This may seem simplistic in many ways, yet is represents one small gesture offering a means of control to people who so rarely have it.

The town will continue the traditions of the plaza mayor, or Main Square, as a gathering place for the community lined by public buildings such as a town hall, church, or a school. This town is intended to grow in phases as opposed to being built all at once, and the main square should be viewed as serving as the source for development much like other Latin American cities or more recently towns such as Seaside, Florida. As the
primary industry of the town (in this case salt production) succeeds along with local businesses the aim would be to develop the town’s residences and recreational areas to the point that the town can incorporate all the beneficial qualities of a healthy community.

In this proposal, two models of development are based upon the same planning grid, one assuming the relocation of families into the company town as a critical mass of population and the other being based on day-laborers and a more transient work force. Without knowing the social impact on other local communities by importing labor, these strategies are intended to display the flexibility of my proposal to meet the needs of a company town despite its location.

The success of the design will depend upon two principal criteria: the overall appeal of the design itself from the earliest stages to a well defined town and the plausibility of the proposal. If the town lacks visual interest and a clear sense of order it will fall short of my set goal. Additionally, if the design were not possible due to a lack of understanding the environment or circumstances the plan could not be considered successful. Despite the eventual outcome of the design the aim is to have learned the lessons of Caribbean planning, the Laws of the Indies, ideal cities, and how they all can work together. If this thesis design expresses an understanding of these concepts, the author will have accomplished at least a better knowledge of precedent and history regardless of the outcome.
CHAPTER 4

ARCHITECTURE IN THE CONTEXT OF A COMPANY TOWN

4.1 Architecture and Community

One of the principal challenges of this thesis is to create a balance of quality architecture that could reasonably be constructed and afforded by a parent company. It may help to define architecture from the author’s viewpoint. Simply stated, a building becomes architecture when it is designed with a greater purpose in mind than simply fulfilling a function. Purely functional buildings more closely represent Le Corbusier’s notion of houses being machines for living. The goal here is to design architecture, not machines. The author believes that architectural buildings respond to their place in the world, namely climate and geography; as well as their place within a community.

Addressing the issue of location, any good building should meet the Vitruvian requirement of *firmitas* in the sense that the construction should be of a type made to last within a given environment. Buildings should respond to their climates in a manner that prevents water damage through roofs, openings, or floors; recognizes the amount of natural light exposure; insulates the walls in appropriate fashion; and can withstand severe weather to a reasonable measure.

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As for a building’s role within a community, its purpose should be clearly evident by the typology, scale, and articulation. Simply stated, a church should look like a church and a house appear as a house.

One notable exception worth mentioning is that of the company town’s factory. The salt works building in this instance carries with it an importance above and beyond typical industrial needs. For a company town, the factory represents the heart and soul of the complex and understandably receives additional architectural attention as deserved by such a hierarchically important building. This is not to say that the factory should be confused with a church or a town hall; rather, the detail and ornament merely exceed the expectations of a typically utilitarian building.

The general makeup of a traditional company town focuses on the factory and employee housing while social welfare buildings such as town halls, churches, schools, and markets are introduced in varying degrees depending on the vision of the parent company. In a strictly capitalist company town the public buildings are often limited to the general store while towns with a social agenda (such as Patterson, New Jersey or Pullman, Illinois) include schools, libraries, and meeting halls. This thesis is envisioned as a design based means to a social end, and therefore includes a church, town hall, schools, markets, and mixed-use buildings in hope of creating the sense of a truly urban community.

The approach to architectural research taken here is to gain a basic understanding of design history throughout the Caribbean before examining the particulars of Haitian communities. The history of design in the Caribbean mirrors that of the general history—essentially a dissection of pre and post-Columbian influences. The native Indian tribes
predating Columbus’s arrival developed seemingly rustic structures that held up remarkably well to the demands of the environment. Constructed out of carefully selected materials and assembled in time-proven methods, the Arawak, Tainos, and Carib inhabitants built structures that were to become the foundation of modern Caribbean homes.

In the centuries following the European introduction to the archipelago, a blend of Indian domestic buildings and European civic architecture began to evolve in myriad forms across the islands. Spanish, French, Dutch, and English settlers all brought their own unique styles of architecture according to native tastes and influences which in turn were informed by the environmental practicalities of the native populations.

The following sections explain the approach taken towards architectural design in two principal categories: employee housing types and public buildings. The housing types are comprised of dormitories, apartments, and single family homes while the public buildings include the factory, church, town hall, schools, shops, and markets. From an architectural standpoint, an essential objective of this thesis is to balance the character and scale of housing with that of larger public buildings in a manner that suggests stimulating civic life within an organized urban framework.

4.2 Housing Types

For a company town to become a success, the employees of the industry must feel as though the town is truly their home and that they might gain personally by becoming involved collectively. By investing their time and effort in the company and the town, residents’ efforts will be rewarded by the success of the community. An architectural expression of this approach manifests itself in the three proposed types of housing, each
representing a higher level of establishment within the community as a visual sign of an individual’s increasing stability and well-being. Conceptually, a newcomer to the company town will presumably start with little or no savings to purchase housing with. As such, this person could find lodging in one of the town’s dormitories with access to a public cafeteria for meals.

While they continue to work and save money, an employee would eventually earn the capacity to rent an apartment, which in turn would increase their sense of ownership in the community. Life in an apartment would include amenities such as a basic kitchen and garden space for growing their own fruits and vegetables, representing tangible improvements in a rural Haitian’s quality of life.

Eventually the goal of any resident would be the purchase of their own home and land within the community, further increasing their quality of life and stewardship of the town. The purchase of a home embodies the sense of stability and security made possible by the company town where similar opportunities are quite rare.

4.3 The Dormitories

The dormitories within the company town serve as a starting point for residents of the company town who arrive without previous resources. The dorms include shared bathing facilities and access to the adjoining cafeterias for regular meals. These buildings are located near the factory and help to form a large public square by means of their symmetrical footprints. Due to their location between the factory and the apartment blocks, they are of a public scale at two stories high with long, narrow massing that provides ample light and air throughout the buildings.
Residents within a dorm would have the option between smaller rooms with space for four occupants or larger, higher occupancy rooms. The fenestration attempts to express the communal nature of the dorms through a repetitive band of similar windows across the street façade without calling attention to individual units. The large number of windows allows for natural light and ventilation to permeate the interior spaces, both reducing the need for electric lights and air-conditioning. Although detail is generally kept to a minimum, traditionally vibrant Haitian colors would give a sense of liveliness that might otherwise be lacking in such a practical building.

Figure 22. Elevation of the Dormitory Building

4.3 The Apartments

Apartments are included in this community as an option of greater appeal than the dormitories for residents who cannot yet afford a home of their own. Residents of the apartments would likely include employees who arrive with some previous financial resources or who have managed to save enough money through work created in the town to afford their own space. For those residents who move in from the dormitories, the apartments are the first major step in improving their quality of life by means of employment in the town.
As the apartments differ from dormitories in that a person is responsible for their own space, the massing and detail of the buildings are intended to convey the sense of individual units within a larger building. Like the dormitories, the apartment buildings are two stories tall and have a much larger presence than single family homes. The town plan calls for sixteen apartment buildings along the principal east-west boulevard linking the plaza mayor to the factory.

Each apartment includes designated areas for gardening so that residents would in turn be less dependent on either markets for their own food or on cafeterias for meals. The modest size of these gardens would not likely support surplus foods for sale in a market, but could reasonably subsidize what residents might need to purchase otherwise. These gardens are an established part of Caribbean life, especially in Haiti where other resources are so scarce.

Each individual apartment building is comprised of eight separate units spread over two stories, four to each floor. The buildings are entered from the east-west axis on either side through a vestibule and stair hall. On both floors the apartments share a larger central vestibule from which they can enter their individual units. The units all include a living space with a kitchenette, a large bedroom, and a bathroom. The kitchenette and private bathroom are two of the more significant improvements over living in a dormitory where there are no cooking facilities and bathrooms are shared.

On the exterior, these buildings attempt to express the interior arrangement by means of fenestration and additive elements such as balconies and porches. Whereas the dormitory conveys a long, repetitive sense of rooms through fenestration and lack of architectural punctuation, the apartments provide exterior space and detail for each
individual resident. Small gestures such as these are intended to give a greater sense of purpose and identity for buildings within the town as well as increase the architectural variety for the community as a whole. By doing so, buildings of a public scale can be read as either commercial, residential, or some combination of both that is common to any community of traditional planning.

At the first floor level (slightly higher than street level for flood concerns) apartments would each have a small terrace area with an entrance into the living room. Likewise, on the second floor, each unit includes a balcony offering views towards either the ocean or the surrounding mountains. Such openings to the exterior are ubiquitous throughout the Caribbean as they afford comfortable exterior settings as well as generous ventilation for the interior. These features, native to such climates, convey an understanding of location and climate that should be expected of any good design as a response to the environment.

The construction of the apartments, like all the other buildings of the town, would consist of concrete masonry foundations and walls with wood trusses and metal roofs. The foundations would be poured concrete slabs with foundation walls as necessary, each reinforced with steel for support against high velocity winds. The walls would be unit masonry with bond beams at the second floor and wall caps for increased stability.

As a cost-saving measure windows could initially consist of unit masonry openings as found across Haiti in current residential construction. Solid shutters of either aluminum or wood would help to control light, insects, and privacy concerns. Doors would be either wood or aluminum, with screen doors as a possible addition depending on available resources.
The roofs would be of corrosive-resistant metal with a steep pitch which is reduced at the overhangs in keeping with the Caribbean tradition of dual-slope roofs from the post-Columbian periods. The large overhangs provide ample shade from the intense Haitian sunlight, but require additional strapping to counter wind uplifts during strong storms. In this manner the roofs can adequately cool the building while providing a durable cover that might reasonably resist even hurricanes.

![Figure 23. Apartment Building Elevation](image)

### 4.4 Single Family Homes

As mentioned previously, single family homes in the proposed company town represent the stability and ownership that employees should aspire towards. As the overall goal of the proposed town is to create a sense of stability and civility, the importance of attractive and durable housing cannot be stressed enough. The single family homes utilize the majority of lots in the town and in turn are fundamental to defining the character and appeal of the town.

Almost all examples of Haitian residential architecture are of a rather small scale. Palaces and large homes are rarities within the company due to the combination of
natural disasters and political upheavals. The residential architecture of Haiti mirrors the political and social history of the country in that working class people and their modest homes survive the ebb and flow of politics much better than the despots in their palaces who keep Haiti in chaos\textsuperscript{56}.

Although mid-size homes exist in the major cities with an interesting degree of eccentricity, the homes of the company town are taken from the precedents of small homes which are derivatives of two historic types. These two types, the Bohio and the Ajoupa, represent a link to the Caribbean heritage of Haiti while affording practical modern amenities and the rustic beauty of vernacular architecture.

4.5 The Bohio Housing Type

The name Bohio describes a small gable-roofed home with a door on one of the longer sides of the building\textsuperscript{57}. These homes date back to the native Indians of Central and South America who eventually settled the islands of the Caribbean. A very basic structure, the bohio throughout Latin America varies greatly in materials, color, and orientation while at the same time is easily recognizable thanks to its simple form.


\textsuperscript{57} Gravette, p. 7
When the Indians of the Caribbean sought to construct shelters for their communities they had a large variety of tropical trees for their utilization. Through centuries of trial and error these Indians learned the many attractive qualities of the type of palm tree known as the Royal Palm (see figure 22)\textsuperscript{58}. These trees can grow as tall as eighty feet with a straight, rot-resistant trunk and as such make excellent building materials. The frond base is a green fibrous material called \textit{pencas} with a bulb shape giving way to long, bushy fronds. Indian customs were to build a frame that supported the gable roof and raise it on corner posts while the palm fronds were used as a roof material and the waterproof \textit{pencas} lined the ridges. If walls were built (they often were

\textsuperscript{58} Gravette, p. 7
not for residences) they consisted of woven tree branches without a finishing surface, thus allowing for generous breezes to cool the structure.

When Christopher Columbus shipwrecked at the site he named La Navidad, his crew imitated the rustic shelters they observed on the island as a means for shelter. From that point forward European and African inhabitants began finding ways of learning from these basic homes while adapting them to their own native cultures. These new arrivals introduced methods such as wattle and daub, which provided more privacy as is typical in Europe and especially Africa. This introduction of solid walls gave rise to windows for ventilation and light, further evolving the building type according to different cultures.

The Spanish arrivals introduced shallow pitched porches, fashioned shingles from the trunks of Royal Palms, and where available even made clay roof tiles. Each of these adaptations transformed the earlier Indian type into something more closely approximating rustic Spanish farm buildings59. The European versions of the bohio began to include interior partitions for separation of public and private rooms, thus creating space within the home for receiving visitors in their native manner. All of these adaptations have found their way to modern times with the inclusion of plumbing and electricity and at the same time the bohio remains easily recognizable as a type handed down from Haiti’s earliest inhabitants.

4.6 The Ajoupa Building Type

Like the bohio, the ajoupa also has its origins in Native Indian construction. In modern variations the only apparent difference between them would be that ajoupas are

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59 Gravette, p. 11
entered from the gable end of the building as opposed to the long side. Their typical size, gable roofs, and interiors are otherwise essentially the same. During the initial stages of research an obvious precedent for this housing type seemed to be the Shotgun house which pervades the American South. One author claimed that the Shotgun type developed from African slaves based upon their native huts known as yorubi. Despite the sensible connection of Southern vernacular housing to African roots, there was little architectural evidence to support this claim.

In Andrew Gravette’s *Architectural Heritage of the Caribbean* a similar link is made to African roots, but Gravette managed to explore further back in history to early Indian shelters for an explanation. In order to distinguish African influences on Caribbean building from those of European settlers Gravette identifies two unique instances where African slaves escaped from their European masters and settled with Indian populations.

These two groups, the Bosnegers of Suriname and Black Caribs of St. Vincent, would likely have built their homes in the shape of a round hut were they in Africa, but in the Caribbean they Indian traditions of rectangular gabled huts. These structures, known as ajoupas, consist of a simple wooden frame over which the Indians laid palm fronds reaching the ground; therefore the entire shelter was nothing more than a gable roof. While the sleeping tents lacked walls, the communal buildings of the Indians were raised on a frame and exposed to three or four sides similar to a bohio. The displaced African arrivals imitated the raised communal building and introduced wattle and daub walls while keeping the entry on the gable end similar to the sleeping huts.

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60 Gravette, p. 38-40
61 Gravette, p. 38-40
As time passed over the centuries the ajoupa housing type was adapted to the many nationalities that eventually settled in the Caribbean reflecting the various cultures of European and African people across the archipelago. As with the bohio type, many ajoupas have been modernized to include contemporary features including air conditioning and electricity although plenty have remained as the most rudimentary of homes. The most important distinction for the bohio and ajoupa types is their simple, recognizable form and a strong connection to the present and past of the inhabitants of Hispaniola and the other islands.

The bohio and ajoupa types naturally lend themselves to housing in a Haitian company town for several obvious reasons. Easily constructed and very affordable, the two types also offer flexibility in urban design due to their different orientations to the street frontages. This flexibility helps in solving otherwise awkward corner conditions without having to resort to additional structures such as garages or sheds to maintain edges along secondary streets. Their narrow footprints also allow for high density housing which assists in defining a sense of space along street frontages. By minimizing
the setbacks between adjacent homes the simplicity of their form also helps create an appealing rhythm of buildings along the streets in a manner similar to the style of Aldo Rossi. In addition to their beautiful simplicity and flexibility, the bohios and ajoupas are easily expanded upon both laterally and vertically and are both intrinsically linked to Haiti’s residential history. For all of these reasons, the choice was made to use the two forms as the fundamental building blocks for development around the industry buildings of the company town.

Figure 26. A contemporary Haitian Ajoupa.

4.7 Industrial and Public Buildings

As with any well balanced community, the proposed company town addresses the need for balancing private and public buildings in a way that best suits their needs. As a small community with a centralized industry the town would have very different
commercial, institutional, and recreational facilities than an American suburban
development or a typical resort town. Like many historic examples, the proposed
company town could operate on as little as a factory, housing, and a general store.
However, the goal of this town includes a social considerations which under this proposal
would include primary, secondary, and trade schools; medical facilities, a library, church,
meeting hall, and at least one market. Although such a town might not have a large
diversity of economies in the early stages, the expandable and adaptable town grid (as
with Florence, Naples, and countless Latin American cities) is intended to accommodate
any future growth the town might experience.

The character of the public buildings is typically vernacular in an effort to
respond to the environment more so than a style associated with any nationality. This
decision stems from a desire to avoid association with either Spanish or French political
regimes of the past whose abuses are notorious in Haitian history. It might be argued that
choosing the Laws of the Indies as a town planning strategy is at odds with this last
statement, however I do not believe that is necessarily so. The Laws of Indies are a
Spanish adaptation of Vitruvius’ writings in the First century B.C.\(^{62}\), which in turn was
likely influenced by earlier Roman and Greek practices. Aside from these facts, I believe
that architectural styles are more readily understood by a general population as being
from a specific nationality as opposed to town planning by grids.

By choosing to work with vernacular public buildings it is suggested that the
appeal of such buildings would be found in their tectonic detailing (overhangs, eaves,
balconies, and arcades), the simplicity of their massing, and a vibrant Haitian palette for
the stucco walls. These vernacular buildings would involve simple construction,

\(^{62}\) Vitruvius, p. 17-34
beautiful materials, and flexible interior usage that make them a strong candidate for success in such a town. In fact, the public buildings would likely appear quite similar to any other dense urban region of Haiti because very few notable period buildings have survived the political and natural disasters over the centuries.

Although the large majority of private and public buildings are vernacular in this design, the salt factory, town hall, and the church have been designated as buildings deserving of more refinement than the others. The factory represents the heart and soul of the community well being, and like many historic company towns the building symbolizes the public face of the community. Similar examples exist in Arc-et-Sanans and Noisel-sur-Marne, France as well as in Pullman, Illinois and Echota, New York. In early design schemes the author proposed architectural elements such as arcades along the front façade, a large entry portal, stucco profiles, and planters which in no way improve the function of an industrial building yet they all drastically soften the otherwise brutal character of a warehouse. As for the interior, the entry sequence and offices offer reasonable places for improving finishes and materials while the body of the factory should bear out a mechanical appeal similar to railroads or good airport terminals.

Figure 27. Arc-et-Sanans factory by C.N. Ledoux
The church deserves embellishment by the merits of its purpose and function within a community as does the town hall, although symbolic references would be obviously different. The proposed church would be the center of a new Roman Catholic parish (Catholicism being the national religion) and would probably include a baptistery, parish center, and a school. The church could be embellished through greater materials or a more formal architectural language such as Italian Renaissance (a classical language without links to the abuses of Spanish or French predecessors) or some combination thereof. In addition to the architectural features would be the myriad artistic pieces associated with the Catholic faith, which also help to elevate the importance of this building in the community.

The town hall represents the town’s gathering place for people to celebrate, debate, or entertain as the occasion requires. Introducing politics on a large scale into an unstable third world area would be ill-advised for such a community, so one should image this town hall as more of a public gathering space. Community plays or musical performances might be as much a part of this building as any political discussion, so the design should be flexible yet dignified at the same time. As with the church, materials and language should both be noticeably better than other public buildings. Finally, the location of the church and town hall on the plaza mayor only reinforces their architectural embellishment and the urban and architectural gestures are meant to work in tandem.

Having described the housing types and public buildings, historic background, and urban strategies all that remains is to bring them all together in a cohesive design strategy. The last several months have been spent reconciling the written components with the design approach and vice versa to create what hopefully is a plausible argument.
4.8 Conclusion

Architecture and urbanism cannot solve all the problems of a place like Haiti, but the influences of design can improve the lives of entire communities in developing countries. The lessons of the past have shown that company towns can foster economic growth and social improvement when managed and designed well. By creating a source of employment and offering quality housing, company towns can fulfill the basic needs of people in ways that unstable governments are either unwilling or unable to. When the potential of such towns is combined with architecture and urbanism, the possibilities are as diverse and beautiful as the people who will shape them. The following designs are but an example of such possibilities as they relate to the conditions of Petit Paradis in northern Haiti.
CHAPTER 5

DESIGN IMAGES FOR THE COMPANY TOWN OF PETIT PARADIS

Figure 28. Plan of the Proposed Company Town
Figure 29. Plan Detail of the Plaza Mayor

Figure 30. Aerial View of the Plaza Mayor
Figure 31. Housing Types: Dormitories, Apartments, Bohios, and Ajoupas
Figure 32. Plan of an Ajoupa

Figure 33. Elevation of Ajoupas along a street

Figure 34. Two Story Ajoupas at a later stage of development
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Figure 36. Elevation of Bohios along a street

Figure 37. Two Story Bohios at a later stage of development
Figure 38. Plan of an apartment building

Figure 39. Elevation an apartment building
Figure 40. Market Square plan detail

Figure 41. Perspective view of the Market Square from an earlier plan
Figure 42. Axonometric view of a typical block

Figure 43. Typical block plan showing rear gardens
Figure 44. Plan detail of the salt factory and surrounding blocks
Figure 45. Salt factory plan

Figure 46. Elevation of the factory facing towards the town
Figure 47. View of the factory from the East

Figure 48. View of the factory from the West
Figure 49. View of the factory from the North
APPENDIX

ORDINANCES FOR THE DISCOVERY, THE POPULATION AND THE PACIFICATION OF THE INDIAN (1573)

Don Felipe etc.- To the Viceroy, presidents, audiencias and governors of our new Indies and to all those others concerned let it be known: That in order that the discoveries and new settlements and pacification of the land and provinces that are to be discovered, settled, and pacified in the Indies be done with greater facility and in accordance with the service to God Our Lord, and for the welfare of the natives, among other things, we have prepared the following ordinances.

1. No person, regardless of state or condition, should, on his own authority make a new discovery by sea or land, or enter a new settlement or hamlet in areas already discovered. If he were found without our license and approval or by those who had our power to give it, he would face a death penalty and loss of all his possessions to our coffers. And, we order to all our viceroys, audiencias, and governors and other justices of the Indies, that they give no license to make new discoveries without previous consultation with us and only after having obtained our permission; but we do consent that in areas already discovered, they can give license to build towns as necessary, adhering to the order that in so doing they must keep to the laws of February regarding settlements in discovered lands, [and] then they should send us a description.

2. Those who are in charge of governing the Indies, whether spiritually or temporally, should inform themselves diligently whether within their districts, including lands and provinces bordering them, there is something to be discovered and pacified, of the wealth and quality, [and] of the peoples and nations who inhabit there; but do this without sending to them war personnel nor persons who can cause scandal. They [the governors] should inform themselves by the best means available; and likewise, they should obtain information on the persons who are best suited to carry out discoveries -and with those who are best fit for this purpose, they [the governors] should confer and make arrangements, offering them the honors and advantages that justly, without injury to the natives, can be given them -and- before carrying out what has been arranged or has been learned, give narratives to the viceroy and the audiencias and also send them to the Council, which, after looking at the case, will issue a license to proceed with the discovery, which should be carried out in the following order:
3. Having made, within the confines of the province, a discovery by land, pacified it, [and] subjected it to our obedience, find an appropriate site to be settled by Spaniards- and if not, [arrange] for the vassal Indians so they be secure.

4. If the boundaries of the settlement are populated, utilizing commerce and ransom, go with vassal Indians and interpreters to discover those lands, and with churchmen and Spaniards, carrying offerings and ransoms and peace, try to learn about the place, the contents and quality of the land, the nation(s) to which the people there belong, who governs them, and carefully take note of all you can learn and understand, and always send these narratives to the Governor so that they reach the Council [Consejo de Indias].

5. Look carefully at the places and ports where it might be possible to build Spanish settlements without damage to the Indian population.

6-12. (These ordinances provide guidelines for discoveries that are made by sea.)

13. Persons who participate in discoveries, whether by land or by sea, should take possession, in our name, of all lands and provinces they might reach and, upon setting foot on to land, perform the necessary ceremonies and writs, thus providing public evidence and faithful testimony.

14. Once the discoverers arrive at newly discovered provinces or lands, together with the officials, they should name each land, each province, and the mountains and principal rivers they might encounter as well as the settlements and towns they might find or that they may begin.

15-31. (These ordinances instruct the Spaniards on the formal issues of encountering, greeting, teaching, and punishing the native Indian population.)

**City Planning Ordinances**

32. Before discoveries are duly recognized, no new population settlements are permitted, whether in the discovered areas or in those still to be discovered, but in those parts which are already discovered, pacified, and subjected to our mandate, population settlements, both of Spaniards and of Indians, should be ordered having permanence and giving perpetuity to both groups as specified in the fourth and fifth books [of the Laws of the Indies], especially in those parts dealing with population settlements and with land allotments.

33. Having populated and settled the newly discovered area, pacified it, and subjected it to our mandate, efforts should be made to discover and populate adjacent areas that are being discovered for the first time.

34. In order to populate those areas that are already discovered, pacified, and under our mandate, as well as areas that might be discovered and pacified in the course of time, the following sequence should be adhered to: choose the province, county, and place that will
be settled, taking into consideration the health of the area, which will known from the abundance of old men or of young men of good complexion, natural fitness and color, and without illness; and in the abundance of healthy animals of sufficient size, and of healthy fruits and fields where no toxic and noxious things are grown, but that it be good climate, the sky clear and benign, the air pure and soft, without impediment or alterations and of good temperature, without excessive heat or cold, and having to decide, it is better that it be cold.

35. And they should be in fertile areas with an abundance of fruits and fields, of good land to plant and harvest, of grasslands to grow livestock, of mountains and forests for wood and building materials for homes and edifices, and of good and plentiful water supply for drinking and irrigation.

36. And that they should be populated by Indians and natives to whom we can preach the gospels since this is the principal objective for which we mandate that these discoveries and settlements be made.

37. And they should have good access and outlet by sea and by land, and also good roads and passage by water, in order that they may be entered and departed easily with commerce, while bringing relief and establishing defenses.

38. Once the region, province, county, and land are decided upon by the expert discoverers, select the site to build a town and capital of the province and its subjects, without harm to the Indians for having occupied the area or because they agree to it of good will.

39. The site and position of the towns should be selected in places where water is nearby and where it would be possible to demolish neighboring towns and properties in order to take advantage of the materials that are essential for building; and, [these sites and positions should be suitable] also for farming, cultivation, and pasturation, so as to avoid excessive work and cost, since any of the above would be costly if they were far.

40. Do not select sites that are too high up because these are affected by winds, and access and service to these are difficult, nor in lowlands, which tend to be unhealthy; choose places of medium elevation that enjoy good winds, especially from the north and south, and if there were mountains or hills, these should be in the west or in the east, and it there should be a need to build in high places, do it in areas not subjected to fogs; take note of the terrain and its accidental features and in case that there should be a need to build on the banks of a river, it should be on the eastern bank, so when the sun rises it strikes the town first, then the water.

41. Do not select sites for towns in maritime locations because of the danger that exists of pirates and because they are not very healthy, and because in these [locations] there are less people able to work and cultivate the land, nor is it possible to instill in them these habits. Unless the site is in an area where there are good and principal harbors, among
these, select for settlement only those that are necessary for the entry of commerce and for the defense of the land.

42. Having selected the site for capital towns in each county, determine the areas that could be subjected and incorporated within the jurisdiction of the head town [English approximation: county seat] as farms, granges, and gardens, without detriment to Indians and natives.

43. Having selected the area, province, and site where the new settlement is to be built, and having established the existing opportunities for development, the governor in whose district [the site] is or borders upon should decide whether the site that is to be populated should become a city, town, or village settlement. In compliance with his decision, it should form a Council [and] commonwealth [república] and name corresponding officials and members in accordance with stipulations in the "Book of the Republic of Spaniards" {Libro de la República de Españoles}. Thus in case it were to become a metropolitan city, it should have a judge with title and name of adelantado [title often given to the governor of a province, probably interim governor], or governor, or principal mayor; a corregidor, or ordinary mayor, who would have insolidum jurisdiction and who jointly with the regiment would carry on the administration of the commonwealth [with the help also of] three officers of the Royal Exchequer [Hacienda Real], twelve magistrates [regidores], two executors, two jurors for each parish, one general procurer, one scribe of the Council, two public scribes [one for mines, another for registers], one main town crier, one broker for commercial transactions, two ushers to diocesan or suffragan bishops, eight [lower] magistrates, and other such essential officials. For the towns and villages, there should be] an ordinary mayor, four magistrates, one constable, one scribe for the Council and a public scribe, and a majordomo.

44-88. (These ordinances dictate the legislative, legal and fiduciary regulations.)

89. The persons who were placed in charge of populating a town with Spaniards should see to it that, within a specified term, assigned for its establishment, it should have at least thirty neighbors, each one with his own house, ten cows, four oxen or two oxen and two young bulls and a mare, and it should have [also] a clergyman who can administer sacraments and provide the ornaments to the church as well as the necessary implements for the divine service; if this is not accomplished, he should lose everything already built or formed and he will incur a fine of a thousand gold pesos.

90. The aforesaid stipulations and territory should be divided as follows:

Separate first the land that is needed for the house plots [solares] of the town, then allocate sufficient public land and grounds for pasture where the cattle that the neighbors are expected to bring with them can obtain abundant feed, plus another portion for the natives of the area.
The rest of the grounds and territory should be divided into four parts: one is for the person in charge of building the town, the other three should be subdivided into thirty lots for the thirty neighbors of the town.

91. Land and boundaries for the new settlement cannot be given nor taken at a seaport nor anywhere where it can ever be redundant and detrimental to the Crown nor to the country because such sites will be reserved for us.

92. We define a neighbor as the son, daughter or children of a new settler or his relatives to and beyond the fourth degree that have different households and families and, if they are married, each of them has his own household.

93-98. (These ordinances deals with various topics ranging from town officials, nearby mines, to taxes on items carried along to start a new town.)

99. Those who have made a commitment to build the said town, who after having succeeded in carrying out its settlement, as an honor to them and to their descendants [and in] their laudable memory as founders, we pronounce them hijosdalgo [illustrious men of known ancestry]. To them and to their legitimate heirs, in whatever place they might reside or in any other part of the Indies, they will be hijosdalgo, that is, persons of noble ascendancy and known ancestry.

100. Those who should want to make a commitment to building a new settlement in the form and manner already prescribed, be it of more or less than 30 neighbors, (know that) it should be of no less than twelve persons and be awarded the authorization and territory in accordance with the prescribed conditions.

101. If there is no person with the duty to select a site for a new settlement and there are enough married men who agree to create a new settlement wherever they are directed to locate it, as long as they are no less than ten married men they can do it and will be given land and boundaries accordingly and they will have the right to choose among themselves mayors and yearly councilmen.

102. Having chosen a site for a new settlement, as a colony, a frontier town, a town proper, a district seat, or a village, the Council and the Indies governor will not be satisfied by the mere fact of possession and continuity of rule and order from the start and will make them responsible for its development.

103. After the governor sites a new settlement of the proper hierarchy, the city or people who settle it will also settle with each of the persons that had registered or comes to register for the new settlement, and the person responsible for the town must select urban lots, farm, and pasture lands for the person willing to populate the town, who shall receive the amount of peonias and caballerias on which he is willing and able to build as long as no one is awarded more than five peonias nor three caballerias if given the latter.
104. A peonía is an urban lot 46 feet wide and 92 feet deep, land that will yield 156 bushels of either wheat or barley, 15.6 bushels of corn, land sized for two days of plowing for a vegetable garden, land sized for eight days of plowing to plant unirrigated trees, and pasture land for ten fertile sows, twenty cows, five mares, one hundred sheep, and twenty goats.

105. A caballería is an urban lot 92 feet wide and 184 feet deep, and the rest is equivalent to five peonías which is land that will yield 780 bushels of wheat or barley for bread, 78 bushels of corn, land sized for ten days of plowing for a vegetable garden, land sizes for forty days of plowing to plant unirrigated trees, pasture land for fifty fertile sows, one hundred cows, twenty mares, five hundred sheep, and one hundred goats.

106. The caballería, both the urban lots and the pasture and farm lands should be clearly marked and surveyed in a defined area and the peonías, both the urban lots and farm lands shall be marked and divided, and the pasture land will be common to all.

107. Those who accept settlement in the caballerias and peonías must build in their urban lots and live in their homestead and select the planting cycle of their farmlands and plant them and populate the pastures with cattle within the assigned time period and shall declare what will be accomplished within each period or they will lose their lots, lands and a monetary fine for the state, and must publicly accept these terms by way of a performance bond.

108. (This ordinance continues to elaborate upon requirements for maintaining caballerias and peonías.)

109. The governor who authorizes the settlement of a new town or concedes rights for an existing town to be populated anew, by means of his own authority or by making a request, should ascertain that those who have made a commitment to settle in a new town comply with the taking of seat in a proper manner. This should be done with great diligence and care. Also, the magistrates and Council procurer should initiate due process against the settlers who are bound up by a specified term and who have not complied with it to make them meet the terms, and those who might have left should be prosecuted, seized, and brought back to the town in order that they comply with the terms of settlement, and if they were in another jurisdiction, a requisitioning order should be issued in order that justice be done under penalty of Our Lord.

110. Having made the discovery, selected the province, county, and area that is to be settled, and the site in the location where the new town is to be built, and having taken possession of it, those placed in charge of its execution are to do it in the following manner. On arriving at the place where the new settlement is to be founded - which according to our will and disposition shall be one that is vacant and that can be occupied without doing harm to the Indians and natives or with their free consent - a plan for the site is to be made, dividing it into squares, streets, and building lots, using cord and ruler, beginning with the main square from which streets are to run to the gates and principal roads and leaving sufficient open space so that even if the town grows, it can always
spread in the same manner. Having thus agreed upon the site and place selected to be populated, a layout should be made in the following way:

111. Having made the selection of the site where the town is to be built, it must, as already stated, be in an elevated and healthy location; [be] with means of fortification; [have] fertile soil and with plenty of land for farming and pasturage; have fuel, timber, and resources; [have] fresh water, a native population, ease of transport, access and exit; [and be] open to the north wind; and, if on the coast, due consideration should be paid to the quality of the harbor and that the sea does not lie to the south or west; and if possible not near lagoons or marshes in which poisonous animals and polluted air and water breed.

112. The main plaza is to be the starting point for the town; if the town is situated on the sea coast, it should be placed at the landing place of the port, but inland it should be at the center of the town. The plaza should be square or rectangular, in which case it should have at least one and a half its width for length inasmuch as this shape is best for fiestas in which horses are used and for any other fiestas that should be held.

113. The size of the plaza shall be proportioned to the number of inhabitants, taking into consideration the fact that in Indian towns, inasmuch as they are new, the intention is that they will increase, and thus the plaza should be decided upon taking into consideration the growth the town may experience. [The Plaza] shall be not less that two hundred feet wide and three hundred feet long, nor larger than eight hundred feet long and five hundred and thirty feet wide. A good proportion is six hundred feet long and four hundred wide.

114. From the plaza shall begin four principal street: One [shall be] from the middle of each side, and two streets from each corner of the plaza; the four corners of the plaza shall face the four principal winds, because in this manner, the streets running from the plaza will not be exposed to the four principal winds, which would cause much inconvenience.

115. Around the plaza as well as along the four principal streets which begin there, there shall be portals, for these are of considerable convenience to the merchants who generally gather there; the eight streets running from the plaza at the four corners shall open on the plaza without encountering these porticoes, which shall be kept back in order that there may be sidewalks even with the streets and plaza.

116. In cold places, the streets shall be wide and in hot places narrow; but for purposes of defense in areas where there are horses, it would be better if they are wide.

117. The streets shall run from the main plaza in such manner that even if the town increases considerably in size, it shall not result in some inconvenience that will make ugly what needed to be rebuilt, or endanger its defense or comfort.
118. Here and there in the town, smaller plazas of good proportion shall be laid out, where the temples associated with the principal church, the parish churches, and the monasteries can be built, [in] such [manner] that everything may be distributed in a good proportion for the instruction of religion.

119. For the temple of the principal church, parish, or monastery, there shall be assigned specific lots; the first after the streets and plazas have been laid out, and these shall be a complete block so as to avoid having other buildings nearby, unless it were for practical or ornamental reasons.

120. The temple of the cathedral [principal church] where the town is situated on the coast shall be built in part so that it may be seen on going out to sea and in a place where its buildings may serve as a means of defense for the port itself.

121. Next, a site and lot shall be assigned for the royal council and cabildo house and for the custom house and arsenal, near the temple, located in such a manner that in times of need the one may aid the other; the hospital for the poor and those sick of noncontagious diseases shall be built near the temple and its cloister; and the hospital for the sick with contagious diseases shall be built in such a way that no harmful wind blowing through it may cause harm to the rest of the town. If the latter be built in an elevated place, so much the better.

122. The site and building lots for slaughter houses, fisheries, tanneries, and other business which produce filth shall be so placed that the filth can easily be disposed of.

123. It shall be of considerable convenience if those towns that are laid out away from seaports, inland, be built if possible on the shore of a navigable river, and attempts should be made to place the town on the side from which the cold north wind blows and that buildings that cause filth be placed on the side of the river or sea below the town.

124. The temple in inland places shall not be placed on the square but at a distance and shall be separated from any other nearby building, or from adjoining buildings, and ought to be seen from all sides so that it can be decorated better, thus acquiring more authority; efforts should be made that it be somewhat raised from ground level in order that it be approached by steps, and near it, next to the main plaza, the royal council and cabildo and customs houses shall be built. [These shall be built] in a manner that would not embarrass the temple but add to its prestige. The hospital for the poor who are not affected by contagious diseases shall be built near the temple and near its cloister, and the [hospital] for contagious diseases shall be built in an area where the cold north wind blows, but arranged in such a way that it may enjoy the south wind.

125. The same plan shall be observed in any inland place without shore, taking considerable care to ascertain the availability of those conveniences that are required.

126. In the plaza, no lots shall be assigned to private individuals; instead, they shall be used for the buildings of the church and royal houses and for city use, but shops and
houses for the merchants should be built first, to which all the settlers of the town shall contribute, and a moderate tax shall be imposed on goods so that these buildings may be built.

127. The other building lots shall be distributed by lottery to the settlers, continuing with the lots closer to the main plaza, and the lots that are left shall be held by us for assignment to those who shall later become settlers, or for the use that we may wish to make of them, and so that this may be ascertained better, the town shall maintain a plan of what is being built.

128. Having made the plan of the town and having distributed building lots, each of the settlers shall set up his tent on his plot if he should have one. For this purpose the captains should persuade settlers to carry them, and those who did not bring one should make their huts of easily available local materials, so that they may have shelter, and everyone as soon as possible shall make a palisade or ditch encircling the plaza so that they may not be harmed by Indians or natives.

129. Within the town, a commons shall be delimited, large enough that although the population may experience a rapid expansion, there will always be sufficient space where the people may go to for recreation and take their cattle to pasture without them making any damage.

130. Adjoining the commons there shall be assigned pasture ground for the work oxen and for the horses as well as for the cattle for slaughter and for the usual number of cattle that the settlers must have according to these Ordinances, and in a good number so they can be admitted to pasture in the public lands of the Council; and the rest [of the adjoining land] shall be assigned as farm lands, which will be distributed by lottery in such a number that the [farm lots] would be as many in number as the lots in the town; and if there should be irrigated lands, lots shall be cast for them and they shall be distributed in the same proportion to the first settlers according to their lots; the rest shall remain for ourselves so that we may assign it to those who may become settlers.

131. In the farmlands that may be distributed, the settlers should immediately plant the seeds they brought with them and those they might have obtained at the site; to this effect it is convenient that they go well provided; and in the pasture lands, all the cattle they brought with them or gathered should be branded so that they may soon begin to breed and multiply.

132. Having planted their seeds and made arrangements for the cattle in such number and with good diligence in order to obtain abundant food, the settlers shall begin with great care and efficiency to establish their houses and to build them with good foundations and walls; to this effect they shall go provided with molds or planks for building them, and all the other tools needed for building quickly and at small cost.

133. They shall arrange the building lots and edifices placed thereon in such a manner that when living in them they may enjoy the winds of the south and north as these are the
best; throughout the town arrange the structures of the houses generally in such a way that they may serve as defense or barrier against those who may try to disturb or invade the town, and each house in particular shall be so built that they may keep therein their horses and work animals and shall have yards and corrals as large as possible for health and cleanliness.

134. They shall try as far as possible to have the buildings all of one type for the sake of the beauty of the town.

135. The faithful executors and architects as well as persons who may deputed for this purpose by the governor shall be most careful in overseeing that the above [ordinances] be executed; and they shall hurry in their labor and building so that the town may be completed in a short time.

136. If the natives should resolve to take a defensive position toward the [new] settlement, they should be made aware of how we intend to settle, not to do damage to them nor take away their lands, but instead to gain their friendship and teach them how to live civilly, and also to teach them to know our God so they learn His law through which they will be saved. This will be done by religious, clermics, and other persons designated for this purpose by the governor and through good interpreters, taking care by the best means available that the town settlement is carried out peacefully and with their consent, but if they [the natives] still do not want to concour after having been summoned repeatedly by various means, the settlers should build their own town without taking what belongs to the Indians and without doing them more harm that it were necessary for the protection of the town in order that the settlers are not disturbed.

137. While the town is being completed, the settlers should try, inasmuch as this is possible, to avoid communication and traffic with the Indians, or going to their towns, or amusing themselves or spilling themselves on the ground [sensual pleasures?]; nor [should the settlers] allow the Indians to enter within the confines of the town until it is built and its defenses ready and houses built so that when the Indians see them they will be struck with admiration and will understand that the Spaniards are there to settle permanently and not temporarily. They [the Spaniards] should be so feared that they [the Indians] will not dare offend them, but they will respect them and desire their friendship. At the beginning of the building of a town, the governor shall name one person who will occupy himself with the sowing and cultivation of the land, planting wheat and vegetables so that the settlers can be assisted in their maintenance. The cattle that they brought shall be put out to pasture in a safe area where they will not damage cultivated land nor Indian property, and so that the aforesaid cattle and its offspring may be of service, help, and sustenance to the town.

138. Having completed the erection of the town and the buildings within it, and not before this is done, the governor and settlers, with great care and holy zeal, should try to bring peace into the fraternity of the Holy Church and bring on to our obedience all the natives of the province and its counties, by the best means they know or can understand, and in the following manner:
139. Obtain information of the diversity of nations, languages, sects, and prejudices of the natives within the province, and about the lords they may pledge allegiance to, and by means of commerce and exchange, [the Spaniards] should try to establish friendship with them [the Indians], showing great love and caressing them and also giving them things in barter that will attract their interest, and not showing greediness for their things. [The Spaniards] should establish friendship and alliances with the principal lords and other influential persons who would be most useful in the pacification of the land.

140. Having made peace and alliance with [the Indians lords] and with their republics, make careful efforts so that they get together, and then [our] preachers, with utmost solemnity, should communicate and begin to persuade them that they should desire to understand matters pertaining to the holy Catholic faith. Then shall begin our teaching [efforts] with great providence and discretion, and in the order stipulated in the first book of the holy Catholic faith, utilizing the mildest approach so as to entice the Indians to want to learn about it. Thus you will not start by reprimanding their vices or their idolatry, nor taking away their women nor their idols, because they should not be scandalized or develop an enmity against the Christian doctrine. Instead, they should be taught first, and after they have been instructed, they should be persuaded that on their own will they should abandon all that runs contrary to our holy Catholic faith and evangelical doctrine.

141-147 (These ordinances further deal with the conversion of the native Indian population).

148. The Spaniards to whom the Indians are entrusted [encomendados], should seek with great care that these Indians be settled into towns, and that, within these, churches be built so that the Indians can be instructed into Christian doctrine and live in good order. Because we order you see to it that these Ordinances, as presented above, be incorporated, complied with, and executed, and that you make what in them is contained be complied with and executed, and never take action or move against them, nor consent that others take action or move against either their content or form, under penalty of our Lord.

Dated in the Woods of Segovia, the thirteenth of July, in the year fifteen hundred and seventy-three, I the King; the Licenciado Otalaza; the Licenciado Diego Gasca de Alazar; the Licenciado Gamboa, the Doctor Gomez de Santillán.

LIST OF REFERENCES


World History Archives. 16 September 2005.
<http://www.hartford-hwp.com/archives/43a/100.html>
