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## Chapter Six

*Embracing the Concept of Good Design*

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*“Project should be a poised between the pragmatic solutions to real architectural problems by the designer and a disquieting commentary on that very program.”*

*- Barry Bergdoll*

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**Six** • *Schematic Design*

• **Introduction**

The schematic design for the community complex began with the individual scale and relationships of the ten building types. This established the general scope for the design of the community complex and led fourth into the conceptual development within the design of the campus and each building. The primary objective was to arrive at a clearly defined concept that explores alternative design solutions to the architectural problems existing within Barahona, Dominican Republic. The general arrangement of the buildings upon the site was explored, ultimately resulting in a schematic arrangement. Diagrams and models were used to help visualize the project enabling the clients ('Children of the Nations') to envision the plans for a new community complex.

**Six** • *Design Objectives*

• **Introduction**

In order to produce a successful project, the project goals need to be clearly identified. The interdependences of all building systems also is needed to be coordinated concurrently from the planning and programming phases. The project goals can be defined further in order to allow for the understanding of the goals in further detail.<sup>1</sup> They are as follows:

• **Accessibility**

This pertains to the building elements, which includes heights and clearances which are implemented to address the specific needs of disabled people.<sup>2</sup> There is a need to provide equal access and to plan for flexibility. These two needs are extremely important within the design of the community center as this will be the first location upon which disabled users will be able to use the site and buildings. Planning for flexibility allows for 'Children of the Nations' to grow and expand within the complex to ultimately achieve long term goals.

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- **Aesthetics**

This pertains to the physical appearance and perceived image of the building elements and spaces designed.<sup>3</sup> The usual aesthetic approach taken here in the United States will differ greatly from that of the Dominican Republic. Engaging the appropriate language and elements of design is important within the aesthetical design of the buildings and the overall complex. It is important to take into consideration the architecture of the Dominican Republic and allow for the people to be able to aesthetically connect with the buildings upon the complex, as they do not need to become something foreign to the people. Engaging the integrated design process is also an important factor. The design of the complex will allow for new methods and technologies to be integrated, but although this is true the aesthetic quality of the individual buildings will pertain to the architecture of Barahona; the Bateys and Barrios. This will ultimately create a stronger connection that is so greatly needed between the users and architecture within Barahona.

- **Cost-Effective**

This pertains to selecting specific building elements on

the basis of life-cycle costs.<sup>4</sup> It is necessary to weigh the design options during the conceptual design development. Developing a basic cost estimating and budget will be one of the final goals of this thesis in order to hand over to 'Children of the Nations'. The cost of the land along with the construction of each of the ten buildings will be designed and planned to move forward in purchasing and construction in numerous stages. This will break down the large scale of the community complex into more feasible stages, ultimately allowing for the entire project to be constructed.

- **Functional / Operational**

This pertains to the functional programming-spatial needs and requirements. The system performance as well as the durability and efficient maintenance of building elements.<sup>5</sup> The design of the community complex will become a facility that will run on a daily basis, every day out of the year. The design of the individual buildings will encompass the functional programming-spatial needs and requirements. With the integration of new sustainable methods will call for the need of efficient maintenance of certain building elements. The complex will need to be

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designed correctly in order to become a fully functional and operational facility. The local staff members will take upon the positions of efficient maintenance and these new learned skills will hopefully become integrated into the Bateys and Barrios. The complex can become an example of a functional facility which integrates new building and sustainable methods, building elements and techniques.

- **Productive**

This pertains to the occupants well-being. This being the physical and psychological comfort. Building elements such as air distribution, lighting, workspaces, systems and technology will need to be designed in order to provide further comfort for the users.<sup>6</sup> Designing for changing workplaces is important within all of the buildings, as this complex will move through stages of growth, allowing for more people to be served in country. Promoting health and well-being is extremely important within the design of the complex as this is a major issues within the Bateys and Barrios at present. Providing a comfortable environment is one of the most important factors as the users need to feel welcomed and at home within the programmatically designed spaces and buildings. The complex will be someone's home, school,

health provider, feeder, comforter; thus becoming a place where the architectural form is the controlled environment for the users. Current indoor environments within the Bateys are not of a comfortable environment, so to provide an entire complex that encompasses this factor is the ultimate goal through the design and production of architecture.

- **Security / Safety**

This pertains to the physical protection of occupants and assets from man-made and natural hazards.<sup>7</sup> Planning for fire protection is important to ensure the safety of the large numbers of occupants upon the site. Ensuring occupant safety and health is something to be promoted through the design of the community complex. This specifically pertains to the occupants that will be housed within the complex. Providing security for building occupants and assets is the most important safety factor. Many problems arise with security in the Dominican Republic and specifically Barahona. There will need to be a wall that will surround the site, as well as numerous security guards protecting the complex. Entry and exit will also be a security factor as it is important that all venture teams and children that will be using the complex feel safe and secure at all times by

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'Children of the Nations'. Current COTN locations are all secure and protected by walls, gates and daily twenty-four hour guards.

- **Sustainability**

This pertains to the environmental performance of building elements and strategies.<sup>8</sup> Sustainability is very important to 'Children of the Nations' and also to the development of implementing new methods into the Bateys and Barrios. This thesis explores many methods in which sustainable design can be implemented into the design and the elements of design. These are as follows: optimize site potential, optimize energy use, conservation of water, collection of rainwater, the use of environmentally preferable products, enhancement of indoor environmental quality, use of wind power, use of solar energy, and the use of compost toilets. The use of wind power will be integrated by COTN as these designs have been developed in Africa through their organization. All of these factors will be fully explored prior to the introduction in order to achieve maximum quality and understanding for the integration of sustainable building techniques and methods.

## **Six** • *Conceptual Site Planning and Design Research*

- **Introduction**

The pattern language of an architectural design describes the structure of the network to be developed within the design of the community complex in Barahona, Dominican Republic. By using a network of language the complex develops a sequence, going through patterns. The patterns researched are discussed further, in order to become developed into a new pattern language for the community complex.

- **Mosaic of Subcultures**

- In a city made up of ghettos, people have the support of the most basic forms of differentiation - race or economic status. The ghettos are still homogeneous internally and do not allow a significant variety of life styles to emerge. People in the ghetto are usually forced to live there, isolated from the rest of society, unable to evolve their way of life and often tolerant of ways of life different from their own.<sup>9</sup>

- In a city made of a large number of subcultures relatively small in size, each occupying an identifiable

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place and separated from other subcultures by a boundary of nonresidential land, new ways of life can develop. People can choose the kind of subculture they wish to live in, and can still experience many ways of life different from their own. Since each environment fosters mutual support and a strong sense of shared values, individuals can grow.<sup>10</sup>

- **Network of Learning**

- In a society which emphasizes teaching, children and students and adults become passive and unable to think or act for themselves. Creative, active individuals can only grow up in a society, which emphasizes learning instead of teaching.<sup>11</sup>

- “Path” where young children can safely wander on their own.<sup>12</sup>

- Encourage teenagers to work a self-organized learning society of their own.<sup>13</sup>

- **Sacred Spaces**

- People cannot maintain their spiritual roots and their connections to the past if the physical world they live in does not also sustain these roots.<sup>14</sup>

- Intensifies public meaning. The best way to

intensify a site is through a progression of areas, which people pass through a progression of areas which people pass through as they approach the site. This is the principle of “nested precincts” discussed in detail under the pattern holy ground.<sup>15</sup>

- A garden can be reached only by passing through a series of outer gardens keeps its secrecy. A temple which can be reached only by passing through a sequence of approach courts, is able to be a special thing in a man’s heart.<sup>16</sup>

- The site itself becomes a kind of inner sanctum, at the core.<sup>17</sup>

- Give every sacred site a place, or a sequence of places, where people can relax, enjoy themselves, and feel the presence of the place: quiet backs, zen views, tree places, garden seat. Above shield the approach to the site, so that it can only be approached on foot, and through a series of gateways and thresholds which reveal it gradually: Holy Ground.<sup>18</sup>

- **Activity Nodes**

- Node must draw together the main paths in the surrounding community. The major pedestrian paths should

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converge on the square, with minor paths funneling into the major ones, to create the basic star-shape of the pattern.<sup>19</sup>

- The facilities grouped around any one node must be chosen for their symbolic relationships. It is not enough merely to group communal functions in so-called community centers.<sup>20</sup>

- To create intensity of action, the facilities which are placed together round any one node must function in a cooperative manner and must attract the same kinds of people, at the same times of day.<sup>21</sup>

- Activity Nodes should support one another.<sup>22</sup>

- **Work Community**

- If you spend eight hours of your day at work, and eight hours at home, there is no reason why your workplace should be any less of a community than your home.<sup>23</sup>

- Why should the people of our culture choose to use the word “live”, which, on the face of it applies to every moment of our waking lives, and apply it only to a special portion of our lives – that part associated with our families and houses. The implication is straightforward. The people of our culture believe that they are less alive when they are working than when they are at home; and we make

this distinction subtly clear, by choosing to keep the word “live” only for those places in our lives where we are not working. Anyone who uses the phrase “where do you live” in its everyday sense, that no one really “lives” at his place of work – there is no song or music there, no love, no food: that he is not alive while working, not living, only toiling away, and being dead.<sup>24</sup>

- Why shall we not create a world in which our work is as much part of life, as much alive, as anything we do at home with our family and with our friends?<sup>25</sup>

- For workplaces to function as communities, five relationships are critical:<sup>26</sup>

1. Workplaces must not be too scattered, nor too agglomerated, but clustered in groups of about 15.
  2. The workplace community contains a mix of manual jobs, desk jobs, craft jobs, selling and so forth.
  3. There is a common piece of land within the work community, which ties the individual workshops and offices together.
  4. The work community is interlaced with the larger community in which it is located.
  5. Finally, it is necessary that the common land, or courtyards, exists at two distinct and separate levels.
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- **Children in the City**

- Create the network of learning.<sup>27</sup>
- If children are not able to explore the whole of the adult world round about them, they cannot become adults. But modern cities are so dangerous that children cannot be allowed to explore them freely.<sup>28</sup>
- The need for children to have access to the world of adults is so obvious that it goes without saying. The adults transmit their ethos and their way of life to children through their actions, not through statements. Children learn by doing and by copying.<sup>29</sup>
- In simple villages, children spend their days side by side with farmers in the fields, side by side with people who are building house, side by side, in fact, with all daily actions of the men and women round them: making pottery, counting money, curing the sick, praying to God, grinding corn, arguing about the future of the village.<sup>30</sup>
- Children's bicycle pathways can be integrated into the site design.<sup>31</sup>

- **Pools and Streams**

- We came from the water; our bodies are largely

water; and water plays a fundamental role in our psychology. We need constant access to water, all around us; and we can not have it without reverence for water in all its form.<sup>32</sup>

- Think of running water, in all its possible forms. People who have been deprived of it in their daily surroundings go to great lengths to get out of their towns into the countryside, where they can watch a river flow, or sit by a stream and gaze at the water. Children are fascinated by running water. They use it endlessly, to play in, to throw sticks and see them disappear, to run little paper boats along, to stir up mud and watch it clear gradually.<sup>33</sup>

- Rainwater can be allowed to assemble from rooftops into small pools and to run through channels along garden paths and public pedestrian paths, where it can be seen and enjoyed.<sup>34</sup>

- Where there is a gap, where nourishing contact with water is missing, then each project should make some attempt, on its own and in combination with other projects, to bring some water into the environment.<sup>35</sup>

- Preserve natural pools and streams and allow them to run through the city; make paths for people to walk along them and footbridges to cross them. Let the streams form natural barriers in the city, with traffic crossing them only

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infrequently on bridges.<sup>36</sup>

- Whenever possible, collect rainwater in open gutters and allow it to flow above ground, along pedestrian paths and in front of houses. In places without natural running water, create fountains in the streets.<sup>37</sup>

- **Holy Ground**

- What is a church or temple? It is a place of worship, spirit, contemplation, or course. But above all, from a human point of view, it is a gateway. A person comes into the world through the church. He leaves it through the church. And, at each of the important threshold of his life, he once again steps through the church.<sup>38</sup>

- In an ordinary Christian church, you pass first through the churchyard, then through the nave; then, on special occasions, beyond the altar rail into the chancel and only the priest himself is able to go into the tabernacle. The holy bread is sheltered by five layers of ever more difficult approach. This layering, or nesting of precincts, seems to correspond to a fundamental aspect of human psychology. We believe that every community, regardless of its particular faith, regardless of whether it even has a faith in any organized sense, needs some place where his

feeling of slow, progressive access through gates to a holy center may be experienced. When such a place exists in a community, even if it is not associated with any particular religion, we believe that the feeling of holiness, in some form or other, will gradually come to life there among the people who share in the experience.<sup>39</sup>

- In each community and neighborhood, identity some sacred site as consecrated ground, and form a series of nested precincts, each marked by a gateway, each one progressively more private, and more sacred than the last, the innermost a final sanctum that can only be reached by passing through all of the outer ones.<sup>40</sup>

- **Connected Play**

- Children need other children. Some findings suggest that they need other children even more than they need their own mothers.<sup>41</sup>

- Lay out common land, paths, gardens and bridges.<sup>42</sup>

- **Public Outdoor Room**

- Place where hanging out and being “out” in public becomes possible. For this purpose it is necessary to distinguish one part of the common land and to define it

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with a little more elaboration.<sup>43</sup>

- Men seek corner beer shops, where they spend hours talking and drinking; teenagers, especially boys, choose special corners too, where they hang around, waiting for their friends. Old people like a special spot to go to, where they can expect to find others; small children need sand lots, mud, plants and water to play with in the open; young mothers who go to watch their children often use the children's play as an opportunity to meet and talk with other mothers.<sup>44</sup>

- Because of the diverse and casual nature of these activities, they require a space which has a subtle balance of being defined and yet not too defined, so that any activity which is natural to the neighborhood at any given time can develop freely and yet has something to start from.<sup>45</sup>

- **Local Sports**

- Scatter places for team and individual sports through every work community and neighborhood: tennis, squash, table tennis, swimming, billiards, basketball, dancing, gymnasium...and make the action visible to passers-by, as an invitation to participate.<sup>46</sup>

- Treat the sports places as a special class of

recognizable simple buildings, which are open, easy to get into, with changing rooms and showers – building complex.<sup>47</sup>

- **Adventure Playgrounds**

- Play has many functions: it gives children a chance to be together, a chance to use their bodies, to build muscles, and to test new skills. But above all, play is a function of the imagination. A child's play is his way of dealing with the issues of his growth, of relieving tensions and exploring the future. It reflects directly the problems and joys of his social reality. Children come to terms with the world, wrestle with their pictures of it, and reform these pictures constantly through those adventures of imagination we call play.<sup>48</sup>

- **Animals**

- Animals are as important a part of nature as the trees and grass and flowers. There is some evidence, in addition, which suggests that contact with animals may play a vital role in a child's emotional development.<sup>49</sup>

- Example of ecologically useful animals: horses, ponies, donkeys– for local transportation and sport. Pigs– to recycle garbage and for meat. Ducks and chickens– as

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a source of eggs and meat. Cows- for milk. Goats- milk. Bees- honey and pollination of fruit trees. Birds- to maintain insect balance.<sup>50</sup>

- Within the framework of the common land, the clusters and the work communities, encourage transformation of the smallest independent social institutions: the families, work groups, and gathering places.<sup>51</sup>

- **Teenage Society**

- Replace the “high school” with an institution which is actually a model of adult society, in which the students take on most of the responsibility for learning and social life, with clearly defined roles and forms of discipline. Provide adult guidance, both for the learning, and the social structure of the society; but keep them as far as feasible, in the hands of the students.<sup>52</sup>

- Provide one central place, which houses social functions, and a directory of classes in the community. Within the central place, provide communal eating for the students, opportunities for sports and games, a library and counseling for the network of learning which gives the students access to the classes, work communities, and home workshops that are scattered through the area.<sup>53</sup>

- **Buildings**

- Let the form grow from the fusion of these patterns, the site and your own instincts.<sup>54</sup>

- It is essential to work on the site, where the project is to be built; on the land where the building is to go up; and so forth. And as far as possible, work with the people that are actually going to use the place.<sup>55</sup>

- Let the site tell you its secrets.<sup>56</sup>

- That the form will grow gradually as you go through the sequence, beginning as something very loose and amorphous, gradually becoming more and more complicated, more refined and more differentiated, more finished.<sup>57</sup>

- Give the form more order than it needs to meet the patterns and the conditions of the site, each step of the way.<sup>58</sup>

- Building up your design, one pattern at a time.<sup>59</sup>

- The first group of patterns help to lay out the overall arrangement of a group of buildings: the height and number of these building, the entrance to the site, main parking areas, and lines of movement through the complex:<sup>60</sup>

- Building complex

- Circulation Realms

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- Main Building
- Family of entrances
- Small parking lots

- **Building Complex**

- Never build large monolithic buildings. Whenever possible translate your building program into a building complex, whose parts manifest the actual social facts of the situation. At low densities, a building complex may take the form of a collection of small buildings connected by arcades, paths, bridges, shared gardens and walls.<sup>61</sup>

- Arrange the buildings in the complex to form realms of movement; build one building from the collection as a main building- the natural center of the site; place individual buildings where the land is least beautiful, but healthy; and put them to the north of their representative open space to keep the gardens sunny- south facing outdoors.<sup>62</sup>

- **Circulation Realm**

- A good environment is one which is easy to understand without conscious attention.<sup>63</sup>

- In order to be clear, a building complex must follow three rules:<sup>64</sup>

- 1. It is possible to identify a nested system of realms in the

complex, the first and largest of these realms being the entire complex.

2. Each realm has a main circulation space, which opens directly from the entrances to that realm.

3. The entrances to any realm open directly off the circulation space of the next larger realm above it.

- Lay out very large buildings and collections of small buildings so that one reaches a given point inside by passing through a sequence of realms, each marked by a gateway and becoming smaller and smaller, as one passes from each one, through a gateway to the next. Choose the realms so that each one can be easily named, so that you can tell a person where to go, simply by telling him which realms to go through.<sup>65</sup>

- **Family of Entrances**

- When a person arrives in a complex of offices or services or workshops, or in a group of related houses, there is a good chance he will experience confusion unless the whole collection is laid out before him, so that he can see the entrance of the place where he is going.<sup>66</sup>

- Lay out the entrances to form a family. This means:<sup>67</sup>

1. They form a group, are visible together, and each is visible

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from all the others.

2. They are all broadly similar, for instance all porches, or all gates in a wall, or all marked by a similar kind of doorway.

- **Positive Outdoor Spaces**

- Outdoor spaces which are merely “left over” between building will, in general, not be used.<sup>68</sup>

- Positive vs Negative<sup>69</sup>
  - Make all the outdoor spaces which surround and lie between your building positive. Give each one some degree of enclosure; surround each space with wings of buildings, trees, hedges, fences, arcades, and trellised walks, until it becomes an entity with a positive quality and does not spill out indefinitely around corners.<sup>70</sup>

- **Wings of Light**

- Arrange each building so that it breaks down into wings which correspond, approximately, to the most important natural social groups within the building. Make each wing long and as narrow as you can- never more than 25 feet wide.<sup>71</sup>

- Within the buildings’ wings, lay out the entrances, the gardens, courtyards, roofs and terraces: shape both

the volume of the buildings and the volume of the space between the buildings at the same time- remembering that indoor space and outdoor space, like yin and yang, must always get their shape together.<sup>72</sup>

- **Main Entrance**

- Placing the main entrance (or main entrances) is perhaps the single most important step you take during the evolution of a building plan.<sup>73</sup>

- **Hierarchy of Open Spaces**

Whatever space you are shaping- whether it is a garden, terrace, street, park, public outdoor room, or courtyard, make sure of two things. First, make it least one smaller space, which looks into it and forms a natural back for it. Second, place it, and its openings, so that it looks into at least one larger space. When you have done this, every outdoor space will have a natural “back” and every person who takes up the natural position, with his back to this “back”, will be looking out toward some larger distant view.<sup>74</sup>

- **Path and Goals**

- The layout of paths will seem right and comfortable

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only when it is compatible with the process of walking. And the process of walking is far more subtle than one might imagine. The path to goal. The series of goals. The actual path.<sup>75</sup>

- To lay out paths, first place goals at natural points of interest. Then connect the goals to one another to form the paths. The path may be straight, or gently curving between goals; their paving should swell around the goal. The goals should never be more than a few hundred feet apart.<sup>76</sup>

- **Intimacy Gradient**

- Lay out the spaces of a building so that they can create a sequence which begins with the entrance and the most public parts of the building, then leads into the slightly more private areas, and finally to the most private domains.<sup>77</sup>

- **Common Area at Heart**

- Any building which houses a social group supports this kind of contact by providing common areas. The form and location of the common areas is critical.<sup>78</sup>

- **Common Ground**

- Without common land no social system can survive.<sup>79</sup>

- The paths and streets which gave access to buildings were safe, social spaces, and therefore functioned automatically as common land.<sup>80</sup>

- The common land has two specific social functions. First the land makes it possible for the people to feel comfortable outside their buildings and their private territory, and therefore allows them to feel connected to the larger social system - though not necessarily to any specific neighbor. Second, common land acts as a meeting place for people.<sup>81</sup>

## Six • *Shipping Containers*

### • **Adaptive Reuse**

There are infinite possibilities for the adaptive reuse of shipping containers. They are one of the most ubiquitous artifacts of industrial capitalism. There is a vast stock of decommissioned shipping containers stockpiled in ports world wide as the first generation of that simple technology which revolutionized world trade and transport over a generation ago reaches the limit of it's life in transit.<sup>82</sup> "Understand that by using shipping containers one almost unavoidably also unleashes a set of cultural associations and a chain of meanings that have as much to do with consumer society, the haves and the have-nots, and global commerce as they do with the simple industrial production of standardized shipping units."<sup>83</sup> The possibility that this transportation network should be able to deliver emergency housing and clinic facilities in the case of a natural disasters. There is also needs for housing for large numbers of people in other continents. The adaptive reuse concept within this thesis will allow for 'Children of the Nations' to expand and utilize a modular form of design.



Fig. 6.1\_ Container ship departing the port in Santo Domingo



Fig. 6.2\_ Trucks on smaller roads transporting containers

**Six • Case Study 01**

• **Pingry School<sup>84</sup>**

Pingry was envisaged as an interdisciplinary research project for the development and construction of a disaster relief housing prototype on the Martinsville campus of the Pingry School, NJ. Pingry students undertake a project to design and build a temporary structure capable of housing 40 people in a flood, hurricane and earthquake proof community module. The objective is to create an inexpensive, quick and environmentally sustainable architectural system that could be used by millions of inadequately housed people around the world. Pingry students develop the prototype within the campus, utilizing shipping containers as an internationally available resource and economic solution for medium term low cost housing. The project prototype will consist of eight 40-foot containers and stacked two high to form a balconied courtyard enclosed with parachute fabric.

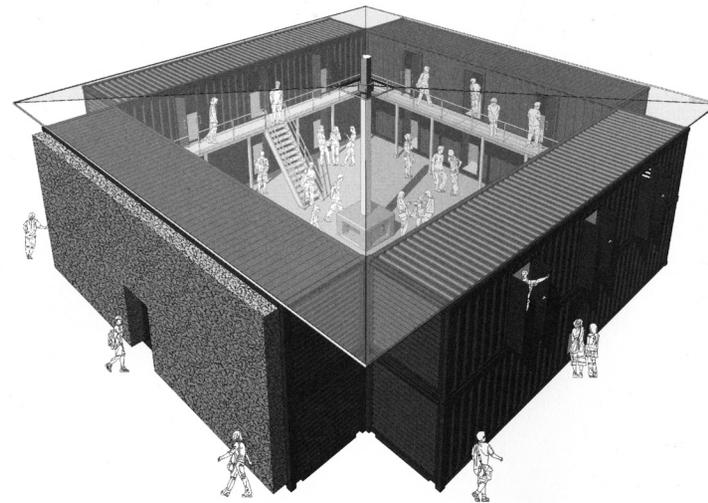


Fig. 6.3\_View of the interior courtyard surrounded by the container units

## Six • Case Study 02

### • Refugee Village<sup>85</sup>

This project creates an inexpensive, quick and sustainable architectural system for millions of inadequately housed people around the world. The Quik Build Ecosystem addresses a broad swathe of life concerns for under served populations by integrating economic, agricultural, energy, health and social issues into an architectural whole. The basic building block of the QBE is the recycled shipping container. By stacking and arranging the containers in vernacular geometries, one forms solids and voids, streets and courtyards, public and private spaces; villages inspired by indigenous culture. By creating a central street, one makes a souk for small business, craft and trade. By drawing water from the ground through solar powered pumps, one irrigates the crops and nourishes richly planted courtyards. With one small wind turbine, one generates energy for food, refrigeration and lighting. By using a combination of high tech thermal coatings and natural shade, one humanizes the sometimes harsh climate. The project aims to create autonomous and self-sustaining villages where inhabitants can live with a sense of dignity and self-reliance.

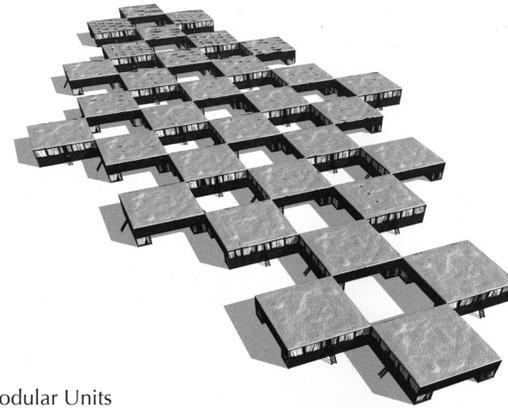


Fig. 6.4\_ Modular Units



Fig. 6.5\_ Front elevation of the housing

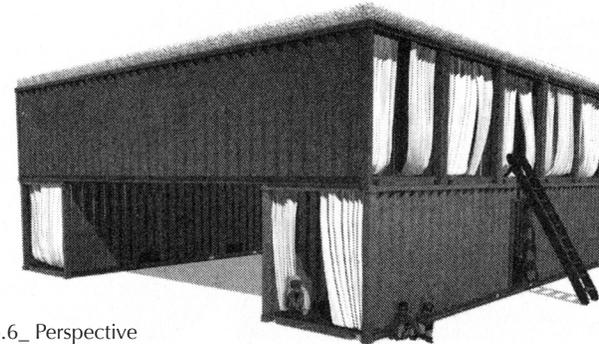


Fig. 6.6\_ Perspective

**ix** • *Development of Concept into Design*

• **Buildings as a symbolic form of “support”**

Through the development of ten building types, it becomes clear that the creation of a modular ‘pod’ form will be derived from the large design of certain buildings. The use of the modular pod concept will be defined by housing, education, faith and health. Therefore the design of the clinic, housing, library and chapel will involve the process integration of shipping containers. These design can be broken down into the simple form of a single unit to be shipped out to places in need.

The creation of a new found common ground is the site upon which this community complex will be situated. The use of the shipping container and the celebrated use of the natural building techniques both will be used in the design of the community complex. The core of each building is the place where the integration of natural building techniques is introduced. The communal space is created within these centroids and this becomes a private space where people can gather. The centroid is the area concentrated at the centroid without affecting the moment. Light within these centroids will create a shaded natural environment that the

users will feel safe and comfortable within. The lighting of the architecture of the people within these centroid spaces will embrace and enhance the environments. Ultimately the design of the church will encompass the symbolic meaning of the filtering of light into the site. The creation of the core will be connected to the church upon a single axis pathway, that will be the symbolic journey of the people of Barahona towards hope supplied by faith. “We live in a world that is increasingly devoid of deep social connections and there is a widespread desire to recapture a sense of community.”<sup>86</sup>

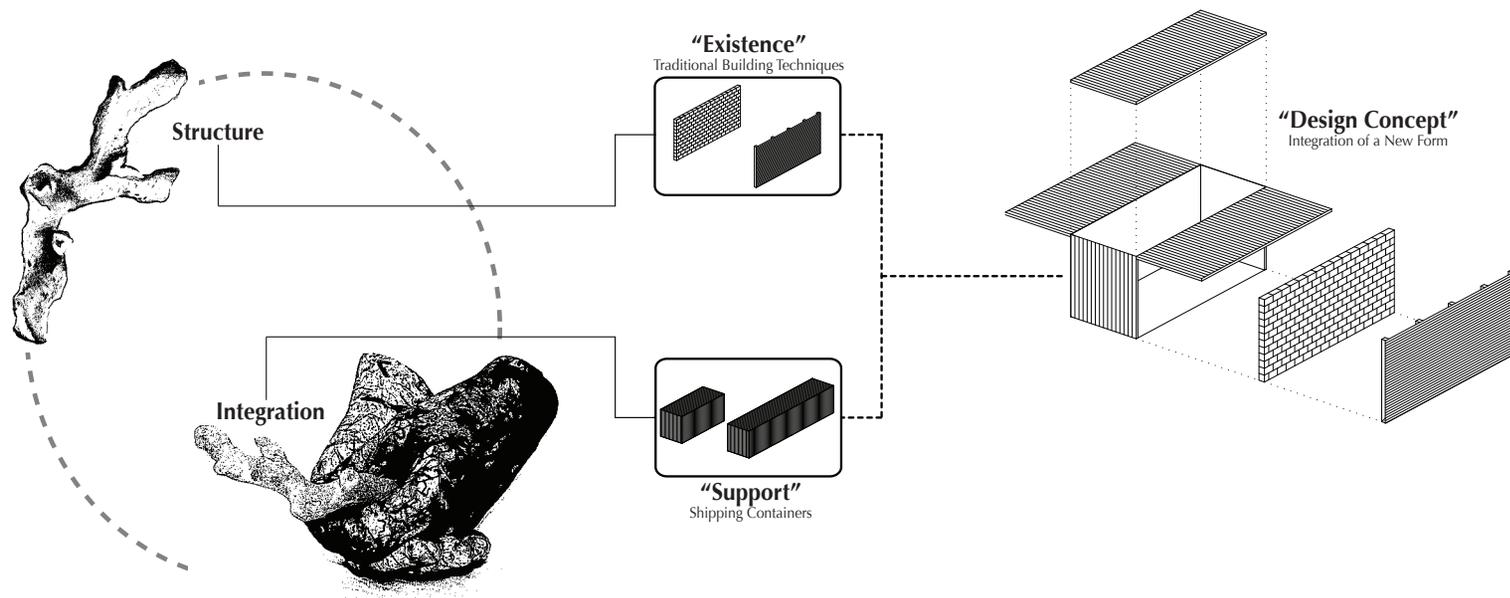
Each of the buildings designed to integrate the use of shipping containers is either defined as a ‘pod’, ‘unit’ or ‘quadrant’. A pod is a streamlined enclosure, housing or detachable container of some kind.<sup>87</sup> A unit is any magnitude regarded as an independent whole; a single indivisible entity forming a cohesive unit.<sup>88</sup> A quadrant is one of the four parts into which a plane, as the face of a heavenly body, is divided by two perpendicular lines.<sup>89</sup>

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Six • Schematic Design

Fig. 6.7

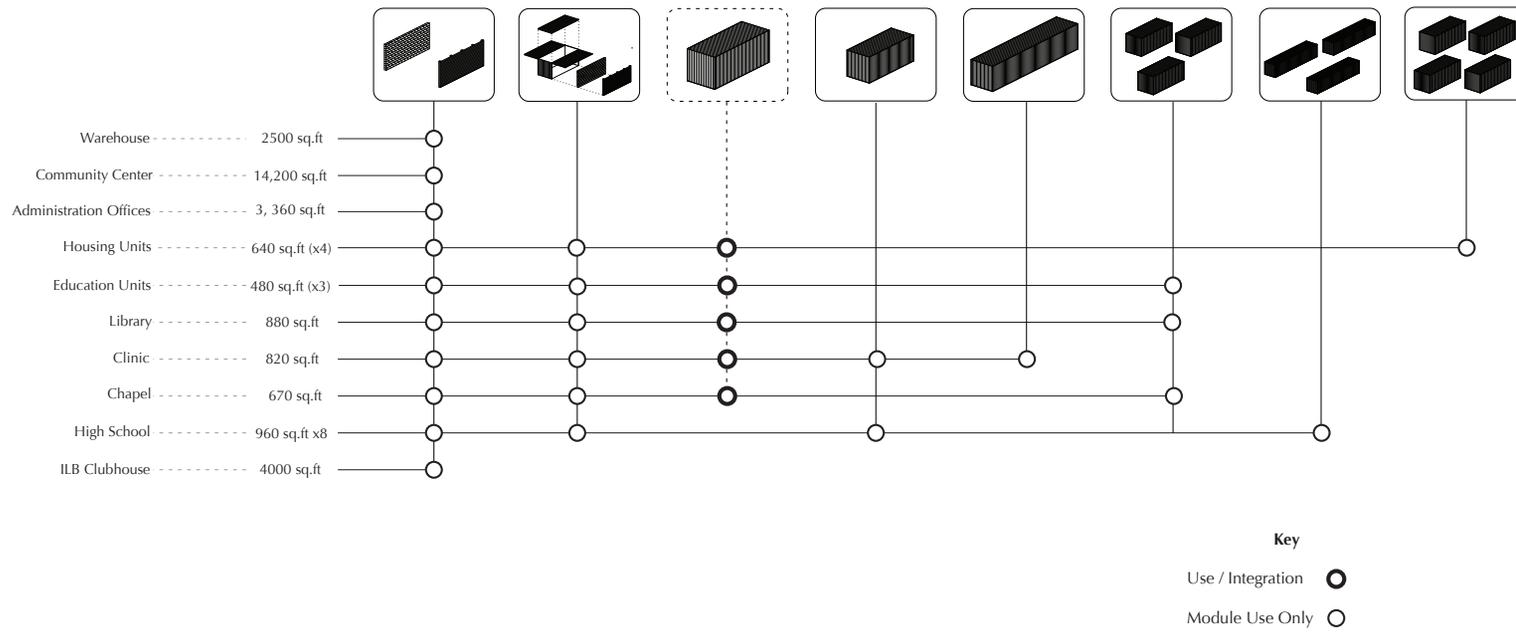
• Design Concept 01



Six • Schematic Design Phase 01

Fig. 6.8

• Building Design Matrix 01

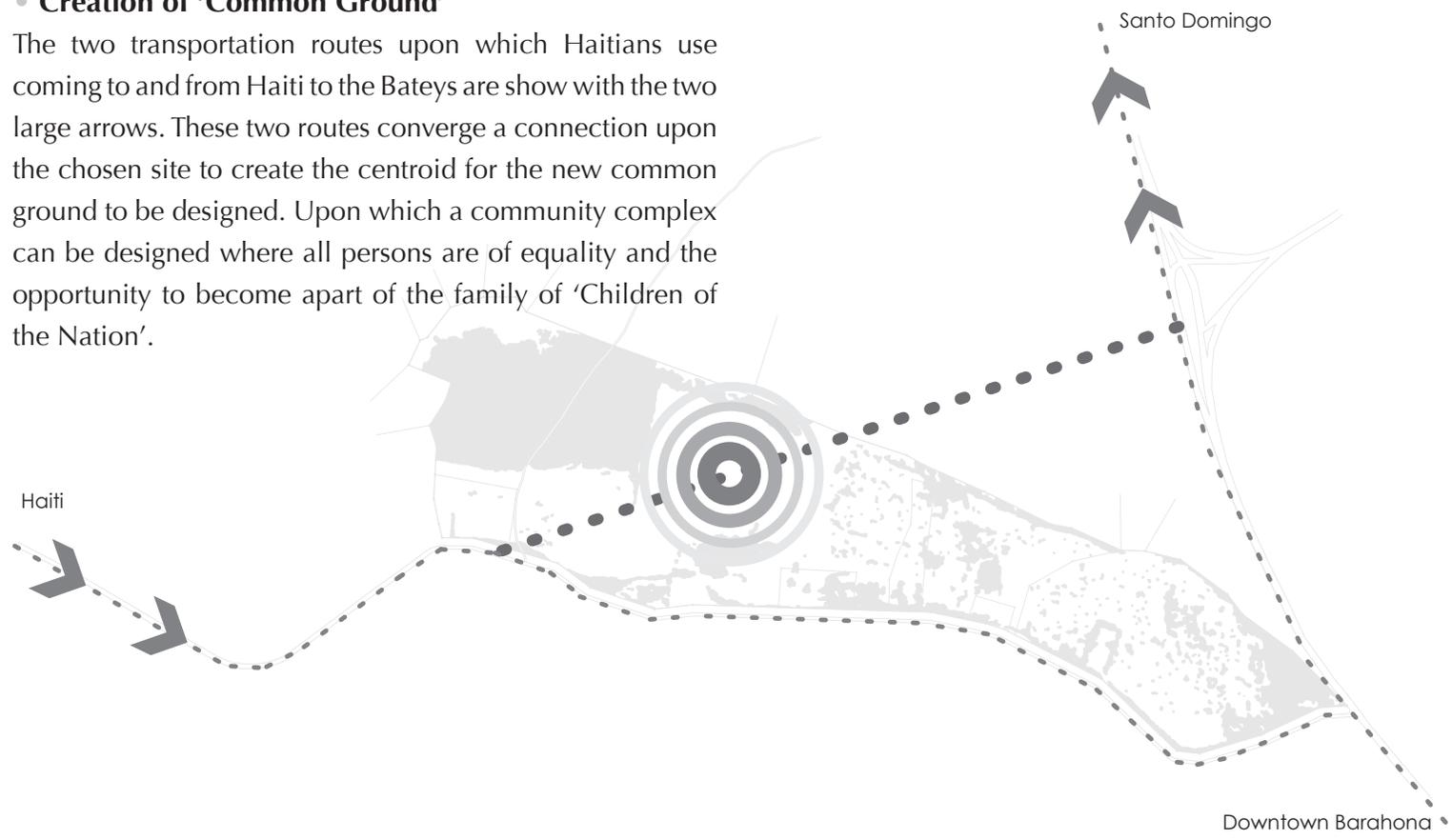


**Six • Schematic Design Phase 01**

Fig. 6.9

**• Creation of 'Common Ground'**

The two transportation routes upon which Haitians use coming to and from Haiti to the Bateys are show with the two large arrows. These two routes converge a connection upon the chosen site to create the centroid for the new common ground to be designed. Upon which a community complex can be designed where all persons are of equality and the opportunity to become apart of the family of 'Children of the Nation'.

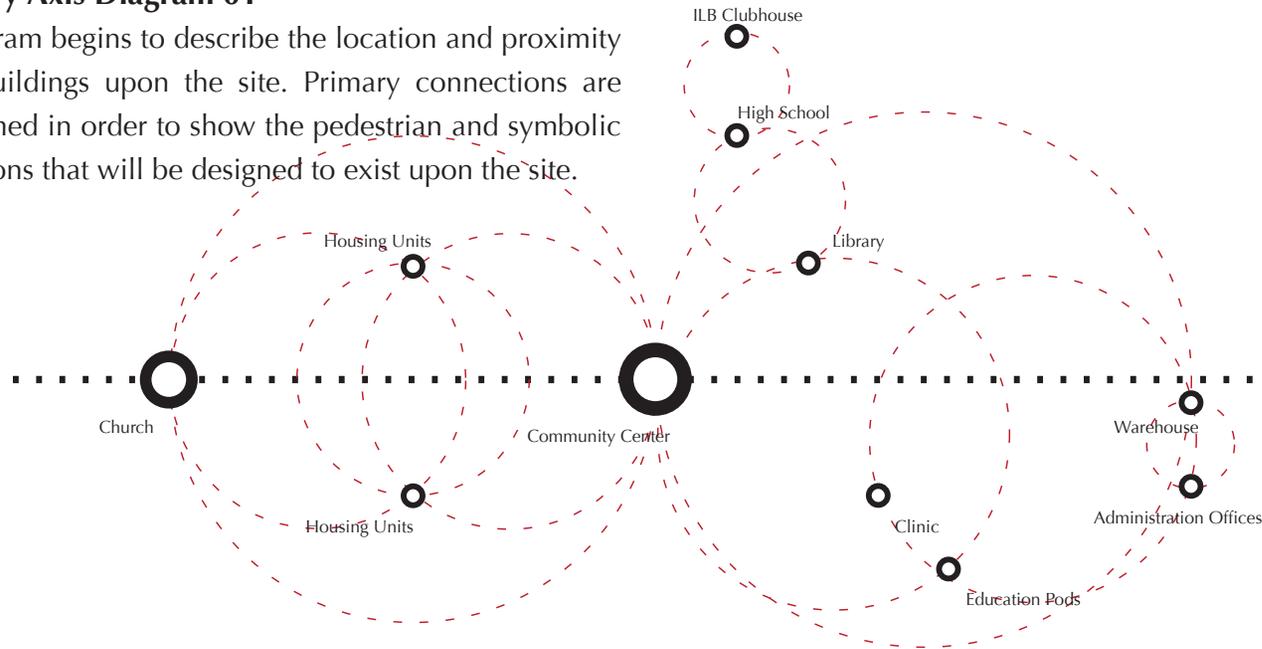


**Six** • *Schematic Design Phase 01*

Fig. 6.10

• **Primary Axis Diagram 01**

This diagram begins to describe the location and proximity of the buildings upon the site. Primary connections are diagrammed in order to show the pedestrian and symbolic connections that will be designed to exist upon the site.

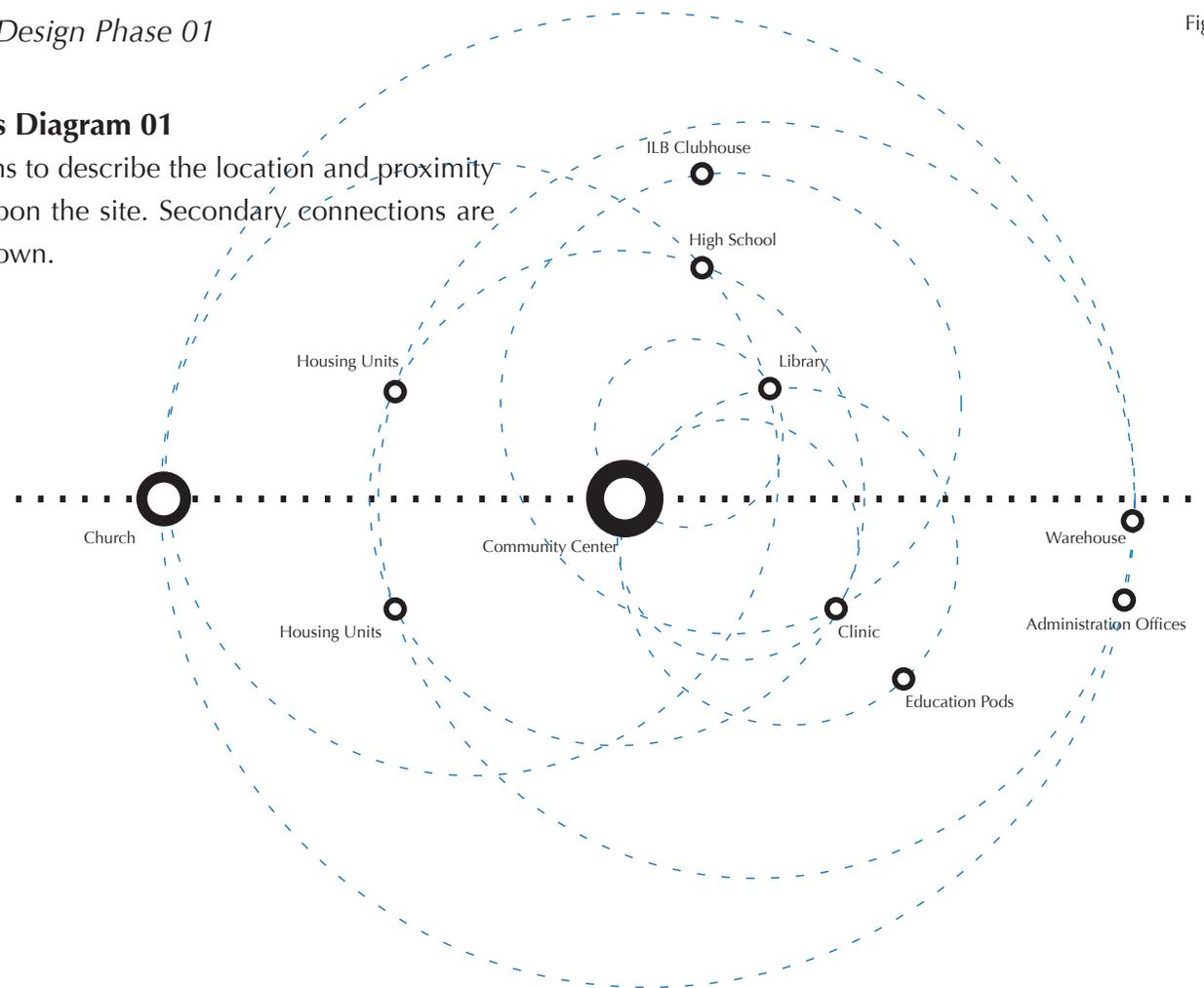


**Six • Schematic Design Phase 01**

Fig. 6.11

**• Secondary Axis Diagram 01**

This diagram begins to describe the location and proximity of the buildings upon the site. Secondary connections are diagrammed as shown.



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**Six** • *Schematic Design Phase 01*

Fig. 6.12

• **Location of Site in Barahona**



Six • *Schematic Design Phase 01*

Fig. 6.13

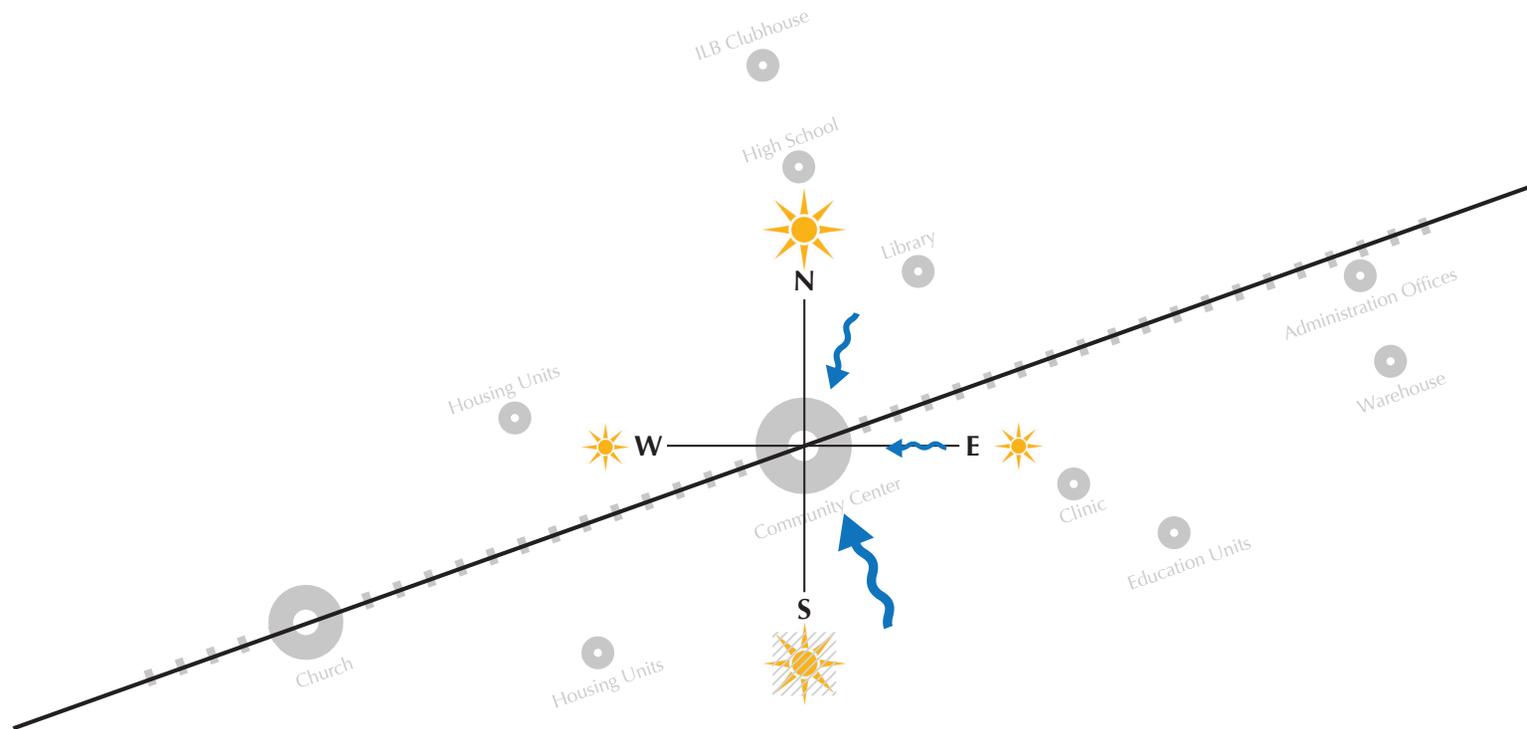
• **Design Concept 01**



**Six** • *Schematic Design Phase 01*

Fig. 6.14

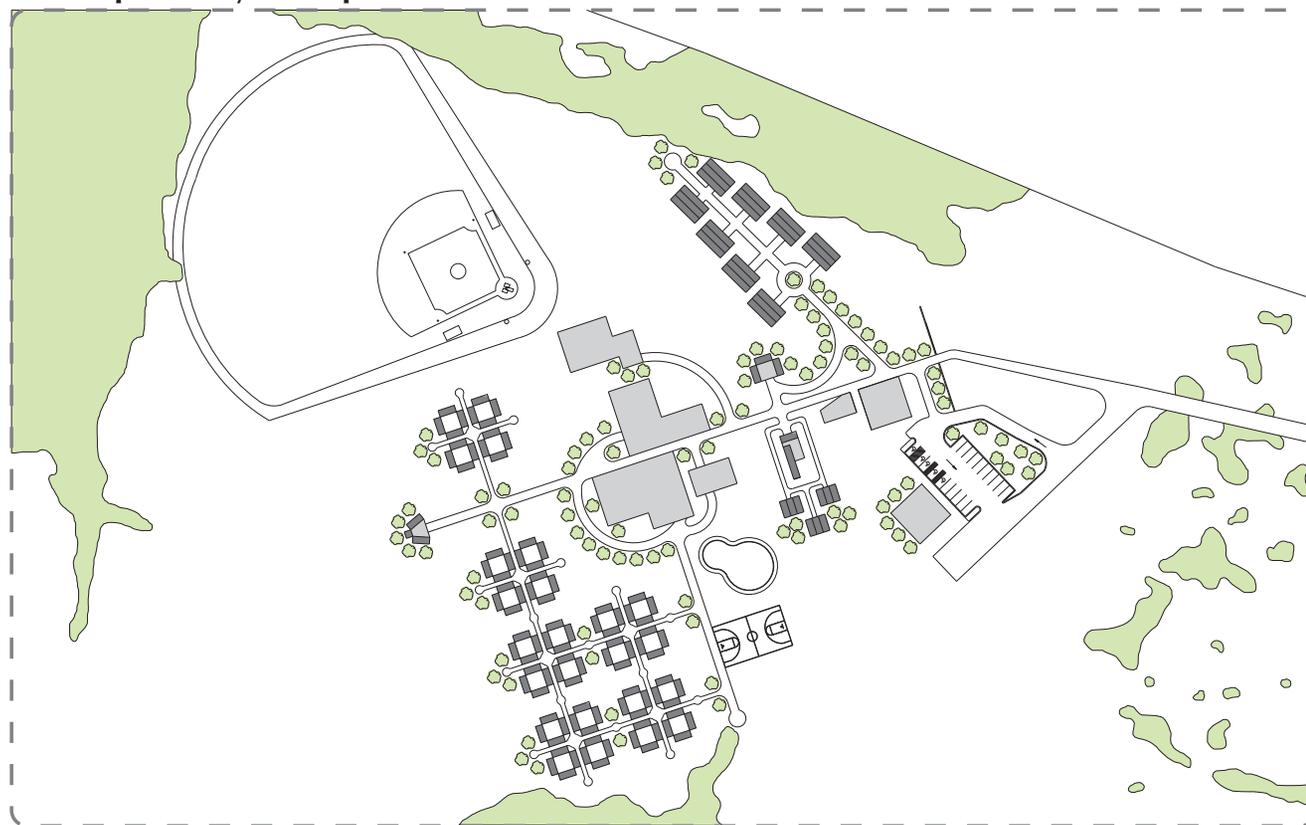
- **Use of nature to promote sustainability**



Six • *Schematic Design Phase 01*

Fig. 6.15

- **The Master plan 01**  
**“La Aldea de Esperanza y de Inspiración”**



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**Six** • *Summary Statement Post Thesis Review II*

Section one of chapter six shows the design development of the schematic plans for the community complex. The buildings are currently within the primary stages of design and will now be carried through into design detailing in order to produce a final product of design for this thesis. More research is needed in the area of communal gathering spaces currently existing and also conversations with the people of Barahona and 'Children of the Nations' will ultimately help to make decisions moving the project further in design detailing. It is important upon the next visit to Barahona that the collection of data and information regarding feedback from the users will help identify changes needed to be made and also for the community complex to become a facility that will become a place recognizable and natural for the users. The topic of modular 'pod' design will be brought to the attention of the office within Barahona, due to the amount of venture teams and in country staff currently working in Haiti to provide medical relief. The awareness of what is currently happening in Haiti and the Dominican Republic due to the 2010 devastating earthquake will also be further studied and this will help towards producing a design that could provide the modular spaces needed in

times of natural disasters. The visual identification of the 'streets' will be studied throughout the Bateys and Barrios to determine the function and spaces that will be created and will naturally occur off the south-west axis that has been designed for the complex to be situated upon. All of the presentations planned for the next trip will be fully recorded in order to attain a full understanding of what the people need and want. Buildings may change according to this research, but ultimately all changes will be based upon feedback and further research whilst in Barahona.

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**Six** • *Re-Development of Concept into Design*

• **Schematic Re-design of the Community Complex**

Upon the third visit to Barahona, Dominican Republic, the schematic design for the community complex was presented to 'Children of the Nations'. This presentation ultimately led to many changes, expanding the community complex and re-designing certain aspects to create a whole design for the organization. The addition of certain things were necessary such as a volleyball court, science lab for the high school, and classrooms for college level courses to be taught. These classrooms were specified to be modular units using shipping containers, so they can be replicated upon different sites. Also an important outcome of this presentation was to identify the importance of which buildings were to be constructed first and in what order. The high school and education units were voiced as the most important buildings upon the site. Second was the clinic, third was the facilities for the 'I Love Baseball' program, fourth was the church, and last was the community center. The other buildings that were not mentioned would be constructed along with the community center.

Upon this third visit it was necessary to research

numerous cultural and social spaces within the Dominican Republic. It had become apparent through the development of the pattern language for the community complex that the integration of current cultural social spaces were not integrated into the design or fully understood. Within the week trip, it was necessary to interact, experience and view these spaces and learn how they could become integrated within the design for the users. The street culture of the Dominican Republic was one of the most important factors that this thesis had yet to explore and throughout this trip, this was researched and defined accordingly to the complex design.

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**Six • Case Study 03****• The Red Ribbon / Tanghe River Park<sup>93</sup>**

The Red Ribbon is an example of the modern interpretation of the Malecon. It is located upon the banks of the Tanghe River. It extends through 1,640 ft. with a width that varies between 1 and 5 feet. It serves as a bench, walkway, light source, and a vantage point. The red ribbon is only interrupted by four pavilions which serves as meeting points. With the new design, this old marginal area has improved in its recreational aspects.



Fig. 6.16\_ Adults sitting on the red ribbon to talk



Fig. 6.17\_ Children running along the wooden walkway

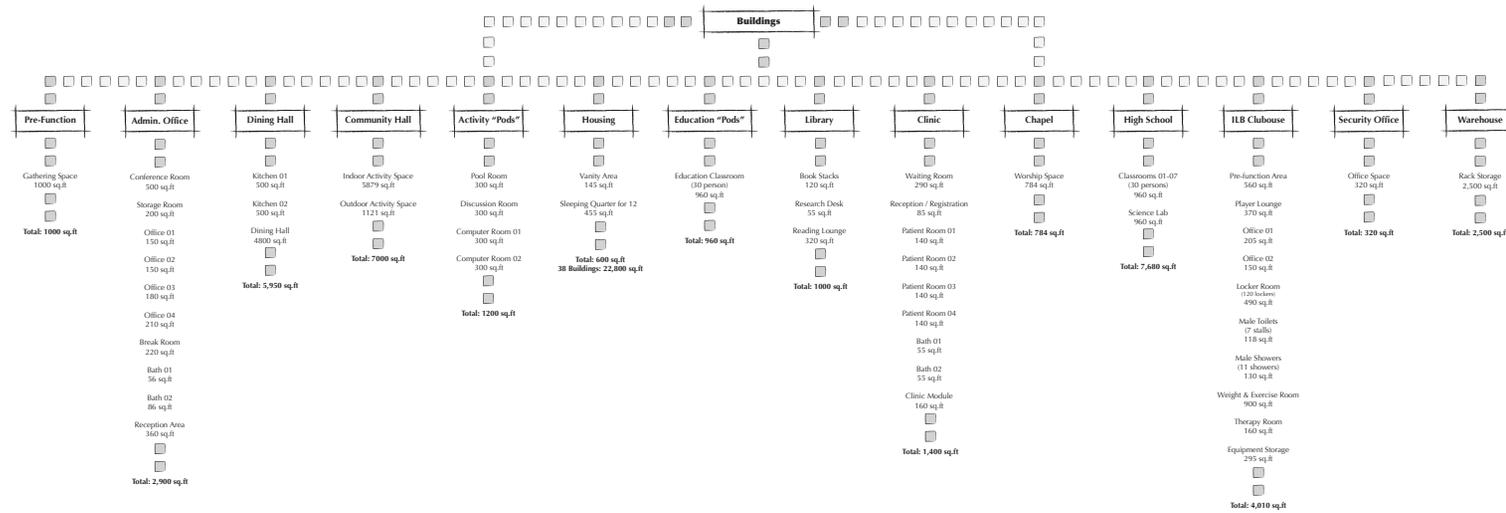


Fig. 6.18\_ Lit at night by the lights within the red ribbon

Six • Schematic Design Phase 02

Fig. 6.19

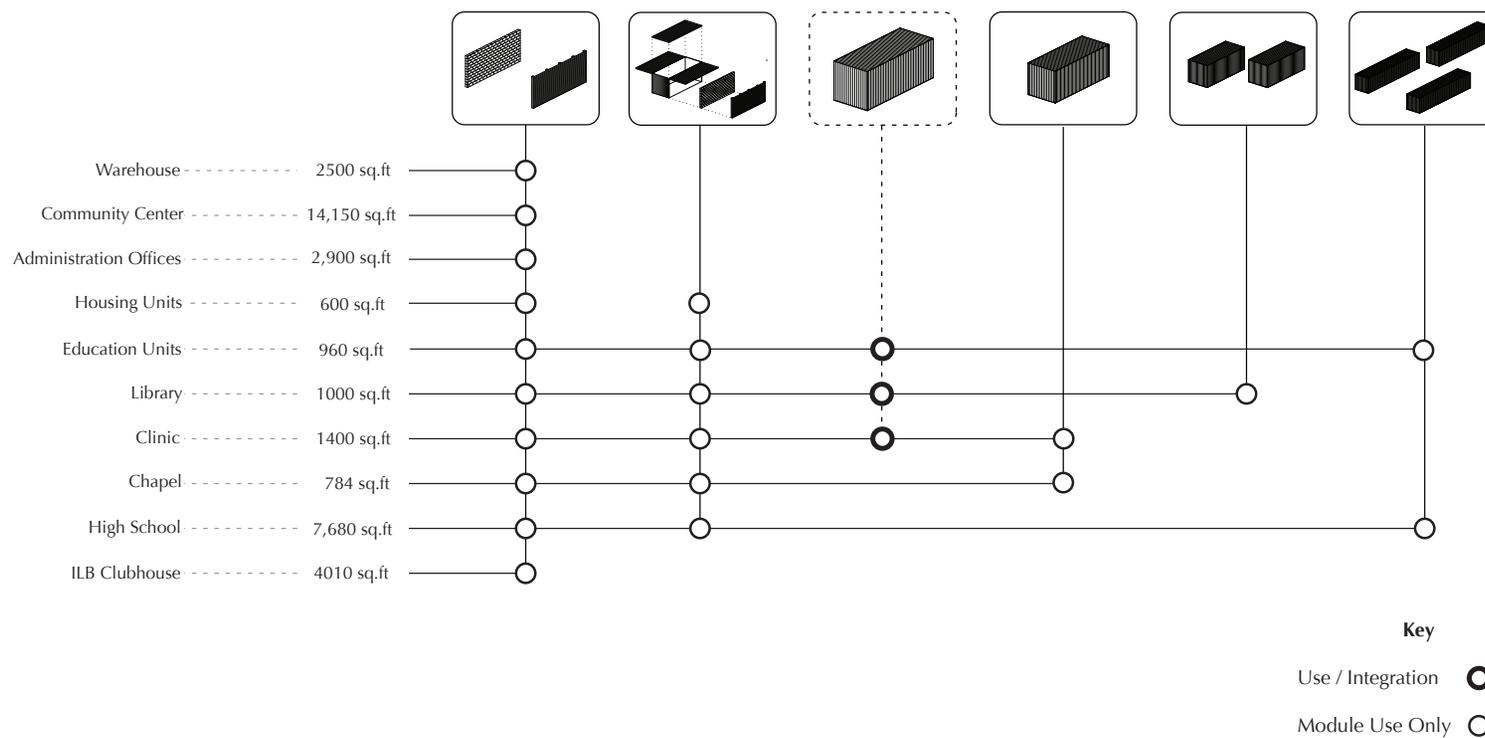
• Flow Chart: Program 02



Six • Schematic Design Phase 02

Fig. 6.20

• Building Design Matrix 02

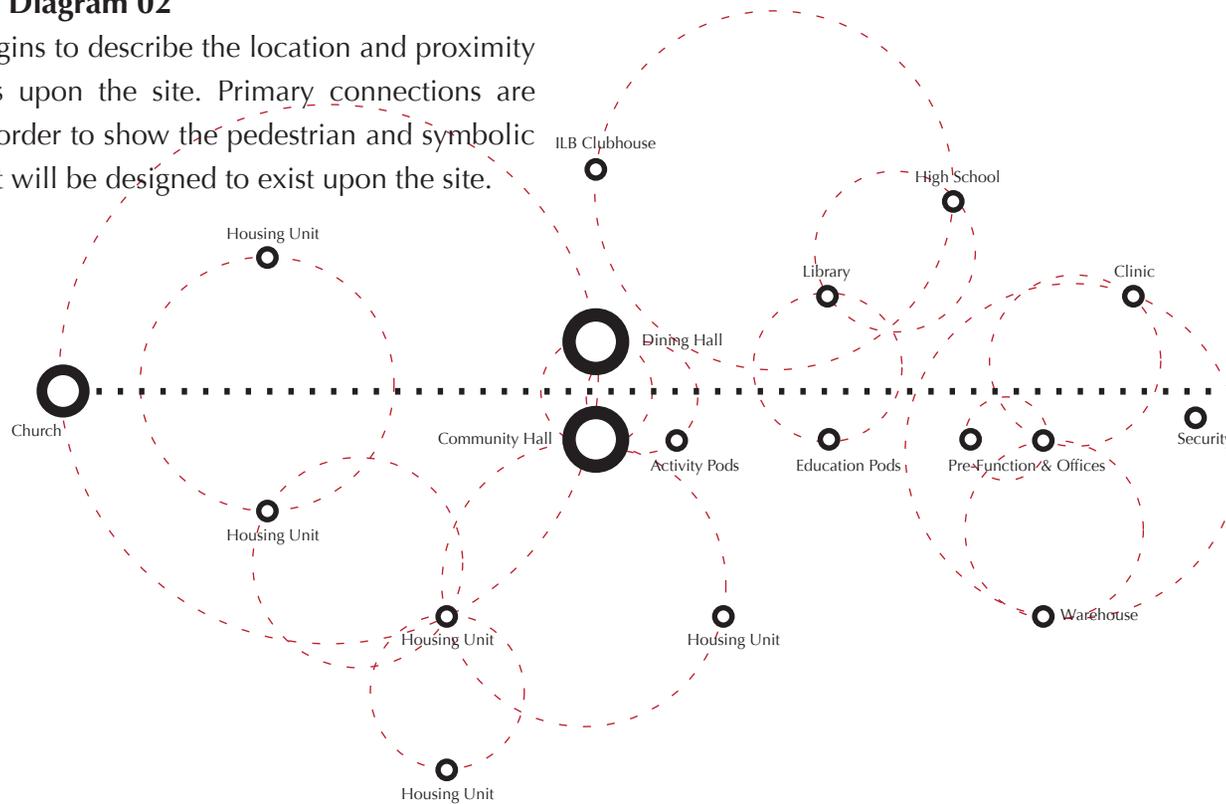


**Six** • *Schematic Design Phase 02*

Fig. 6.21

• **Primary Axis Diagram 02**

This diagram begins to describe the location and proximity of the buildings upon the site. Primary connections are diagrammed in order to show the pedestrian and symbolic connections that will be designed to exist upon the site.

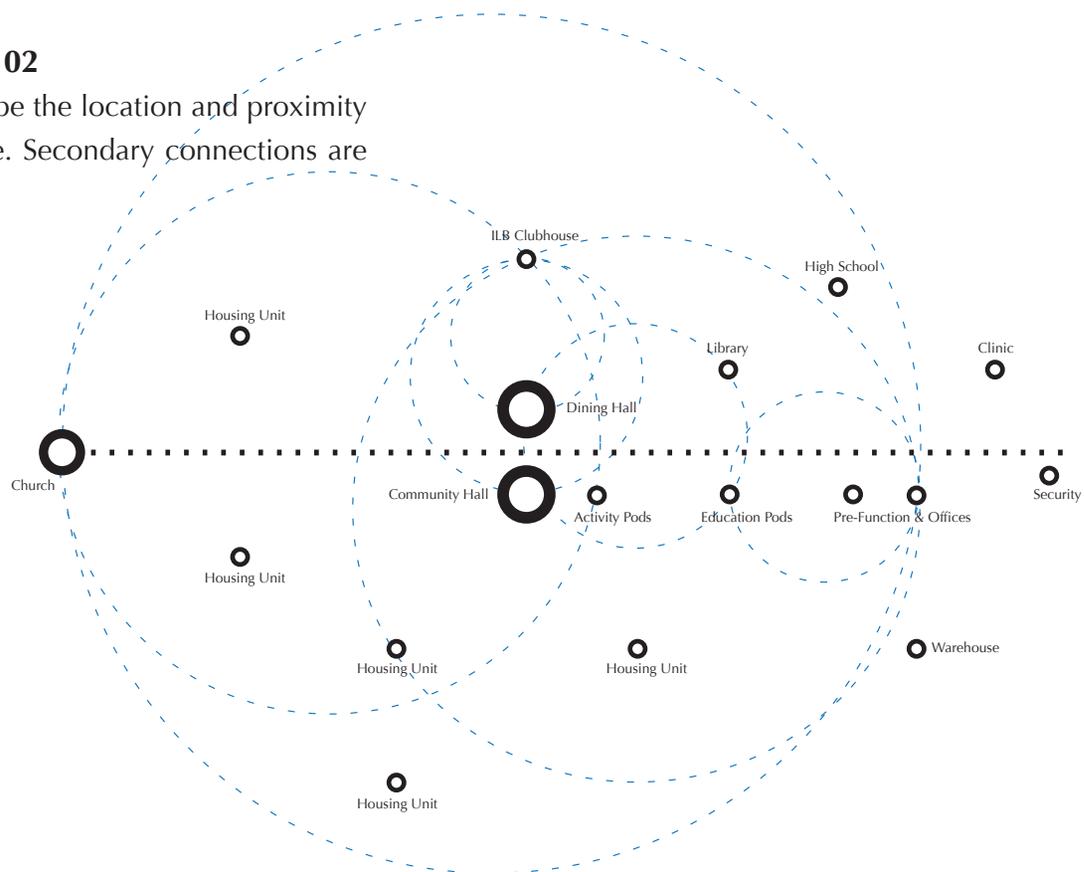


## Six • Schematic Design Phase 02

Fig. 6.22

### • Secondary Axis Diagram 02

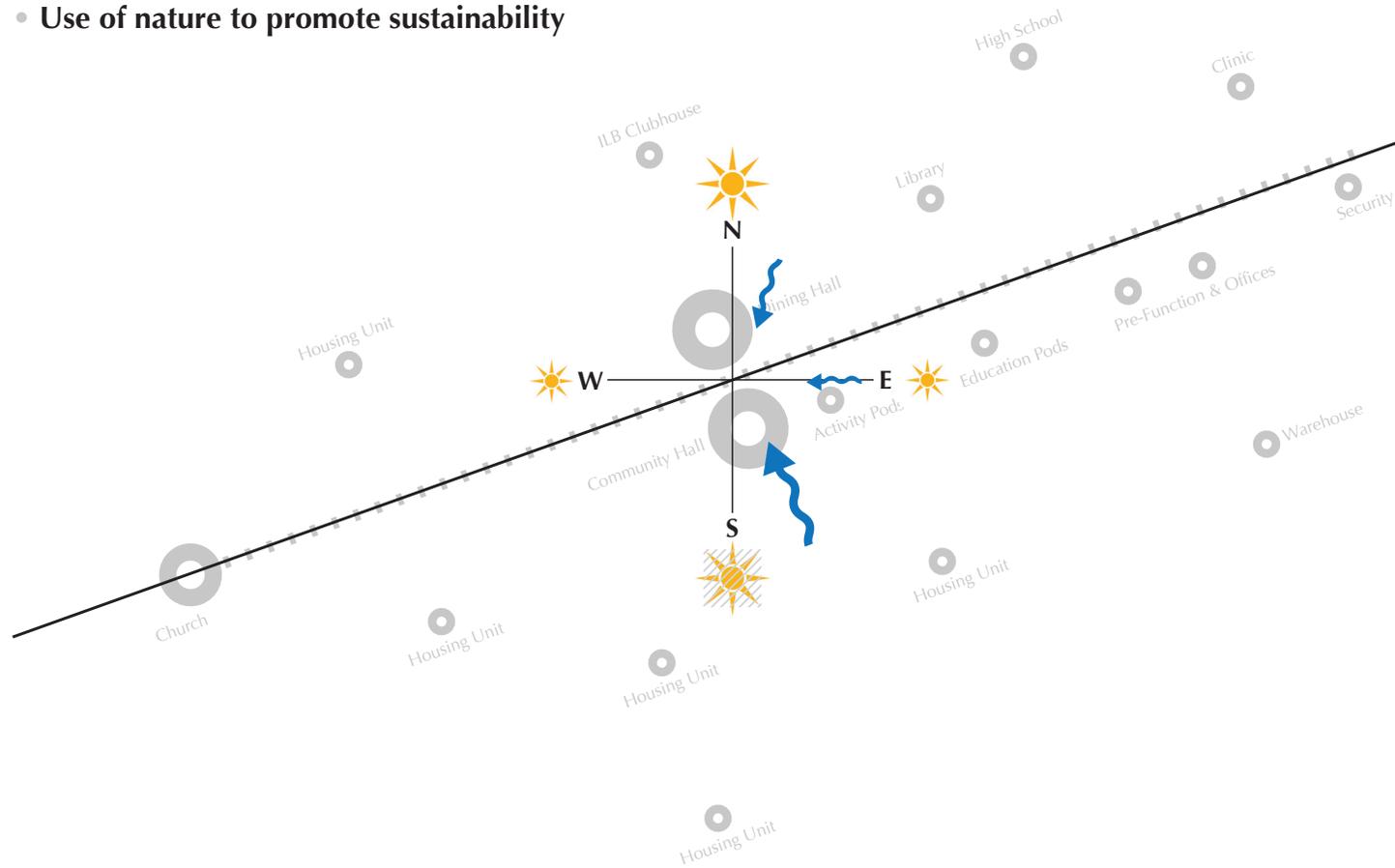
This diagram begins to describe the location and proximity of the buildings upon the site. Secondary connections are diagrammed as shown.



**Six** • *Schematic Design Phase 02*

Fig. 6.23

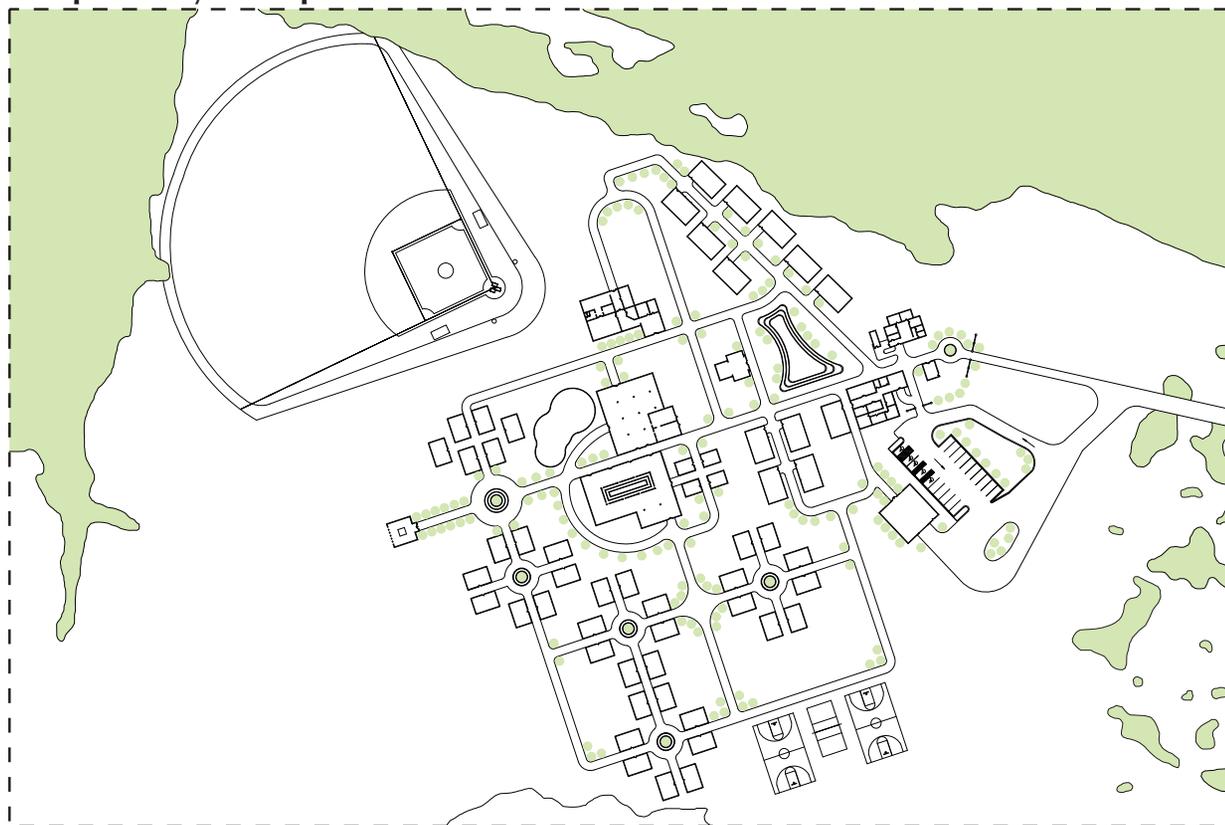
- **Use of nature to promote sustainability**



**Six** • *Schematic Design Phase 01*

Fig. 6.24

- **The Master plan 01**  
**“La Aldea de Esperanza y de Inspiración”**



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**Six • *Summary Statement Pre Thesis Review III***

The second portion of chapter six shows the re-development of the community complex after the schematic design phase one. The community complex has dramatical changed but for the positive aspects. After a third trip to Barahona, it became clear that certain aspects were misrepresented and missing from within the design. The integration of the shipping containers in certain buildings was questioned and in such places as the housing it became null and void. A house is a permanent structure within not only a family's life but a generation of that family. It is important that the housing within the complex symbolize this permanence. The clinic has been expanded to allow for more patient rooms and the module form is now a separate piece of the building. This module clinic will be housed upon the complex grounds, but as needed can be transported to the Bateys or places such as Haiti. The library boasts the concept of plugging the shipping containers into a solid form in order to create a whole space. These containers can be taken from the built solid form and still provide a large enough space for a library to be integrated into different areas. The community complex was broken down into components as one large building ultimately

would not provide the desired space. The dining and kitchen are now separate from the main community hall.

The overall design of the complex boasts the connectivity of pathways and upon the pathways the creation of nodes and entry to the built forms. The concept of keeping people upon this sacred pathway was not fully achieved post-thesis review II. Therefore the pathway design was re-designed and now is the connective circulation route throughout the entire site to all buildings and recreational areas. The modernized concept of the Malecon has been introduced due to extensive research into the street culture of the Dominican Republic. The Malecon introduces a circular community gathering space that depresses into the ground, creating spaces away from the busy complex. The pathway upon which all the buildings branch off from still remains one eighth of a mile long and finishes at the point of reflection. This point of reflection is the chapel. The design of this building now symbolizes the meaning of light and view whilst still integrating a new form of architecture; a twenty foot vertical shipping container. The design of the community complex is finally a connective whole, ultimately creating the new found common ground for the people of Barahona.

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**Six** • *Endnotes*

<sup>1</sup> "WBDG - The Whole Building Design Guide." WBDG - The Whole Building Design Guide. National Institute of Building Sciences, n.d. Web. 1 Feb. 2010. <<http://www.wbdg.org/>>.

<sup>2</sup> Ibid.

<sup>3</sup> Ibid.

<sup>4</sup> Ibid.

<sup>5</sup> Ibid.

<sup>6</sup> Ibid.

<sup>7</sup> Ibid.

<sup>8</sup> Ibid.

<sup>9</sup> Alexander, Christopher. *A Pattern Language: Towns, Buildings, Construction* (Center for Environmental Structure Series). New York: Oxford University Press, USA, 1977.

<sup>10</sup> Ibid.

<sup>11</sup> Ibid.

<sup>12</sup> Ibid.

<sup>13</sup> Ibid.

<sup>14</sup> Ibid.

<sup>15</sup> Ibid.

<sup>16</sup> Ibid.

<sup>17</sup> Ibid.

<sup>18</sup> Ibid.

<sup>19</sup> Ibid.

<sup>20</sup> Ibid.

<sup>21</sup> Ibid.

<sup>22</sup> Ibid.

<sup>23</sup> Ibid.

<sup>24</sup> Ibid.

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<sup>26</sup> Ibid.

<sup>27</sup> Ibid.

<sup>28</sup> Ibid.

<sup>29</sup> Ibid.

<sup>30</sup> Ibid.

<sup>31</sup> Ibid.

<sup>32</sup> Ibid.

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<sup>34</sup> Ibid.

<sup>35</sup> Ibid.

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<sup>37</sup> Ibid.

<sup>38</sup> Ibid.

<sup>39</sup> Ibid.

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84 Kalkin, Adam, and William F. McLean. *Quik Build: Adam Kalkin's ABC of Container Architecture*. Toronto: Bibliotheque Mclean, 2008.

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<sup>86</sup> Taylor, Betsy. *Sustainable Planet: Solutions for the Twenty-first Century*. Boston: Beacon Press, 2003.

<sup>87</sup> "Pod | Define Pod at Dictionary.com ." Dictionary.com | Find the Meanings and Definitions of Words at Dictionary.com . N.p., n.d. Web. 18 Mar. 2010. <<http://dictionary.reference.com/browse/pod>>.

<sup>88</sup> "Unit | Define Unit at Dictionary.com ." Dictionary.com | Find the Meanings and Definitions of Words at Dictionary.com . N.p., n.d. Web. 18 Mar. 2010. <<http://dictionary.reference.com/browse/unit>>.

<sup>89</sup> "Quadrant | Define Quadrant at Dictionary.com ." Dictionary.com | Find the Meanings and Definitions of Words at Dictionary.com . N.p., n.d. Web. 18 Mar. 2010. <<http://dictionary.reference.com>>.

<sup>90</sup> "Eyes on the Street." *streetswiki-Eyes On The Street*. N.p., n.d. Web. 10 Apr. 2010. <[streetswiki.wikispaces.com/Eyes+On+The+Street](http://streetswiki.wikispaces.com/Eyes+On+The+Street)>.

<sup>91</sup> Ibid.

<sup>92</sup> Ibid.

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