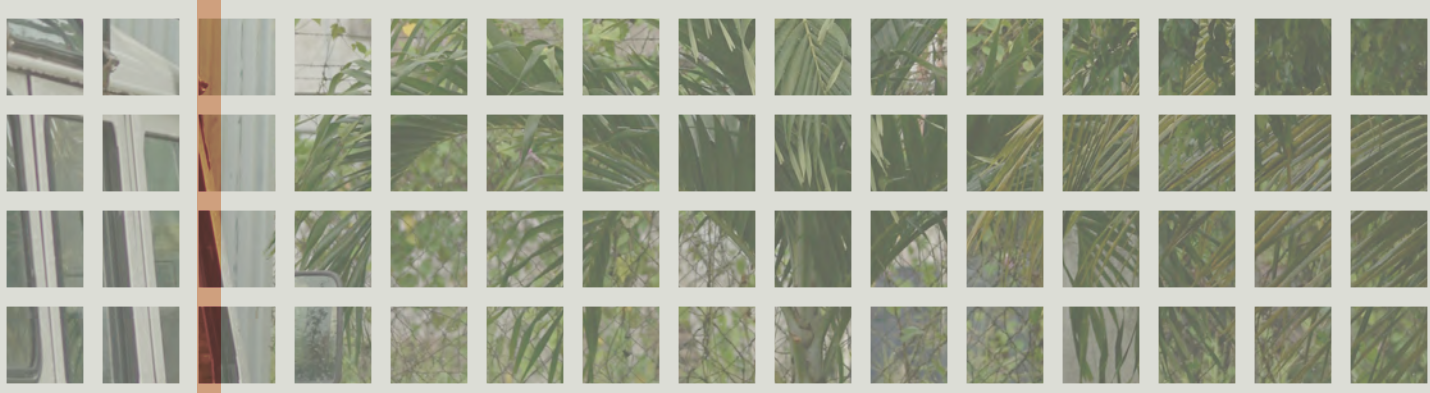


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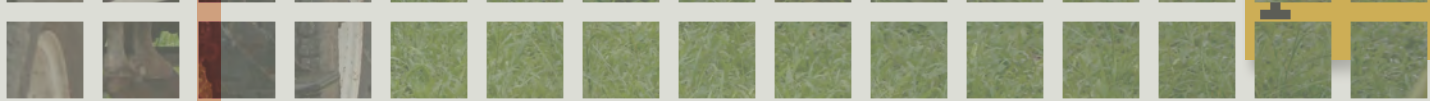
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PROLOGUE

TOGETHER BELIZE

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BY THE COMMUNITY, FOR THE COMMUNITY

TOGETHER BELIZE

A Design Thesis Submitted to the Department of Architecture and Landscape Architecture of North Dakota State University. By Dylan Neururer, In partial fulfillment of the requirements for the degree of Masters of Architecture.

DYLAN NEURURER
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SPRING 2017

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PART 1

FALL SEMESTER, 2016
THESIS PREPARATION

SPRING SEMESTER, 2017
THESIS

PART 2

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P A R T

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CONTENT -----04

TABLES/FIGURES -----06

ABSTRACT -----07

This disclosed a brief synopsis of the thesis and what the content of the book are

NARRATIVE -----08

Describes the following:

- i. Explanation of the thesis connecting the dots
- ii. Definition of project typology or precedent
- iii. Project emphasis
- iv. Goals of your thesis project
- v. User/ Client or audience description
- vi. Project justification

DESIGN PLAN -----12

- i. Design methodology
- ii. Design process plan documentation
- iii. Project schedule

RESearch -----14

This paper describes the project to a greater extent an a cohesive document that incorporates the research up to this point as well as insight. This paper includes the following:

- i. Case Studies
- ii. Research Paper
- iii. Annotated Bibliography

P
R
O
L
O
G
U
E

PRECEDENT -----26

Three different projects that relate to this thesis in various manners.

PROGRAM -----32

This highlights the components of the building including sizes & space calculations

SITE ANALYSIS -----40

Brief analysis of the overall site as well as some notable characteristics that will affect the design.

CODE ANALYSIS -----44

Outline of the various codes that would be applied to this project because of its typology.

DEFINITION -----46

This reiterates the design methodologies and their intended use

METHODOLOGY -----46

The three methodologies are used to different extends throughout the semester. Graphic.

PROCESS -----48

Documentation of the process is key & this illistates how it will be done specifically

SCHEDULE -----50

This is what the semester will look like by a every other day fashion

T
A
B
L
E
O
F
C
O
N
T
E
N
T
S

- Figure 1-5: Retrieved from: <http://studiogang.com/project/arcus-center-for-social-justice-leadership> (pg. 26-27)
 Figure 6: Retrieved from: <http://www.arqbacana.com.br/internal/noticias/read/14978/jeanne-gang-%C3%A9-nomeada-arquiteta-do-ano-pelo-pr%C3%AAmio-women-in-architecture> (pg. 27)
 Figure 7-10: Retrieved from: <http://www.ruralstudio.org/projects/greensboro-boys-and-girls-club> (pg. 28-29)
 Figure 11-15: Retrieved from: <https://massdesigngroup.org/work/design/gheskio-cholera-treatment-center> (pg. 30-31)
 Figure 16: Retrieved from: <https://www.wildernessinquiry.org/find-your-trip/itinerary/?i=Belize-and-Tikal> (pg. 38-39)
 Figure 17: Retrieved from: <http://www.unfinishedman.com/the-unfinished-mans-guide-to-traveling-in-belize/> (pg. 38-39)
 Figure 18: Retrieved from: <http://www.touropia.com/belize-beach-resorts/> (pg. 38-39)
 Figure 19: Site (pg. 40-41)
 Figure 20: Rain (pg. 41)
 Figure 21: Wind (pg. 41)
 Figure 22: Sun (pg. 41)
 Figure 23: Belize City, yearly relative humidity (pg. 42)
 Figure 24: Belize City, yearly average temperature (pg. 42)
 Figure 25: Belize City, yearly high/low temperature (pg. 42)
 Figure 26: Image of soil type in Belize City area (pg. 42)
 Figure 27: Site plan with general site dimensions (pg. 43)
 Figure 28: Occupant (pg. 44)
 Figure 29: Lavatories (pg. 45)
 Figure 30: Toilet (pg. 45)
 Figure 31: ADA (pg. 45)
 Figure 32: Means of Egress (pg. 45)
 Figure 33: Stairwell Dimensions (pg. 45)
 Figure 35: Max Height (pg. 45)
 Figure 36: Square Foot (pg. 45)
 Figure 37: Fire Rating (pg. 45)
 Figure 38: Sigma 60mm lens. Retrieved from: https://www.bhphotovideo.com/c/product/918896-REG/sigma_60mm_f_2_8_dn_lens.html (pg. 49)
 Figure 39: Sony 18-105mm lens. Retrieved from: https://www.bhphotovideo.com/c/product/1001011-REG/sony_selp18105g_18_105mm_f_4_g_lens.html (pg. 49)
 Figure 40: Sony a6300. Retrieved from: https://www.bhphotovideo.com/c/product/1222773-REG/sony_soa6300bk_alpha_a6300_mirrorless_digital.html (pg. 49)
 Figure 41: Handy Recorder. Retrieved from: <https://borge.com.au/zoom-h4n-handy-recorder/> (pg. 49)
 Figure 42: Schedule (pg. 450-51)

Table 1-4: Program (pg.32-35) %'s Retrieved from: http://www.asu.edu/fm/documents/abor_ccg/Chapter_Two_A.pdf

T A B L E S / F I G U R E S

A B S T R A C T

“BUILDING WITH CULTURAL INTEGRITY & SENSITIVITY”

In countries, such as Belize, are at times plagued by natural disasters, struggling economies, and dense slums, many times other nations send support like food, workers & supplies. Although this aid is sent with good intentions and can help; it often does have some unintended negative consequences. These negative consequences are caused by a lack of cultural & socioeconomic factors that are so intertwined with every society. Without a proper understanding of those cultural & socioeconomic; the type of aid offered can & does often lead to the disenfranchisement of these people/communities they are trying to help. Local work is being redirected to international work, where locals are not being taught/trained the local building techniques. Furthermore, the international building techniques that have the potential to influence Belize cannot be reasonably replicated/maintained in Belize. What then is the best way to establish strong communities to live self motivated lives & truly help Belizeans to achieve job stability as well as sustainable building practices? By engaging, educating & creating ownership among those people with cultural intelligence, awareness, consciousness, and delicacy in the building process.

THESIS NARRATIVE

THESIS EXPLANATION

Thesis is about exploring the passions we have developed over the nearly 5 years in our pursuit for becoming an architect. The following describes my passions and intentions for this thesis project.

TYOLOGY

The expected typology for this building is one that doesn't quite fit in a box of refined understanding. Instead it is a program & idea that is the driving force behind this design. The building will be built by the people of the community by employing locals and seeking volunteers from the area. Once constructed, the building will work as a center for the following:

- Work space for creating, building & exploring
- Large auditorium that will facilitate education, exploration & public engagement
- A public gallery to display and sell creations
- Offices to host administration and encourage ideals of that culture that relate to working communally
- Storage space that allows for the storage of machinery, construction materials, etc. involved with whatever this space will facility
- A recycling/ reuse area where materials can be harvested from buildings that are condemned.

*This is not an extensive list but gives an idea of the ways in which this space will be used.

PROJECT EMPHASIS

MAJOR PROJECT EMPHASIS:

- Focus on community engagement
- Replicable architecture that is regenerative in nature

MINOR PROJECT EMPHASIS:

- Current status of society, economy & social class structure
- High security because of high crime rates
- Site location
 - highly saline soils
 - poor bearing soil
 - high flooding tendencies

*Belize City is predominantly at a very low elevation

GOALS OF PROJECT

The goal of this project addresses the emphasis of the project previously mentioned. To answer the major emphasis, this project demands a creation of a building that uses building practices that are replicable, maintainable, have high building integrity, create/ spur on local economies and local building materials as well as actually revitalize the existing site.

Another goal to answer the more minor emphasis is to creating a building that honors and moves culture in a positive direction throughout this building. This could potentially be done by engaging local builders and community members in the building design, construction, maintenance & operation.

Other more minor strategies include further navigating the unique characteristics of Belize, the project would allow for easily manageable practices that create a safe environment that is easy to keep secure during all times operation & especially when not in occupation additionally addressing incredibly low elevations with poor soil.

CLIENT

The client is a **businessman originally from Belize** who started his own company in the US selling hand made wood products that he learned to do as a child living in Belize. He also runs a small side market selling products made from Belizean resource such as the Cohune nut.

*Artan has expressed his concern with **Belizean rarely returning to Belize** once becoming educated in a foreign area. He notes that Belize doesn't offer a very high standard of education and many people leave Belize to look for better education and work. He talks about his own struggle in the temptation to never return to Belize as he has a well established market currently based out of Miami, FL. He hopes to reinvest into the people of Belize to create a better place where the millennials & younger generations can have a good life without having to leave Belize.*

-paraphrase from Artan

USER

The user of the space would be to employees of Artan's company as well as other start up businesses. It would also facilitate for other local initiatives to engage & educate locals on things like building techniques, starting your own business and recycling materials. The program would need to fit a flexible plan of operation as the use of the building has the potential to change often.

AUDIENCE

The gallery would be a space where the employees can display their goods and creations. This helps to establish a public engagement of community members as well a startup/potential stream of revenue for the employees.

PROJECT JUSTIFICATION

The Project Emphasis & goals touch on the different elements about this thesis project. Many societal, cultural and geographic natures of Belize create a population that is poorly educated, struggling economically, creating poorly constructed buildings that leads to the buildings being condemned as well as requiring frequent maintenance. Building up a strong local economy with local employees is crucial to supporting a healthy development of Belize. My experience abroad in missions work (3 internationally) has given me enough of an insight to understand how little I know. This continues to lead me to a place of desiring to understand work abroad, it's usefulness, shortcomings & potential implications at both a small scale (person) & large scale (Belize) specifically in developing countries. This project hopes help to establish/ support a local economy by engaging, educating & creating ownership among the people of Belize through the built environment. These strategies will be used in Belize to create inwardly developed empowerment at the grassroots level.

RESEARCH DESIGN PLAN

QUALITATIVE:

In this methodology, I will be analyzing cultural, social & economic tendencies of Belize. I will be using David Livermore's method of outlines cultures in his book, "Serving with Eyes Wide Open." He breaks down cultural generally based on five different categories. This will help to give an overarching theme. However, even though Belize would fall under a Latin American culture, it has specific idiosyncrasies that are specific to Belize and even more specifically, Belize City.

CORRELATIONAL:

Belize unfortunately is not a well studied country with vast quantities of historical studies that are accessible on-line. Because of this and the complexity of culture as a whole, and the uniqueness of this project, there will need to be relations made from non-direct examples to be applied in a new setting. What is meant by this is that there may not be a lot of information how adaptable Belizean's are to new building techniques or building techniques currently being used in Belize; however, there may be other examples in different societies that one could draw connects through in order to get a well educated premise of which to base design idea on.

HOLISTIC CASE STUDIES:

A key to this project will also be to look at the success of other buildings with similar intentions of grassroots societal empowerment. Analyzing and learning from other projects will help to best understand the reasoning/justification for the design decisions I will be making for the project.

DESIGN METHODOLOGY

IN ORDER TO UNDERSTAND AND CREATE A WELL INVESTIGATED THESIS, THERE REQUIRES A FRAMEWORK TO HELP ANALYZE THE SUCCESS OF THE THESIS. THERE WILL BE THREE MAIN METHODOLOGIES I WILL BE USING.

DESIGN PROCESS PLAN DOCUMENTATION

DOCUMENTATION IS ESSENTIAL IN UNDERSTANDING, REFERRING BACK TO AND SHOWING ONES WORK. I WILL BE DOCUMENTING MY WORK IN THE FOLLOWING MEANS.

PHOTOGRAPHY/VIDEOGRAPHY:

Photography/videography provides a great way for one to experience the things words cannot easily describe. In my time in Belize, this will prove to be invaluable as the material I am seeking to acquire while in Belize can be greatly enhanced by having descriptive & pertinent pictures/videos to help aid in the understand of Belize.

DIGITAL:

Keeping a digital record is crucial in this project as many of the sketches & resources are accessed/represented through a no material form. Keeping strict organizational standards as well as an online backup will ensure that the material is preserved and easily accessible.

MODEL/MATERIAL STUDIES:

These studies done in the physical form could either be translated into a digital form or used in conjunction with the final presentation as a physical model. Pertinent physical models can help not only help to understand subject, but also to illustrate it effectively to others.

PROJECT SCHEDULE

MAINTAINING A STRICTLY REGIMENTED SCHEDULE WILL KEEP THIS PROJECT ON TRACK AND ALLOW FOR APPROPRIATE TIME ALLOTTED TO EACH COMPONENT OF THIS PROJECT.

PART 1A:

Part one of this project includes the heavily researched component of the project. This will include material studies, cultural analysis, site inventory & analysis. These will cumulate in understanding of complex societies & building in Belize through Qualitative, Correlational & Case Studies and run through Spring Break.

PART 1B:

Part one b is the study that will happen in mid-February. I will be traveling to Belize with the intention of gaining additional insight into the Belizean culture and to analyze things that can only be done/experienced in person.

PART 2:

Part two of the project will include the design portion of the project. This is where the concepts, ideas & knowledge will be applied to culminate into the building itself as long as the program of how it will operate.

RESEARCH PAPER

NDSU NORTH DAKOTA
STATE UNIVERSITY

Case Study 1 | Little Stone House

An area in Belize known as Nabitunich is host to series of small cottages that used to be primarily for doctors and nurses who worked at the Good Shepherd Clinic in the nearby town of San Jose, Succotz. Nabitunich translated means 'Little Stone House.' These little stone homes exemplify the use of local resources and materials by the use of stones from the farm fields and thatch made from local palm leaves. (Hanna Stables, 2014)

Case Study 2 | Rural Studio

"Rural Studio is an undergraduate program of the School of Architecture, Planning and Landscape Architecture at Auburn University. We have been in Hale County since 1993, where we hope we have been a good neighbor and friend to the community." Rural Studio's work is primarily affiliated with community-oriented work. They address needs of good design while working with very low budgets. What this means is using atypical material and recycled materials that may not be typical in a "normal" construction setting. Rural Studio has built more than 170 projects. This is one of their projects, "The smokehouse was built for fisherman Shepherd Bryant out of broken concrete provided by the Hale County Highway Department. The roof is made of salvaged road signs and beams from a local barn. Glass bottles are embedded in the walls and glow when seen from the inside. Sambo Mockbee described the small structure as the Alabama Ronchamp." (Auburn University, n.d.)

Case Study 3 | Recycling+Building Materials

This article discusses and gives examples of ways in which materials were recycled/reused in a series of different projects. The following are some examples of how this was applied. Many common building materials can be recycled: Concrete, metals, glass, brick & plastic can be reused and recycled to go back into creating another building making waste less and less of a byproduct. In one of Studio Gang Architects' projects they reused concrete from the area around the construction site to create a wonderful mosaic of different colored concrete. Ross Barney Architects utilized the wood from the site as a paneling around a majority of the interior surfaces. Luis Martinez Nahuel in his Recycled Materials Cottage in Chile reused demolished materials, glass, steel and laminated beams. (Recycling+Building Materials, 2011)

Case Study 4 | If You Build it

'If You Can Build it' is a documentary of how this couple with the backing of a grant went into a struggled small town and taught at the school as a Design + Build class. The couple set out to reinvigorate this dieing community without pay from the school for a total of 2 years. Unfortunately, because of slow progression with leadership of the community, they couple was not able to stay on as stay and were forced to move on from the project. However, they did end up completing a farmers market that the students designed and built (If You Build It, n.d.).

While on a missions trip to Belize I met a man named Philidelpho; Philidelpho lives on mile marker 25 on the Western Highway in Belize. Philidelpho oversees a youth camp called Mountain View Camp and he stays at the camp 24-7 to watch the property. Philidelpho survives with the help of his small flock of chickens, about 20 chickens in all. Shortly before I arrived in Belize, a Jaguar came out of the thicket and killed/ate about 15 of his chickens. A week after I arrived hurricane Earl tore through Belize City. Besides the peeled off roofs, crippled vegetation and

random small ships that were carried inland from the sea, the remainder of Philidelpho's chickens were blown away, leaving him with much less for options (see figure 1). Many people are living in poverty and have similar devastating stories. For Philidelpho, he would be okay and have a good group to help him. But for some, that's not the same story; it's a matter of even surviving. To some, a chicken coop is an easy solution. So why didn't Philidelpho have one? I don't know his specific reasoning. Maybe he didn't feel as though it was necessary, maybe he didn't think he had the money to build it, maybe he had just never thought about it. Whatever the reason, many in that area like the thousands of "squatters" find themselves in the same situation. Why? From my experience and the people I met, it's certainly isn't because they are stupid. Uneducated maybe, but often times those people are very creative,



FIGURE 1: CONDITIONS AFTER THE HURRICANE DELT ITS DAMAGE.

adaptive people. People that I've met in Belize are fully capable of creating something that works to fit their need (in this case a chicken coop). This ability to, "build your way out of a problem" may help to empower people. So, how can the process of a building create a self-empowered community in the country of Belize? By empowering that people group through engagement, education & ownership.

Through my research, exploration & international contacts I hope to describe how those three supporting details would result in empowering a country like Belize. In order to do so, a good context in which to explore this idea is necessary as there are very specific cultural norms, difficulties and tendencies that define the current state of Belize. A cultural intelligence (CQ) will help to better define and specify how to address the question of empowering Belize (Livermore, 2012). Belize is a culturally rich area with a relatively small population of 324,528 according to the 2010 Census. The populus is broken up into 7 major ethnic groups: Asian (1%), Caucasian (1.2%), Creole (25.8%, Afro-European ancestry), East Indian (3.9%), Garifuna (6.1%), Maya (11.3%), Mennonite (3.6%). The remaining 1.2% is other and .3% didn't share. "Belize is a multi-ethnic and multi-linguistic country." Although "[t]he oldest known speech community in Belize is the Maya[,]" the major languages spoken of the populus of 4 + years are primarily made up of English (official language), Spanish, and Creole (Statistical Institute

of Belize, 2010 ; Decker, 2005). "Creole languages frequently are created in a violent and confusing clash of cultures and do not create homogenous or uniform linguistic or cultural situations (Decker, 2005). Over 80% of the population claims to be some form of Christianity which dominates much of the country. Long term education in schools also poses troubling statistics as the age of 5-12 has 93% attending schools. However, from ages 13-16, the attendance drops to a mere 68%. Even more drastic, the number drops down to 5.4% at the age of 17+ (even between male vs. female) Other aspects of the culture is a lack of maintenance on buildings. Tom Moore, missionary of 14 years in Belize, states that maintenance on buildings is not of high priority in the Belizean culture. This observation is back up by the 2010 Census which notes 46.1% of housing in Belize was in some need of repair. Of those, 39% of the repairs needed to residences to be major repairs according to the residents. This may indicate a lack of responsibility, knowledge, ability, financial deficits among many other potential reasons to repair their homes (Statistical Institute of Belize, 2010). Drugs have also invaded Belize bringing with it violence. In 2011, Belize was put on the United State's Blacklist for the countries notable drug influence. According to NPR's report of the unfolding events back in 2011, Belize City has been a hub of this crime (NPR, 2011). Although brief, these data sets and information give a brief snapshot of Belize as a whole and helps to contextualize the state at which Belize is in with the most up to date data available.

Based on this research there begins to form a possible solution, ways to address possibly aid to some of the struggles, challenges & uniqueness that Belize is having as a whole. Some of these variables include Belize being a very diverse nation, education

being very poor and dropping off very quickly at later ages of youth and poor building maintenance. I see these factors being addressed and channeled into a community building of sorts. Community building in the sense of a literal building as well as building good, healthy, and sustainable community. Building that kind of community,

[...] works by building community in individual neighborhoods: neighbors learning to rely on each other, working together on concrete tasks that take advantage of new self-awareness of their collective and individual assets and, in the process, creating human, family, and social capital [...] (Kingsley, 1997)

That kind of community looks to empower people to take "attitudes of self-reliance, self-confidence, and responsibility." (Kingsley, 1997). It is imperative that alongside of that empowerment, neighborhoods promote local institutions such as association or churches as well as friendship where neighbors can trust each other as well as look out for each other (Kingsley, 1997). While in Belize the community of Ladyville (where I was staying with the missionaries) had a "Neighborhood Watch Group." According to the missionaries the program was not very effective in that area because of lack of involvement. Regardless, it is a step in the right direction (CTV3News, 2013). Initiatives such as these can take time and need to be slowly implemented and built upon (Kingsley, 1997). These kind of initiatives could result in the successes of the following case study,

A community group in a low-income Baltimore neighborhood initiated an all out war on the local drug trade through

a variety of activities, often implemented in partnership with the police and other agencies. These included denying drug dealers the space to conduct their trade (boarding up abandoned buildings, fencing off alleys, etc.); conducting community cleanups and providing additional street lighting; communicating the community's intolerance of drugs (e.g., conducting vigils, holding marches); partnering with an outreach treatment program; and establishing positive alternatives for youth (e.g., special summer programs). Between 1993 and 1995, violent crime decreased by 52 percent and arrests for drugs in the community dropped by 80 percent (Kingsley, 1997).



FIGURE 2: JEFF & HIS DAUGHTER

Although this example was in the United States, that same idea is a gateway into providing healthy, creative solutions for change that close-knit communities need. Because, some believe that problems with society, “was a product of a different culture—a different set of values—but that view has clearly been undermined.” (Kingsley, 1997) These values do carry cross-culturally. However, that is not to say they will look exactly the same, cultural intelligence is required to appropriately and effectively apply these ideas. Building communities requires this way of thinking, Although this example was in the United States, that same idea is a gateway into providing healthy, creative solutions for change that close-knit

communities need. Because, some believe that problems with society, “was a product of a different culture—a different set of values—but that view has clearly been undermined.” (Kingsley, 1997) These values do carry cross-culturally. However, that is not to say they will look exactly the same, cultural intelligence is required to appropriately and effectively apply these ideas. Building communities requires this way of thinking,

Community-based and grass-root organizations are considered to be key actors in individual and common efforts for changing attitudes. They serve as mediators between the community empowerment and individual change (Ahmad, 2015).

The act of building needs to take into account all of these stated principles as well. The way this could be translated into an actual building would be to taking these ideas of community, cultural intelligence & social nuances and use engagement, education & ownership to design, construct a use a building.

Engagement is the first stage in which to create this empowerment. People are empowered when part of a community or group. This engagement have very powerful effects even in poor areas, at least in Latin America that is. In the book, *Measuring Empowerment: Cross-disciplinary Perspectives*, there is a “promising source of more effective, and more inclusive, development. It is seen particularly as a means of increasing the capacity of poor people and subordinate groups to influence development processes.” (Livermore, 2012) Furthermore, the

Word Bank came out with a statement saying that “A growing body of evidence points to the linkages between empowerment and development effectiveness both at the society-wide level and at the grassroots level.” (Narayan-Parker, 2005) This grassroots movement is what is driven by community engagement and people using their passion, talents & ideas to make progressive movements in their specific area of influence and can be categorized in what’s called the Creative Class. “The creative class has the power, talent, and numbers to play a big role in reshaping our world.” (Florida, 2014) The Creative Class is quite prevalent in Belize. There are a handful of different categories of the creative class, of which many in Belize fall into one of these categories. Specifically in application to more touristic areas of Belize where they can sell their creations to people looking to get the “real Belizean experience.” I say it in quotations because many people only experience the beaches out on the islands and not the “real Belize.” One of these creators name is Jeff, a gentleman I met many times at church, when he stopped by at the camp to sell his goods and as he helped out at the camp. Jeff runs a small business of making bowls and other wood products in his humble home (see figure 2.) This entrepreneurial drive can be translated into empowering people toward a specific goal. Whether that goal be to own a business, have a stable job or to make a difference in the community, it can be encouraged by engagement and in a community setting. “Participating in growth-fostering relationships is both the source of the goal of development.” (Javan, 1999) This goal and development of making a living was certainly fostered by meaningful relationships with Jeff and his family. Moreover, “the sense that one belongs in and is meaningfully part of a larger

collectively; the sense that there is a network of and structure to relationships” (Sarason, 1986). This sense of belonging is what engagement is all about. For someone to hop in on an idea or goal. In this case the goal or idea of this writing being to build a community building. Once that begins to be established there needs to be an equipping of sorts. A next step beyond just buying into an idea. Engagement is great, but without any further progressions there will be a lack of change and whatever was planned will not move forward.

That next step is education. Education as previously mentioned is quite poor in Belize. With a drop in 25% in attending school from ages 5-12 to 13-16 and an additional drop to 5.4% at age 17+, education is a necessity. There are many efforts to change that, including Christian missions organizations such Latin America Child Care (LACC). LACC is facing that head on with establishing “sponsor a child” programs. I have been blessed to work with LACC on two occasions. Both in my ten days in Nicaragua, and three weeks in Belize. Both of which we were partnering with LACC. What this writing will address isn’t that however. It is to explore how to implement that same idea of getting people educated in the design, construction and use of this community building. Many of age workers are not skilled in a specific trade because of various reasons (no father to teach them, no schooling to learn or never having the opportunity), they never move from their stagnant position. Poor and impoverished need to become educated in a skill to be able to have the ability to move into a position where they can pull themselves out of that poverty. My friend Jeff actually did end up helping out on the project. He knew or at least learned quickly how to wire up the outlets

and for him that is a valuable asset if he wants to move into something different than wood working. Because,

if social capital is to be built—if attitudes of dependency are to be replaced with those of self-reliance—community residents must largely do it for themselves. “Community participation” is not enough. The community must play the central role in devising and implementing strategies for its own improvement (Kingsley, 1997).

Education is a huge avenue in which to not only gain valuable skills but also to progress toward a less impoverished country. According to The World Bank’s assessment of Latin America and Caribbean, “Investment in education quality will play an important role in allowing the poor to contribute to and benefit from future economic growth.” Moreover, the process of building things is an effective way in which to apply that education for a positive push toward, “[t]he strengthening of local Community Development Corporations (CDCs) -- which have focused on the construction and rehabilitations of housing (Kingsley, 1997)” This is particularly important in Belize, where a maintenance of buildings is very poor. Because of the state of Belize, several Missions Organizations are geared up and ready to build things. “Some estimate that as many as four million Americans take short-term missions trips out of the country annually [...]” (Livermore, 2012). This influx of help certainly doesn’t need to go to waste, but if not done properly and under the right leadership, short term missions trips can sometimes do more harm than good. “Much of the way we [Americans] interact cross-culturally

communities to be filled with an “our way is best” mentality.” (Livermore, 2012) A fairly typical way of doing missions currently is to get a group of people experienced or inexperienced in a specific trade to spend a week or so in a place like Belize and offer their time to help get something built. This has been the case with both of the construction missions trips I’ve been on. However, during my time in Nicaragua, we did have locals working with us. While in Belize I saw three different teams go through in three weeks and had some local engagement. The visiting teams work was greatly appreciated and made great progress. Fortunately the missionaries are quite attentive to educating locals and engaging



FIGURE 3: VOLUNTEERS FROM LOCAL CHURCH REPAIRING ROOF the local community in the building process (figure 3). However, that is not always the case and can certainly be improved on still in the case of the three teams I saw. Something detrimental that can happen with bringing in outside groups to do work is that the locals don’t actually get the valuable experience they could use. Furthermore, in the case of building a community building, if there were no locals engaged

in the building process none of the locals would become more educated or gain skills.

[I]n fact, many theologians and mission practitioners comment on the negative effects of the unequal power dynamics - as disempowering local churches and communities, as increasingly dependency on outside funds, ideas and initiatives, and as fomenting completion and conflict with the ‘receiving’ churches and communities (Alvarez, 2016).

A potentially more beneficial approach to building something like a community building would be to use skilled labors (international or local) to teach the locals how to build it instead of building it for them. This can be seen in practice with groups like Engineering Missions International (EMI) (EMI,n.d.). I recently had a conversations with one of the EMI’s interns because of interest in the organization. The individual I spoke with explained that EMI’s goal internationally is really more to leave because of not being needed anymore. The purpose is not to make an international, poverty stricken nation dependent on the US, but rather to equip them through teaching of how to do things like building. This falls in line with the principles discussed thus far in the writings. This idea of empowering people to a point of them to not being dependent on someone anymore is exactly the intention behind this writing. Because if a people group are just spoon fed something they will not become empowered, but instead become entitled. They don’t take ownership, they leave it. This sense over ownership is the icing on the cake for this process of building a community building.

Because, “[c]ommunity empowerment

[...] is more than the involvement, participation or engagement of communities. It implies community ownership and action that explicitly aims at social and political change (WHO, n.d.) This sense of ownership goes beyond just being engaged. It involves real change and in this case the construction of a building. In the process of constructing a building, of laying that block, installing that door, and fixing the beam to the column there develops a sense of ownership of the building. The blood sweat and tears that go into it makes an individual have a great sense ownership. The hope is that this would translate into a better maintenance of the building. After the Design + Build class I was in finished up in the Spring of 2016, I found a great deal of ownership in the work I had done and was willing to fight for it. This phenomenon is classified as “psychological ownership” and its “effect on group effectiveness and customer satisfaction has been examined in the management, services marketing, and experiential education literatures.” (Wood, 2003) In order for this to happen in this psychological & also literal way, there is an understanding that power must be shifted or weighted to a local government way of thinking. This is the premise of a grassroots movement and why it is imperative to the success of creating ownership. To monopolize or simplify the solution to a large scale, non-personal solution that a federal governmental sort of institution would bring won’t bring local change. Thinking in a bottom up sort of fashion allows for what Narayan-Parker speaks about by saying, “The specific empowerment interventions encompass a diverse set of actions to promote participation, increase transparency, build capacity among poor groups, and strengthen accountability mechanisms in development processes.” These sort of processes simply cannot

be achieved by anything but from a local.

These three main supporting groups of engagement, education & ownership have the ability to empower the people of Belize through the construction of a community building that will host the supporting groups both in the design, construction, and use of the building. These ideas will be further emphasized by the use of local materials. Why this is important is because in order for Belize to become increasingly independent and empowered as it's own nation local materials can be utilized to reduce the dependence on other nations. Belize has an abundance of woodlands, mica, lime sand, gravel, marble, limestone and clay (Oancea, 2009 ; Godoy, n.d. ; Minerals Education Coalition, n.d.). Projects like those from Rural Studio also illustrate a framework in which to create brilliant reuse of material to be applied in the art of building (Auburn University, n.d.). These same principles will be integrated into the design of the building. This reuse of material will be of benefit as it will likely cut costs considerable and take material that would otherwise be discarded. This will only assist in achieving the goal of empowering the people of Belize.

Belize hosts a series of challenges that help to define a need as well as their assets. The cultural diversity as well as poor education, poor building maintenance, drug influence, as well as a slew of other defining characteristics of the country help to establish how the country of Belize could potentially be a self-empowered community through the process of design, construction & use the building. The driving force behind it can be categorized under engagement, education and ownership. This

self-empowered, community based notion can be applied from the smallest of chicken coops for our friend Philidelpho, to a large community that impacts a whole community. There is power in that and is the premise of this project.

R E S O U R C E S

Ahmad, M. S., Talib, N. B., & Abu. (2015). Empirical investigation of community empowerment and sustainable development: quantitatively improving qualitative model. *Quality and Quantity*, 49(2), 637–655. <https://doi.org/http://dx.doi.org.ezproxy.lib.ndsu.nodak.edu/10.1007/s11135-014-0014-y>

Great insight into how to achieve community empowerment by working in a ground up sort of movement. It hits on sustainable development and how that relates to empowering communities. The writings spend some time describing how catchwords like “empowerment” and “sustainable” and are often quite vague and are often times difficult to understand as the concepts are not developed very fully. The writing then goes on to more clearly objectify these ideas and concepts like “sense” of community.

Alvarez, M. (2016). *The Reshaping of Mission in Latin America*. Wipf and Stock Publishers. admin. (2014, December 3). History of Nabitunich Stone Cottages. Retrieved from <http://www.hannastables.com/archaeological-view-of-nabitunich/>

The setting in which these ideas are illustrated are primarily in Latin America which helps to better define the criterion that addresses Latin American Culture. The primary writing researched short-term missions and how those could and should change in the future as well see some of the negative ramifications of short term missions. These include but not limited to in the writing: disempowering these cultures, creating a dependency upon other countries/ people and force upon ways of conducting cultural norms that more closely resemble those of the United States.

Auburn University (n.d.). Rural Studio. Retrieved October 11, 2016, from <http://www.ruralstudio.org/>

*Please refer to Case Study 2.

CTV3News (2013) Form Your Neighborhood Watch Now! Retrieved from http://www.ctv3belizenews.com/index.php?option=com_content&view=article&id=2618:form-your-neighborhood-watch-group-now

This citation was simply to prove the “Neighborhood Watch” program that is implemented in Belize to better supplement my verbal talks with the missionary in Belize.

Decker, K. (2005). The Song of Kriol: A grammar of the Kriol language of Belize. Retrieved from http://www.sil.org/system/files/reapdata/20/99/21/20992139271472124394945438780794345365/The_Song_of_Kriol_UnicodeElectronic2013.pdf

This writing was primarily used to understand the Kriol/Creol language/ culture that is so prevalent in Belize. This assessment helped me to understand the deep cultural context of Belize as a nation.

EMI: About Us. (n.d.). Retrieved October 11, 2016, from <http://emiworld.org/aboutus.php>

I had talked more about my personal conversation with an EMI intern; however, there were some references made to EMI's website. I also added it to back up the credentials for having some kind of formal example of EMI's mission, projects & legitimacy.

Florida, R. (2014). The Rise of the Creative Class--Revisited: Revised and Expanded. Basic Books.

This book delved into the concept of the Creative Class. It described the history of it as well as the progression of it to the current day. It talks about different categories of the creative class as Technological, Economic, artistic and cultural. This creative class is described as being "multidimensional" and "experiential." This multifaceted approach to understanding the creative class helped me to understand what category architecture, engineering, arts, music, etc. falls under. My previous view of the creative class limited me to only thinking of hand crafted items I would see abroad.

Godoy, T. (n.d.). FAO. Brief Description of the Forest Resources of Belize Retrieved October 11, 2016, from <http://www.fao.org/docrep/007/ad102s/AD102S05.htm>

This resource was used to get a brief understanding of the state of which the forests in Belize are as well the notable species of trees/vegetation in Belize to be able to apply building materiality to a better understanding of the typology/ renewable material use.

Hanna Stables. (2014, December 3). History of Nabitunich Stone Cottages. Retrieved from <http://www.hannastables.com/archaeological-view-of-nabitunich/>

*Please refer to Case Study 1.

If You Build It (n.d.). Netflix. Retrieved August 26, 2016, from <https://www.netflix.com/h/70298385?trackId=13752289&tctx=0%2C0%2C5a73db4d53c861aa0a046fd099ef35bec4cc2393%3Ac5eb72d0339a7b8231b535f9c894b7b023a15aed>

*Please refer to Case Study 4.

Javan, J. (1999). Empowerment for Community Development: A Multivariate Framework for Assessing Empowerment at the Community Level. Retrieved from <http://search.proquest.com.ezproxy.lib.ndsu.nodak.edu/socabs/docview/61603943/B1C1BA088E6840E8PQ/1>

I was unable to access the full document. This was a quote within another reading I had. So I don't have any more context to read into from the original source.

Kingsley, G.; McNeely, J.; Gibson, J. (1997) Community Building Coming of Age. Development Training Institute, Inc. Retrieved from http://www.instituteccd.org/uploads/iccd/documents/community-building_-_coming_of_age.pdf

This PDF was a wealth of knowledge about community development, and understanding in depth the components that make a healthy community. This article often talks about "social capital" which can be described as the value of things like good connections, family interactions, self-reliance among other things. The writing also has plethora of useful case studies to better define and support. This was applied to many different scenarios that Belize deals with, degradation of society, diverse areas, high crime, drug abuse, poor areas, etc. It gives practical solutions with evidence based conclusions. Although the article is almost 20 years old from the current year in which this is being written, I still find it quite pertinent and useful.

Livermore, D. A. (2012). Serving with Eyes Wide Open: Doing Short-Term Missions with Cultural Intelligence. Baker Books. Narayan-Parker, D. (2005). Measuring Empowerment: Cross-disciplinary Perspectives. World Bank Publications.

Livermore is a well known speaker and has a vast knowledge research & experience based knowledge of cultural intelligence (CQ). This specific although is about short-terms missions primarily it gives useful insight into how to honor culture and to put off our "Americanize the world" kind of mentality and tune into a cultural attentiveness in our perception of the world.

Minerals Education Coalition (n.d.). Mineral Database. Mica. Retrieved from <http://mineralseducationcoalition.org/minerals-database/mica/>

This resource was used to better understand the uses of Mica, a resource that was used by Mayans when that society was still together.

NPR (2011, October). Small And Isolated, Belize Attracts Drug Traffic. Retrieved from <http://www.npr.org/2011/10/29/141808741/small-and-isolated-belize-attracts-drug-traffickers>

This article describes what the situation was like in 2011 with Mexican Drug cartels infiltrating the vulnerable state of which Belize was in as being such a sparsely populated country. It discussed the transition of drugs and the current influence they are having in Belize and how that is tying in with the crime and murder rates in Belize.

Oancea, D. (2009, January) Mining in Central America. Retrieved from <https://web.archive.org/web/20110516031334/http://magazine.mining.com/Issues/0901/MiningCentralAmerica.pdf>

This article was used to understand the different materials that were in Belize to establish a material pallet for the typology of the project.

Recycling+ Building Materials. (2011, August 7). Retrieved September 21, 2016, from <http://www.archdaily.com/155549/recyclingbuilding-materials/>

*Please refer to Case Study 3.

Sarason, S.B.: Commentary: the emergence of a conceptual center. *J. Community Psychol.* 14, 405–407 (1986)

This reference was pulled from another resource and the original source is unavailable for me to access so the context of the original writing is unknown. Just how it applies in the article it was referenced in.

Statistical Institute of Belize ; UNFPA (2010) Population and Housing Census. Retrieved from http://www.sib.org.bz/Portals/0/docs/publications/census/2010_Census_Report.pdf

[sib.org.bz/Portals/0/docs/publications/census/2010_Census_Report.pdf](http://www.sib.org.bz/Portals/0/docs/publications/census/2010_Census_Report.pdf)

This 2010 Census report gave very clear and concise data used to understand the connection, struggles and diversity of Belize. This document is where I pulled almost all of the statistics written in the paper. This Census gave details of racial, ethnicity, building, age, sex, education as well as many other sources.

WHO (n.d.). Track 1: Community empowerment. Retrieved from <http://www.who.int/healthpromotion/conferences/7gchp/track1/en/>

World Health Organization (WHO) had a useful set of writings that helped to quickly summarize ideas that were established with the 7th Global Conference on Health Promotion. They talk about how empowerment goes beyond just involvement, participation and talks about the importance of ownership and it's driving force in creating the empowerment they are defining. They talk about how that empowerment drives things such as social and political change from what they allude to being sort of a grassroots movement. They also talk about how empowering one requires another to relinquish some of their power. A give and take if you will.

Wood, C. M. (2003). The Effects of Creating Psychological Ownership among Students in Group Projects. *Journal of Marketing Education*, 25(3), 240–249. <https://doi.org/10.1177/1052526003253002>

ARCUS CENTER FOR SOCIAL JUSTICE LEADERSHIP

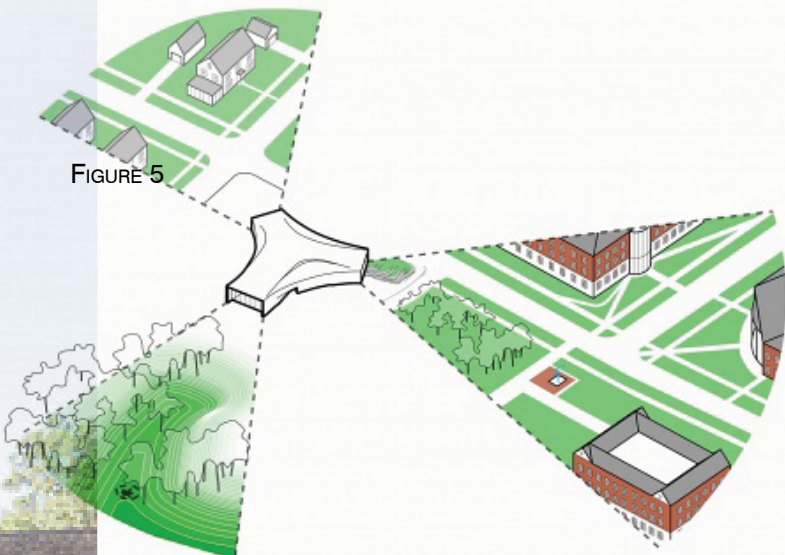
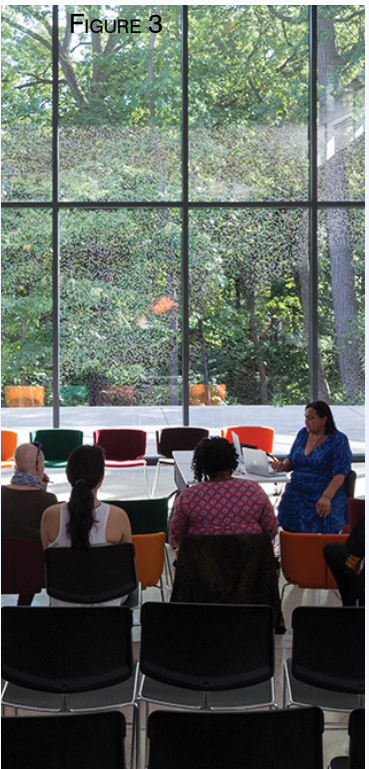
ARCHITECTS: STUDIO GANG

LOCATION: KALAMAZOO, MI
UNITED STATES

AREA: 10,000 SQFT

PROJECT YEAR: 2014

BUILDING TYPOLOGY: SOCIAL



MATERIALITY
The exterior is constructed using a technique known as "cordwood." This technique uses large timber laid laterally bound together with a type of mortar. This technique was used in this project. Cordwood itself is a stack of wood measuring 4ft deep, 4 ft tall & 8ft long. This concept when filled with a material creates a very well built wall. This wall type typically achieve mid range R-values (1-2) & work well as a thermal mass. These thermal properties are defined by the fill and type of wood. These two materials (wood & concrete/mortar) appear to be conflicting materials. One has a high embodied energy while the other is quite renewable. One allows for shrinkage and expansion the other is very ridged when set. Despite the differences, this wall type creates a low impact, high efficiency, very durable wall.

DESIGN INTENT

This building was designed with a high attention to collaborative space where people are meant to have those, "hallway conversations." This building was constructed to address community and social dilemma regarding Social Justice. The three naves of the building help to pull together the three views seen that combine campus, grove & neighborhood

-Snell, 2005



GREENSBORO BOYS AND GIRLS CLUB

ARCHITECTS: RURAL STUDIO
5TH YEAR STUDENTS

LOCATION: GREENSBORO, AL
UNITED STATES

AREA: 5,100 SQFT

PROJECT YEAR: 2012

BUILDING TYPOLOGY:
LEARNING CENTER

DESIGN INTENT

This Building was designed & constructed by Rural Studio. A Design + Build studio at Auburn University. This project was taken on by 5th year Architecture students for the Greensboro Boys & Girls Club. This space hosts large classroom space, computer lab, snack area, administrative office, restrooms & multiple sheltered outdoor spaces. There were four students involved in the project and accounted for all of the design work.



FIGURE 8



FIGURE 10

MATERIALITY

The materials used in the building were used with careful attention to the location & budget of the project. The exterior facade is made of a vibrant blue corrugated steel. This was done for low-maintenance as well as an economical solution to the cladding. The entirety of the interior is done with some dimensional lumber, but mainly Orientated Strand Board (OSB). This was a cost effective solution as well as durably, economical and locally available.

ROOTED IN PLACE

Rural Studio prides themselves on have a great sense of place. The students basically spend a year abroad as they submerge themselves in the cultural fabric of the area in which the project will be built. This amazing experience gives them an undivided attention to the cultural needs & nuances of the micro-cultures that they are often in. This reinforces their ability as a designer to truly complement a sense of place.

GHESKIO CHOLERA TREATMENT CENTER

ARCHITECTS: MASS.

LOCATION: PORT-AU-PRINCE, HAITI

AREA: 7,460 SQFT

PROJECT YEAR: 2015

BUILDING TYPOLOGY: HEALTH

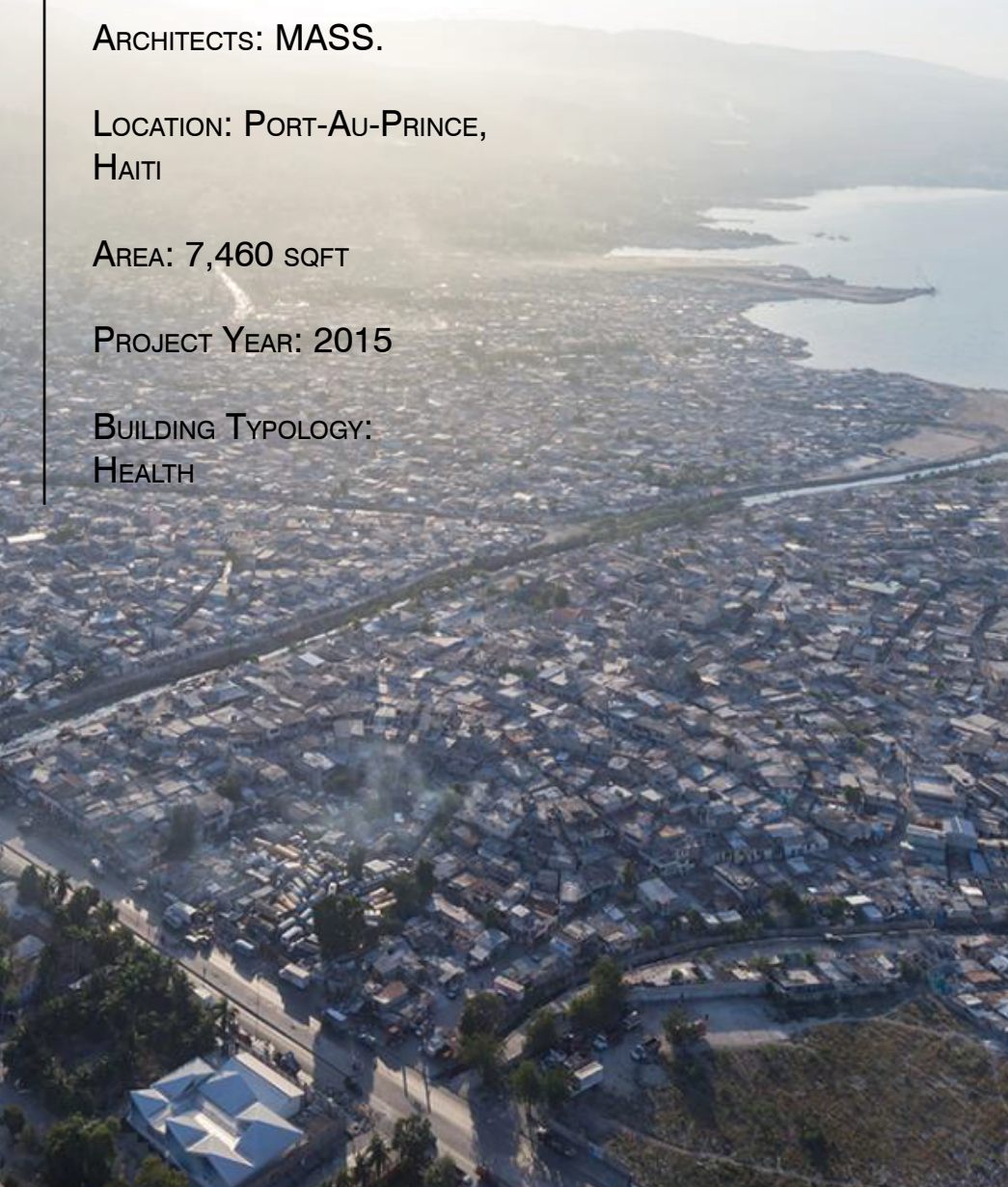


FIGURE 11

DESIGN INTENT

After the earthquake that devastated Haiti toppled building and killed thousands, Cholera, a preventable and curable disease, spread in the country. The country had been free from the disease for over a century suddenly became a deafening blow to Haiti. Mass sought to create a center for healing to establish a more safe environment than the portable tents. In the design they looked to establish a dignity for the people affected.

ARCHITECTURAL MISSION

“Architecture is never neutral. It either heals or hurts. Our mission is to research, build and advocate for architecture that promotes justice and human dignity.” A key component they advocate for is a holistic design approach. However, what really stands out with MASS is their attention to, “the people who build, and the communities and individuals who are affected.” Mass builds for people taking in sensitivity to key cultural and demographic characteristics.



FIGURE 12



FIGURE 13



FIGURE 14



FIGURE 15

MATERIALITY

The unique face of this building was created with a goal to involve the locals with the design of the building. Local metal workers were hired out to complete the exterior facade shown in the images to the left. This facade was created by punching out a simple pattern along with some cutting and bending. This was all done by the local skilled workers. In a video documentary of the project one of these workers talks about the great ownership he has taken with this project and that his wife would ask him if he really did that? He would proudly respond that he did. The attention that MASS. Does as a whole provides an atmosphere conducive to engage people, giving them a guiding hand & thus creating a strong ownership for the project. The services provided by MASS was architectural design, construction administration, on-site training, expanded construction administration.

-GHESKIO, n.d.

C T A N D R P S C D M D S A

P R O G R A M

No. of Units

PUBLIC

Net Area Subtotal

Function People Capacity Unit Area/Unit Net Area

Reception	1	1		1	70	70
Open	1	50		1	450	450
Storage	0	0	na	1	50	50

SUBTOTAL 570

Cnt. Booth	0	4		1	100	100
Seating	0	150		1	1000	1000
Bathroom	0	15	na	2	150	300
Storage	0	0	na	2	150	300

SUBTOTAL 1540

Seating	0	40		3	400	1200
Storage	0	0	na	3	50	150

SUBTOTAL 1350

Display	1	80		1	800	800
Storage	0	0	na	2	100	200

SUBTOTAL 1000

38

TOTAL: 4,460 SQFT

TABLE 1: THIS TABLE ILLUSTRATES THE PUBLIC SPACE GENERAL DIMENSIONS WITHIN THE DESIGN

C T A N D R P S C D M D S A

SEMI-PUBLIC &

No. of Units

SEMI-PRIVATE

Net Area Subtotal

Function People Capacity Unit Area/Unit Net Area

Open	0	40		1	1500	1500
Breakout	0	30		2	300	600
Storage	0	0	na	2	300	600
Equip.	0	20		1	1000	1000
Office	1	2		2	300	600
Bathroom	0	1		2	120	240

SUBTOTAL 4540

Executive	1	1		1	200	200
Administer.	1	2		4	120	480
Board Rm	0	20	na	4	120	480
Print Shop	0	4	na	1	120	120
Commons	0	15		1	200	200
Bathroom	0	2		2	100	200
Storage	0	0		1	70	70
Tech Rm	0	0		1	70	70

SUBTOTAL 1640

Seating	0	80		1	500	500
Serving	0	4		1	100	100
Prep.	0	10		1	300	300

SUBTOTAL 900

TOTAL: 7,080 SQFT

39

TABLE 2: THIS TABLE ILLUSTRATES THE SEMI-PRIVATE, SEMI-PUBLIC SPACE GENERAL DIMENSIONS WITHIN THE DESIGN

C T A N D R P S C D M D S A

C T A N D R P S C D M D S A

PRIVATE

Function People Capacity Unit No. of Units Area/Unit Net Area Net Area Subtotal

Kitchen	0	3		1	120	120
Bedroom	0	2		1	100	100
Bathroom	0	1	na	1	80	80
Living	0	6		1	280	280
Storage	0	0		1	20	20

SUBTOTAL 600

Equip.	0	1		1	70	70
Mech.	0	2		1	200	200
Bathroom	0	2	na	1	70	70
Storage	0	0	na	3	100	300

SUBTOTAL 640

Open	na	na	na	1	500	500
Hazardous	na	na	na	1	100	100
Large Equ.	na	na	na	1	600	600
Const. Mat	na	na	na	2	400	400

SUBTOTAL 2000

40

TOTAL: 3,240 sqft

TABLE 3: THIS TABLE ILLUSTRATES THE PRIVATE SPACE GENERAL DIMENSIONS WITHIN THE DESIGN

Space Name People Capacity Unit Net Area Net:Gross Gross Building Area

LOBBY SPACE	1	50		570	61%	792
AUDITORIUM	0	169		1540	63%	2110
CLASSROOM	1	40		1350	60%	1890
GALLERY	1	80		1000	71%	1290
WORKSHOP	2	92		4540	77%	5584
OFFICES	5	46		1640	62%	2263
DINING	0	94		900	61%	1251
LIVING	2	6		600	68%	792
CUSTODIAL	2	3		640	88%	717
LARGE STORAGE	NA	NA		2000	92%	2160

TABLE 4: THIS TABLE ILLUSTRATES THE CUMULATION OF THE GENERAL DIMENSIONS WITHIN THE DESIGN

LAND USE REQUIREMENTS

People Gross Bld. Area Floors Bld. Footprint Land Area

TABLE 5: THIS TABLE BREAKS DOWN THE LAND USE REQUIREMENTS INTO THE RESPECTIVE AREAS

Living

Apartment	6 (max)	792	2(nd floor)	1250	2188
-----------	---------	-----	-------------	------	------

25% GAC

Parking

Owner	1	380	1	380	475
Visitor	1	380	1	380	475

75% GAC

41

BUILDING AREA SUMMARY

People Gross Bld. Area Floors Bld. Footprint Land Area

Administrative

Offices	5	940	1	940	1645
Other	na	700	1	700	1225

25% GAC

Parking

Staff	6	380	1	2280	1645
Visitor	1	380	1	380	475

75% GAC

Educational

People	124 (max)	6190	1	6190	10833
Other	na	1236	1	1236	2163

25% GAC

Parking

Staff	6	380	1	2280	2280
Students	120	380	1	380	11400

25% occupancy

75% GAC

Public Engagement

People	2	3364	1	5887	4622
Other	na	1182	1	2069	1946

25% GAC

Parking

Staff	2	380	1	2280	950
Visitor	230	380	1	380	78375

50% occupancy

75% GAC

AGGREGATED TOTAL: 14,780 SQFT

FIGURE GROUND & CONCEPT

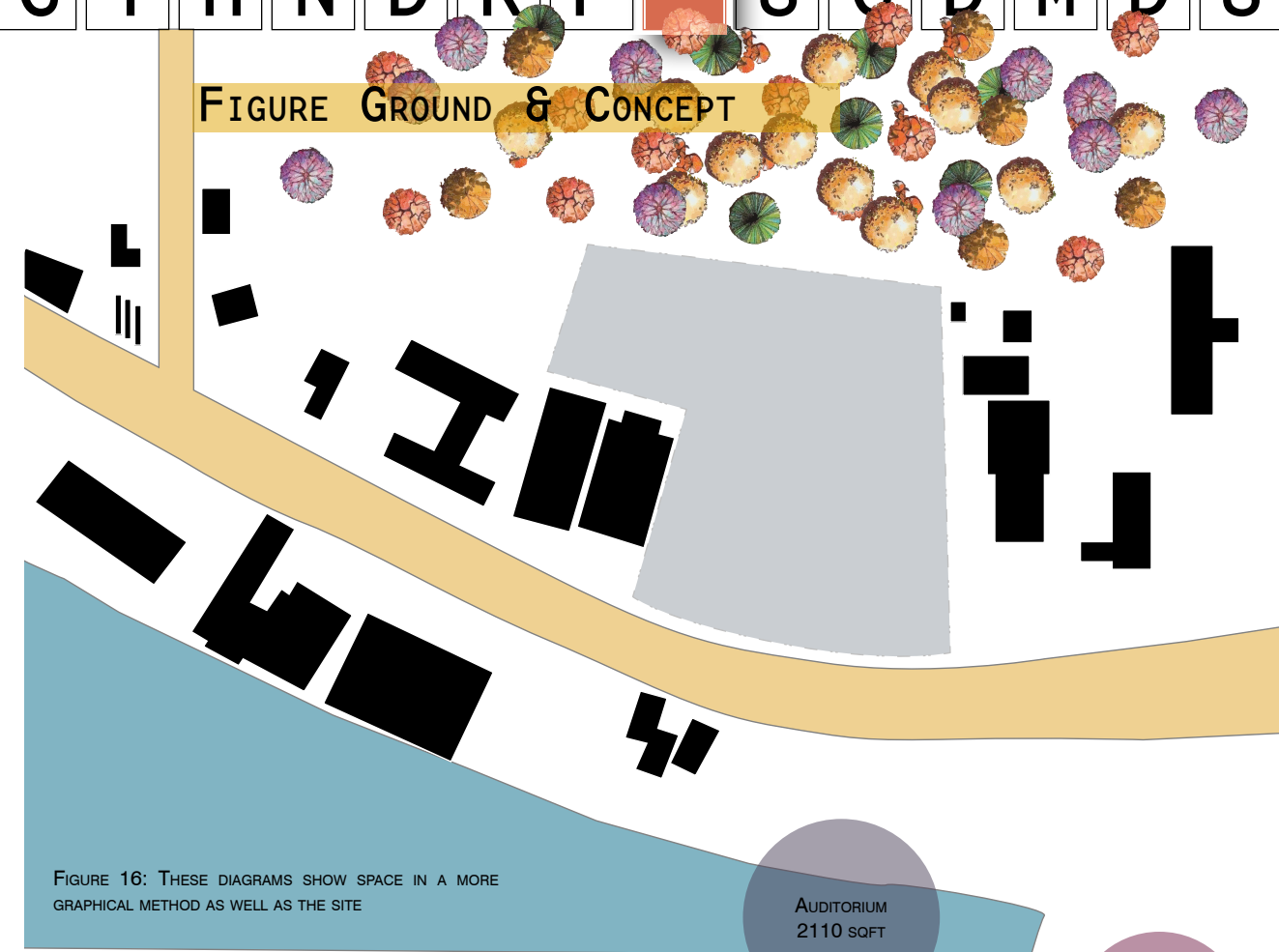
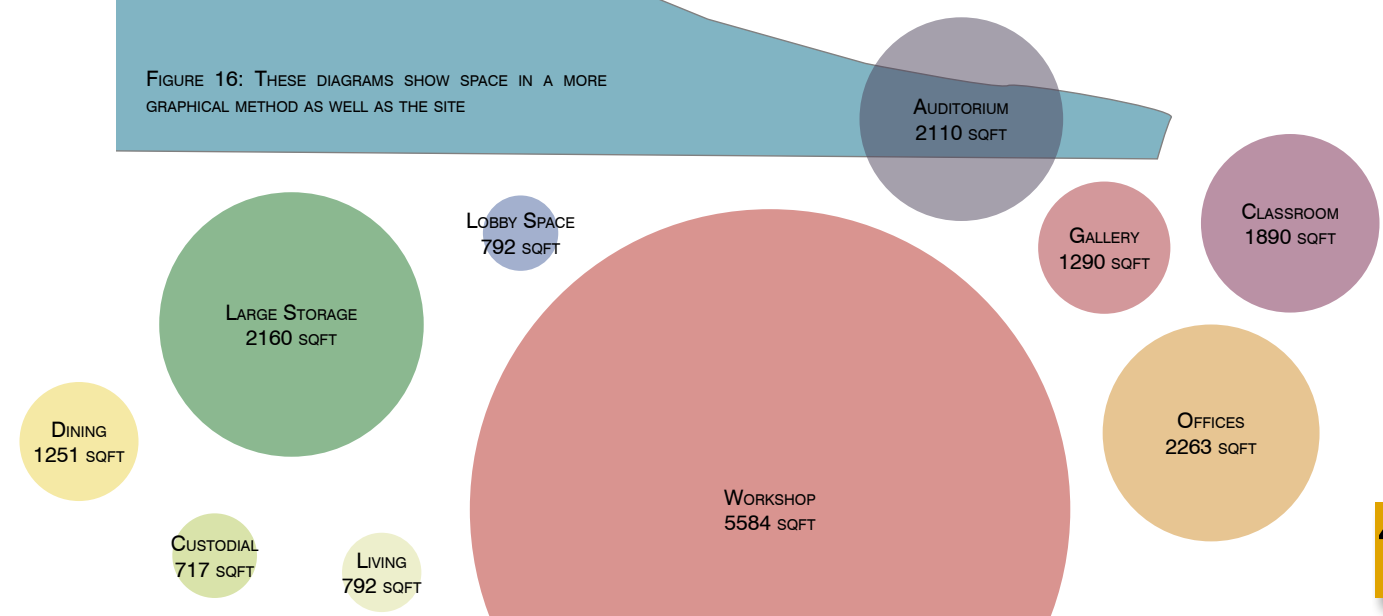


FIGURE 16: THESE DIAGRAMS SHOW SPACE IN A MORE GRAPHICAL METHOD AS WELL AS THE SITE



FUNCTION

The function and purpose of this structure is to serve as a learning grounds to help equip people of the community to become self-empowered individuals. To not rely on foreign assistance and governance to solve the problems in their community. The community center would not only be built by the people, but for the people. Education is poor in Belize and although well intentioned groups come to help build. If not done with cultural intelligence, it will not only take jobs away from citizens who desperately need it. But also disarm their ability to take matters into their own hands. This disempowers the people to take hold of a grassroots movement to create a more robust Belize.

FORM

The form and materiality of this building will be based on local techniques/resources. By building up on already practiced methods to enhance the built environment the project can built up individuals to obtain valuable skills that assist them in getting a job or having another asset to their repertoire. The building looks to acknowledge and honor the currents culture and intent of buildings while pushing the design to regions not yet achieved by traditional building methods and design strategies.



FIGURE 16

ECONOMY

Belize gets much of its income from exports and tourism. Its sandy beaches of the islands and inland tropical forests and Mayan Ruins are a destination for travelers. In Belize City and much of the rest of regions have very poor building maintenance and many buildings need attentive maintenance. Some are far beyond repair and need to be torn down.

TIME

Because of the scope of this building as well as the members in which will construct this. The time-line is not quite as important. This is an grounds for education and facilitation of healthy social, cultural & skills building/acquisition. A common practice in Belize is to actually not finish the building completely or to slow the process immensely. The reason for it, right or wrong, is that the owner doesn't have to pay specific taxes on the building until its completion. So they simply don't complete it.



FIGURE 18



Figure 17

SITE ANALYSIS

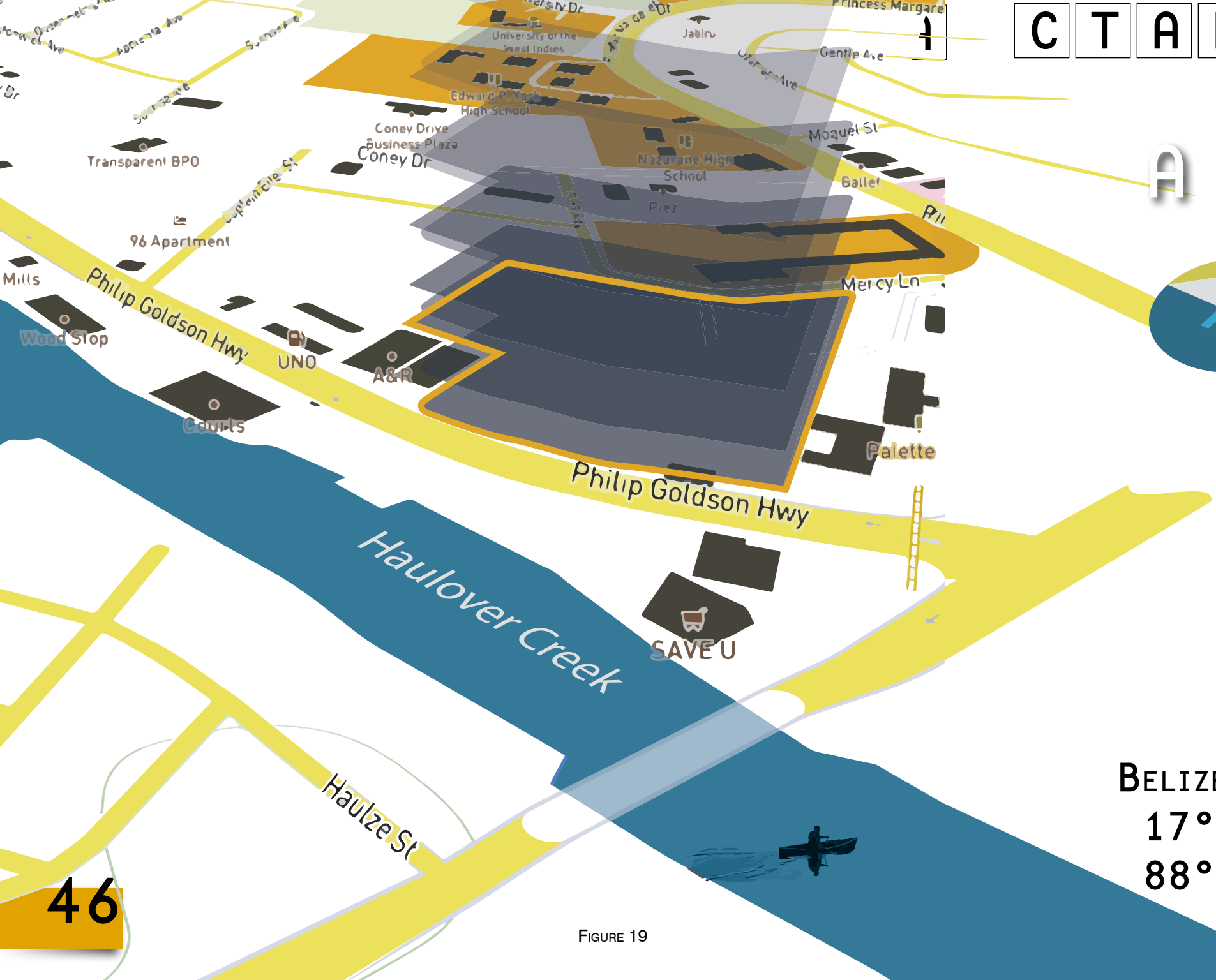
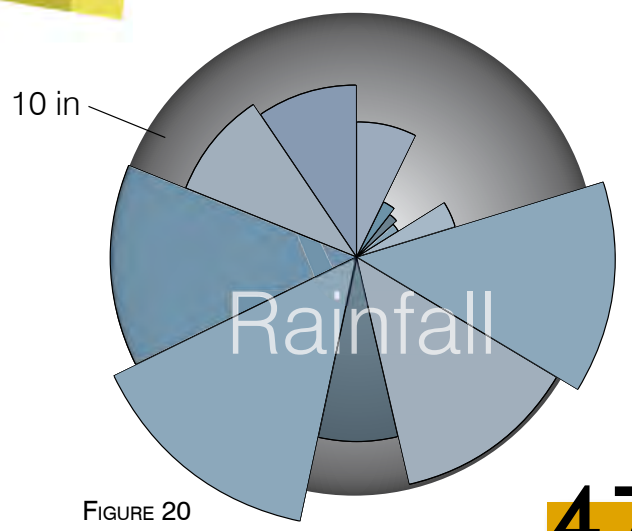
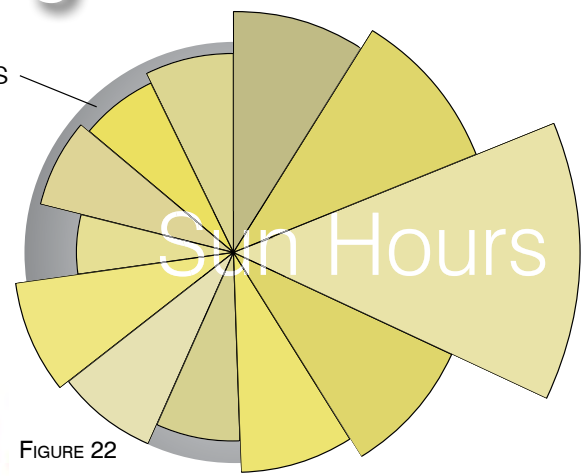
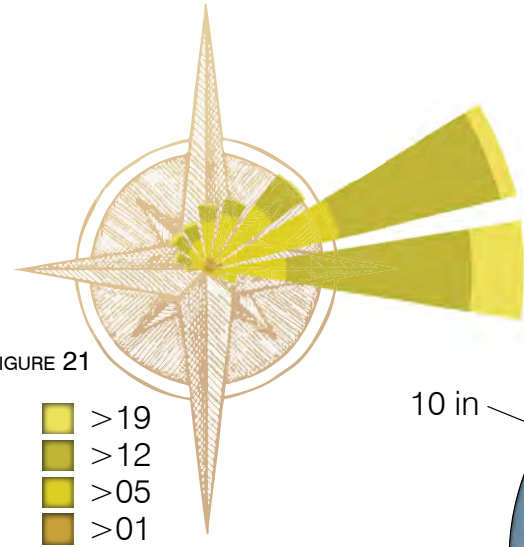


FIGURE 19



BELIZE CITY, BELIZE
 17°30'16.08"N
 88°11'44.50"W

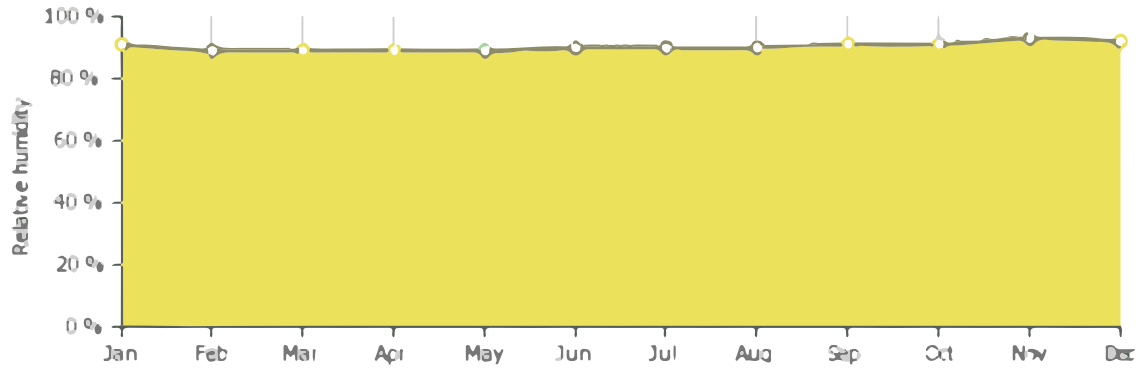


FIGURE 23

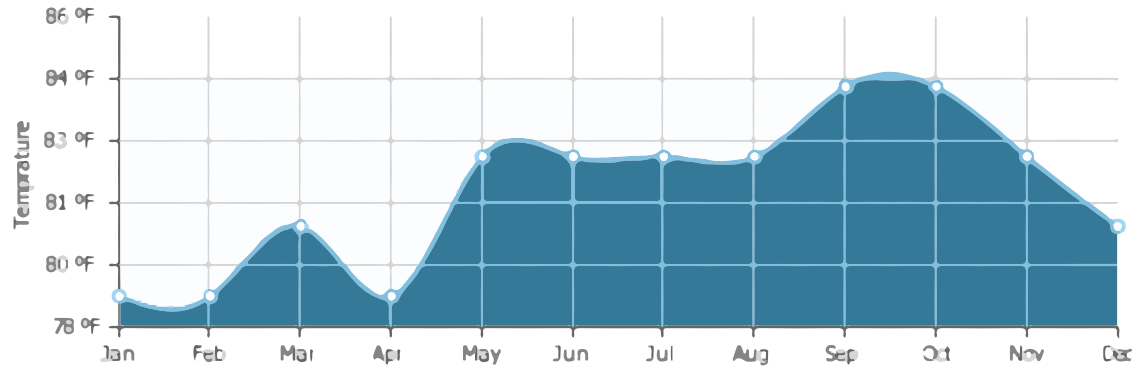


FIGURE 24

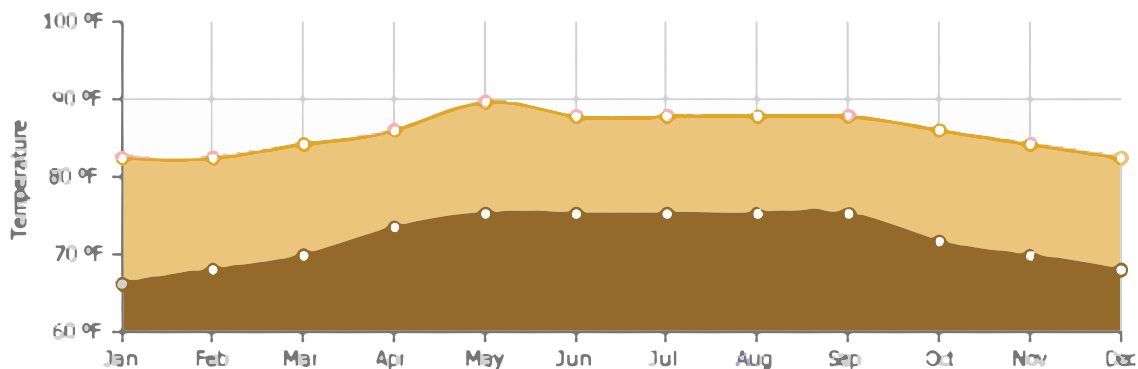


FIGURE 25

ALFISOLS
 The low lying coast adopt a very saline soil because of the close proximity to salt water. Red Clay like soil.

"There is almost no commercial value from an agriculture point of view[.]"
 -Belize Ag Report

10 ft



FIGURE 27

ELEVATION

There is little to no elevation change. Although this map indicated a steeper incline. The increments are 6". Hurricanes are prevalent in the area and it isn't uncommon for this area to be very flood prone. That along with poor soil bolsters a necessity for piles or other more rigorous types of foundations/footing

CODE ANALYSIS

Education

FIGURE 31

E
TYPE 1B

Assembly

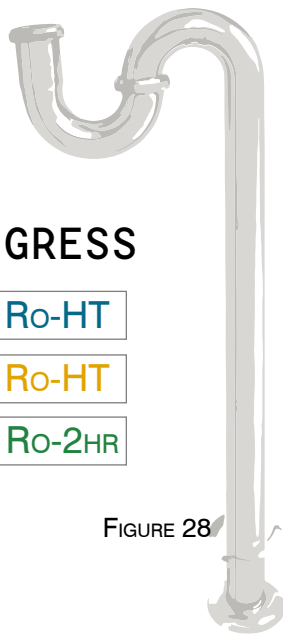
FIGURE 33

A2
TYPE IV

Storage

FIGURE 34

S1
TYPE 1B



MEANS OF EGRESS

EXT-2HR | FL-HT | RO-HT

EXT-2HR | FL-HT | RO-HT

STR-2HR | FL-2HR | RO-2HR

OCCUPANT

20-40 NET/SQFT

7-15 NET/SQFT

300 NET/SQFT

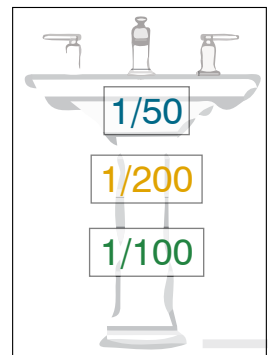


FIGURE 29

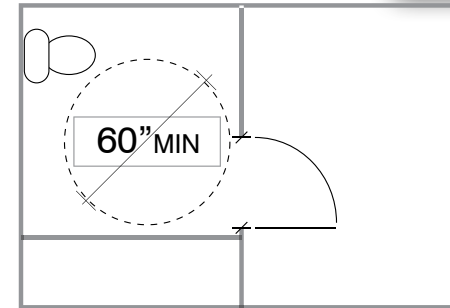


FIGURE 32

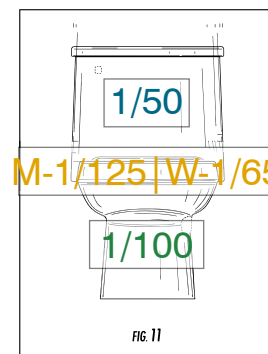
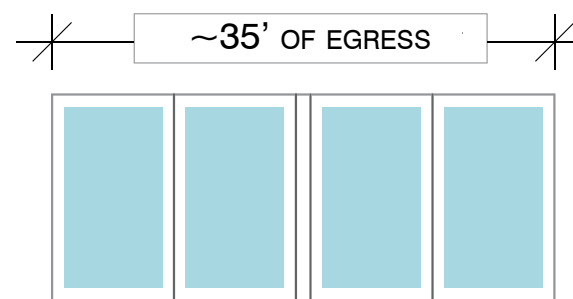


FIGURE 30



~35' OF EGRESS

3'- 2 STAIRS

SQUARE FOOT

NS - UNLIMITED

S1 - 60,000

NS - 79,000

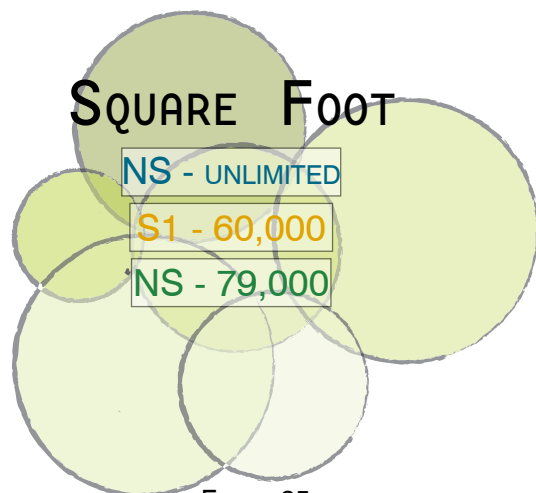


FIGURE 35

MAX HEIGHT

160'- 5 LEVELS

85'- 3 LEVELS

160' - 12 LE.

FIGURE 36

FIRE RATING

STR-2HR | FL-2HR | RO-2HR



C T A N D R P P S C | | D S A

DEFINITIONS OF RESEARCH DIRECTION

THE FOLLOWING METHODS WILL BE IMPLEMENTED AT DIFFERENT PARTS OF THIS THESIS PROJECT. THE SUCCESS & SYNTHESIS OF THIS PROJECT WILL LARGELY BE DETERMINED BY THE SUCCESS OF WHICH THESE (3) DIFFERENT METHODOLOGIES ARE IMPLEMENTED. THIS PAGE SHOWS WHEN IT WILL BE IMPLEMENTED.

(REFER TO DESIGN METHODOLOGY FOR MORE IN DEPTH WRITTEN DESCRIPTIONS)

CORRELATIONAL:
This study will be able to be done throughout the entirety of the research process as the information can likely be retrieved from online sources or easily accessible print sources.

C T A N D R P P S C | | D S A

QUALITATIVE:
I will using this technique throughout primarily from mid-semester through the end. Much of that data/information I will have in this section will be from after the trip to Belize happening mid-February.

HOLISTIC CASE STUDIES:
This approach will be utilized early on; however, will likely extend into the design portion of this analysis resulting in the synthesis of this Thesis.

DESIGN METHODOLOGY SCHEDULE

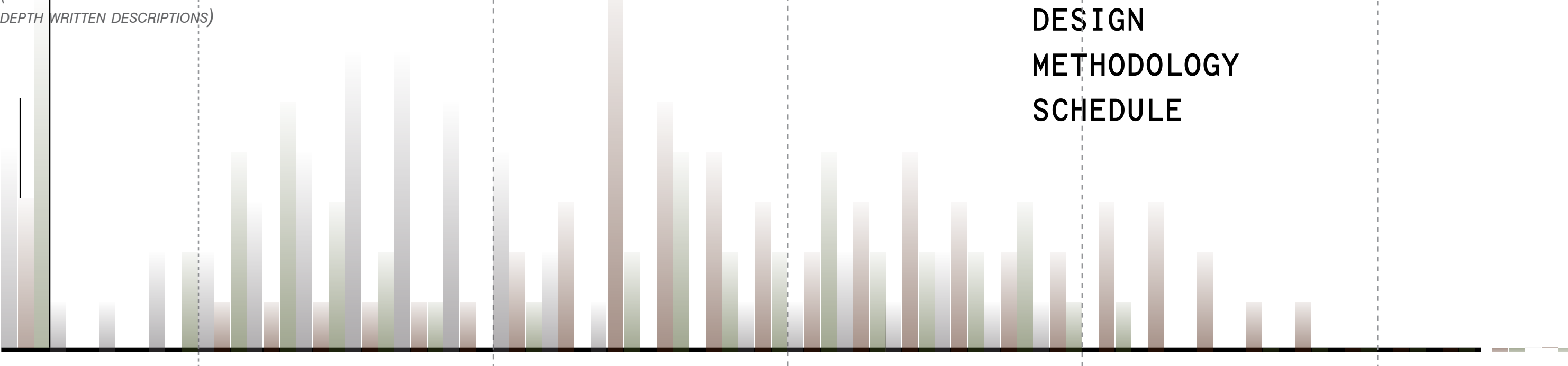


FIGURE 37: THIS GRAPH ILLUSTRATES THE PEAKS AND VALLEYS OF THE VARIOUS METHODOLOGY USAGE THROUGHOUT THE SEMESTER

16 18 20 22 24 26 28 30 31 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 31 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 31 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 31 2 4 6 8 10 12

DECEMBER JANUARY FEBRUARY MARCH APRIL MAY

DOCUMENTING THE DESIGN PROCESS

THIS AREA DESCRIBES THE WAY IN WHICH THE THREE METHODS OF DOCUMENTATION WILL BE IMPLEMENTED.

WHILE NOT IN BELIZE

GENERAL IMAGE DOCUMENTATION:

Documentation of physically made materials will be key for understanding and later representing the work I did. Keeping all this will be important and require a well regimented filing system. *example: pictures>2017.01.25_weekly-documentation>DSC00803*

GENERAL FILE DOCUMENTATION:

Files will also need to be kept neat and tidy. Keeping standardized filing systems will make referencing and file sorting manageable. *Example: documents>thesis>wk06>2017.01.25_neururer_wk06_shape-iteration_04*

SKETCHING:

Most of the sketching will be done digitally on a touch-enabled laptop with a digitizer in the screen to allow for pressure sensitivity. *Example: documents>thesis>wk06>2017.01.25_neururer_wk06_form-sketch_06*

WHILE IN BELIZE

TRIP TO BELIZE:

Even more important than the typical documentation throughout the semester will be well documenting my travel to Belize mid-semester. This will be done in a very strict way. The following illustrates what I hope to capture,

Interviews (videography):

Day 1: Ryan Moore - Builders International Director (Springfield, MO)

Day 2: Liz Ramos - Latin America Child Care, Belize

Day 3: Marvin Soso - X-gang Member ; George Lamb - Business man

Day 4: Abel Raymundo - Assemblies of God General Superintendent

Day 5: Day of exploration, rest and preparation

Day 6: Travel to Belmopan: Javier Romero - Statistical institute of Belize ; Hector Mai - Forestry Department

Day 7: Explore Belize city with Marvin; Emelio Rodriguez - Draftsman

Day 8: Denise Lamb - Assemblies of God Education Superintendent ; Lewis Moses - Electrician & X-addict ; Derrick Pitts - Evangelist & X-gang member ; Tom Moore - 14 year Missionary of Belize (host)

Day 9: Kathi Moore - 14 year Missionary of Belize (host)

Building, experience, interviews

*Daily documentation of notable experience of the day, any other notable happening, observation or experience to write about

*Equipment: Sony a6300, 60mm Sigma lens, 30mm Sigma lens, Lavalier Mic., tripod, headphones, Handy Recorder, GoPro Hero 4 Silver, SD card (x1), battery (x3)



FIGURE 38



FIGURE 39



FIGURE 40



FIGURE 40

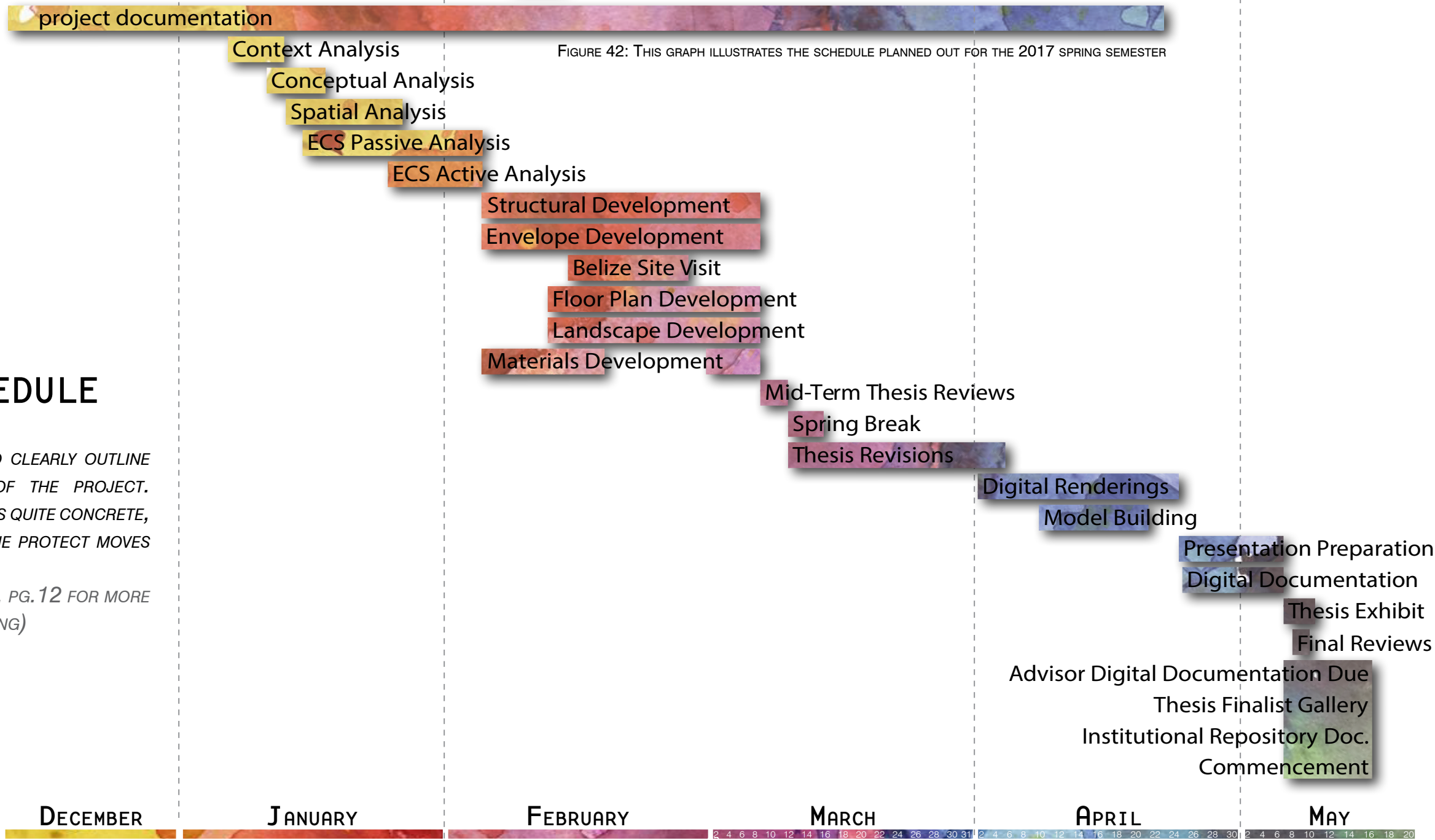


FIGURE 42: THIS GRAPH ILLUSTRATES THE SCHEDULE PLANNED OUT FOR THE 2017 SPRING SEMESTER

PROJECT SCHEDULE

THIS SCHEDULE IS INTENDED TO CLEARLY OUTLINE THE DIFFERENT COMPONENT OF THE PROJECT. ALTHOUGH THIS SCHEDULE LOOKS QUITE CONCRETE, IT IS SUBJECT TO CHANGE AS THE PROJECT MOVES FROM FOCUS TO FOCUS. (REFER TO PROJECT SCHEDULE, PG. 12 FOR MORE IN A MORE BROAD UNDERSTANDING)

T I Q R I L C P S L C F A P A

T I Q R I L C P S L C F A P A

P A R T

2

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T I Q R I L C P S L C F A P A

TABLE/FIGURES-----62

INSPIRATION-----66

Gives merit to the reasoning behind the method and purist to form and attempt of answer the thesis question

QUESTION, THESIS-----68

How can the process of building empower repressed young adults in Belize through missions?

RESEARCH-----70

i. Strategies: Holistic Case Study, Quantitative, Qualitative
ii. Tactics: Literature, Interviews, Logical Iteration

INETERVIEW-----72

While in and out of Belize I conducted a total of 20 interviews from various trades, professions and walks of life in order to better understand things beyond my knowledge at the time.

LITERATURE-----96

I used various sources in order to better prove my argument including film and books.

R

&

D

CONTEXTUALIZE-----109

So how did this research base then start to create answers to the original thesis question?

PROCESS DOCUMENTATION-----110

Shows the means in which I went about the design work of the project through things like sketching.

SYNTHESIS-----112

This is where the cumulative efforts come together to create the final design decisions.

LOCATION-----136

More in depth analysis of the site and it's context

FINAL FLOOR PLANS-----138

These plans are broken up into the various levels off the ground to prevent flooding

APPENDIX-----152

Lists any resources used outside of those already mentioned.

PREVIOUS STUDIOS-----156

The previous studios and projects associated with them.

ABOUT ME-----172

This has a brief bit about me as well as my contact info.

T
A
B
L
E
O
F
C
O
N
T
E
N
T
S

TABLES /
FIGURES

FIGURES

- Figure 43: Collage of people that I had interviewed
- Figure 44: Derrick Pitts, evangelist for the Assemblies of God in Belize. Photo taken during interview.
- Figure 45: Marvin Soso, x-gang member and gatekeeper at Bible Institute. Photo taken during interview.
- Figure 46: Elizibeth Ramos. Teacher at Assemblies of God Bible Institute. Photo taken during interview.
- Figure 47: George Lamb, Business man & pastor. Photo taken during interview.
- Figure 48: Kathi Morre, 14 year missionary of Belize. Photo taken during interview.
- Figure 49: Thomas Morre, 14 year missionary of Belize. Photo taken during interview.
- Figure 50: Emelio Rodriguez, Draftsman for M&M Engineers. Photo taken during interview.
- Figure 51: Abel Raymundo, General Superintendent of Assemblies of God Church, Belize. Photo taken during interview.
- Figure 52: Ryan Moore, Director of Builders International Maps Construction. Photo taken during interview.
- Figure 53: Denise Lamb, Education Superintendent for Assemblies of God. Photo taken during interview.
- Figure 54: Lewis Moses, electrician. Photo taken during interview.
- Figure 55: The Architecture of Empowerment, Book Cover
- Figure 56: Design Like You Give a Damn, Book Cover
- Figure 57: When Helping Hurts, Book Cover
- Figure 58: Serving with Eyes Wide Open, Book Cover
- Figure 59: Poverty Inc., Film Cover
- Figure 60: Exploration of new space filler for 2016 Fall semester
- Figure 61: Process sketch
- Figure 62: Notes from various sources being applied in sketch form
- Figure 63: Exploration of pavement

- Figure 64: Sketching details of materiality and arrangements
- Figure 65: Partial view of the final “money shot” looking from the south
- Figure 66: Ground Level Floor Plan
- Figure 67: Interior Lobby Rendering
- Figure 68: Image of model made to explore & explain the phases
- Figure 69: Render looking west showing the method of construction to create the 3rd floor
- Figure 70: Barefoot College, Design Like You Give a Damn, Image from book
- Figure 71: Rendering from the top of the classrooms looking west to students working on the next floor of classrooms
- Figure 72: Lower First Floor showcasing the view that the rendering is facing looking into the living & office space
- Figure 73: Rendering is facing looking into the living & office space
- Figure 74: Map showing all of the country of Belize broken up into districts.
- Figure 75: Image taken while in Belize showing apartment housing
- Figure 76: Areal map of site and general context surround
- Figure 77: Map showing Belize City area
- Figure 78: This image shows some of the doors that allow for ventilation while still being able to keep a secure building
- Figure 79: Isovist Study of site
- Figure 80: Group of Rural Studio students after completing one of the projects.
- Figure 81: Rendering of shop & tool rental along the north end of the site looking SE.
- Figure 82: Various classroom layouts
- Figure 83: Rendering along classrooms looking north
- Figure 84: Graphic showing some of the various materials used in the project
- Figure 85: Image from wood pile illegally harvested and being stored at the Forestry Department of Belize
- Figure 86: Chair representing all of the interviews I completed. Was taken while trying to set up shots for recording
- Figure 87-93: Map of Belize seen from various distance away from the site
- Figure 94: Image on the Bible Institute where many of the interviews were conducted
- Figure 95: Cost along the North East edge of Belize City
- Figure 96-98: Images from the site
- Figure 99: Sea wall along the road holding back soil from eroding along the rivers edge.

Figure 102-108: Floor plans of the final design on the site

Figure 109: Final render with text overlay defining location of the different areas of the campus

Figure 110: Image from Fall of 2013 studio, Terrature, made form various organic material found on site composed into the form seen in the image.

Figure 111: Joan Vorderbruggen - Fall 2013 studio professor

Figure 112: Part of the final rendering for the tea house project

Figure 113: Sketch of section of Kenzo Tanges, St. Mary's Cathedral

Figure 114: Retrieved from: <https://medium.com/@angvalenz/una-caja-de-tabaco-19a7f67c8ce4>

Figure 115: Darrel Booker - Spring 2014 studio professor

Figure 116: Model of Dance studio from Spring 2014 semester

Figure 117: Image of me carving the birdhouse from the colored plaster

Figure 118: Partial image of final board for the dwelling project from Spring 2014 semester

Figure 119: Rendering from Fall 2014 Agincourt project

Figure 120: Ronald Ramsay - Fall 2014 studio professor

Figure 121: Cat Mausoleum from Fall 2014 semester

Figure 122: Exterior render of Shaker Barn adaptive reuse project for the local school district from Fall 2014 Semester

Figure 123: Interior render of Agincourt project in Fall 2014 Semester

Figure 124: Elevations of concrete project in Spring of 2015

Figure 125: Mark Barnhouse - Spring 2015 studio professor

Figure 126: Site plan of concrete project for Spring 2015 semester

Figure 127: Interior render of steel NDSU library for Spring 2015 semester

Figure 128: Exterior compilation of structure and sheathing/glazing for Spring 2015 semester

Figure 129: Exterior night render of Highrise project for Fall 2015

Figure 130: David Cruthfield - Fall 2015 studio professor

Figure 131: Interior render of upper lofts of residential area of building for highrise project in Fall of 2015

Figure 132: Interior render of sky lounge for highrise project in Fall of 2015

Figure 133: Grasshopper model showing the complexity of developing the final shape and structure or highrise project in Fall of 2015

Figure 134: Exterior rendering of Design + Build project for the Spring of 2016, render credit - Nicholas Brakksma

Figure 135: Malini Srivastava - Spring 2016 studio professor

Figure 136: Interior rendering of one of the passive houses for the Spring of 2016, render credit - Gretta Barends

Figure 137: Interior rendering of one looking out to 13th Ave. S, Fargo render credit - Gretta Barends

Figure 138: Exterior perspective of the site along 13th Ave. S, Fargo, render credit - Nicholas Brakksma

Figure 139: Testing structural methods in tension in Fall of 2016.

Figure 140: Woven leather mesh that acts in similar way to Chinese Finger Trap. for Fall 2016

Figure 141: Assembling wall system utilizing capped half lap joints to create a grid for Fall 2016

Figure 142: Scaled model of Solar Decathlon proposal for Fall 2016

Figure 143: Image of me, photo credit: Emma Keniston

TABLES

Table 5: Hfstede's Culturel Dimensions. Retrieved from: <https://eslkevin.wordpress.com/2013/05/16/hofstedes-cultural-dimensions-theory/>

T Q R I L C P S L C F A P A

T Q R I L C P S L C F A P A

INSPIRATION

MISSIONS

PEOPLE

DESIGN + BUILD

MISSIONS

After a handful of missions trips, the most recent being a 3 week endeavor in Belize, I've found more and more of a heart to serve the nations.

missions // people // design + build

PEOPLE

Through literature and personal experience I've discovered some very powerful way to serve people.

DESIGN + BUILD

From the Spring of 2016 studio I developed a passion for the engagement of hands-on learning through building full scale mock ups of the various building components

THESIS QUESTION

How can the process of Building empower repressed young adults in Belize through missions?

engagement // education // ownership

*ENGAGEMENT
EDUCATION
OWNERSHIP*

ENGAGEMENT
*South side of Belize
Location of Project
People that it's engaging
Built Incrementally
Hurricane/disaster relief*

EDUCATION
*Learning by doing
Spatial needs - open
Cooling demand - passive
Building techniques
Volunteer professors*

OWNERSHIP
*Built by the students
After it's built usage
Affordable tool rental
Security
On campus gate keeper*

T I Q I L C P S L C F A P A

T I Q I L C P S L C F A P A

RESEARCH

METHODS

The ways in which the argument is made valid.

STRATEGIES

The methods in which an argument is formed supported by tactics

TACTICS

The medium in which the research is supported, researched and analyzed

Holistic Case Study: using previous works to understand current application.

Qualitative: unmeasurable characteristics of a place, in this case, culture.

Correlational: understanding how seemingly unrelated elements influence each other

Literature: books, journals, other sources

Personal interviews: In person meetings, most recorded

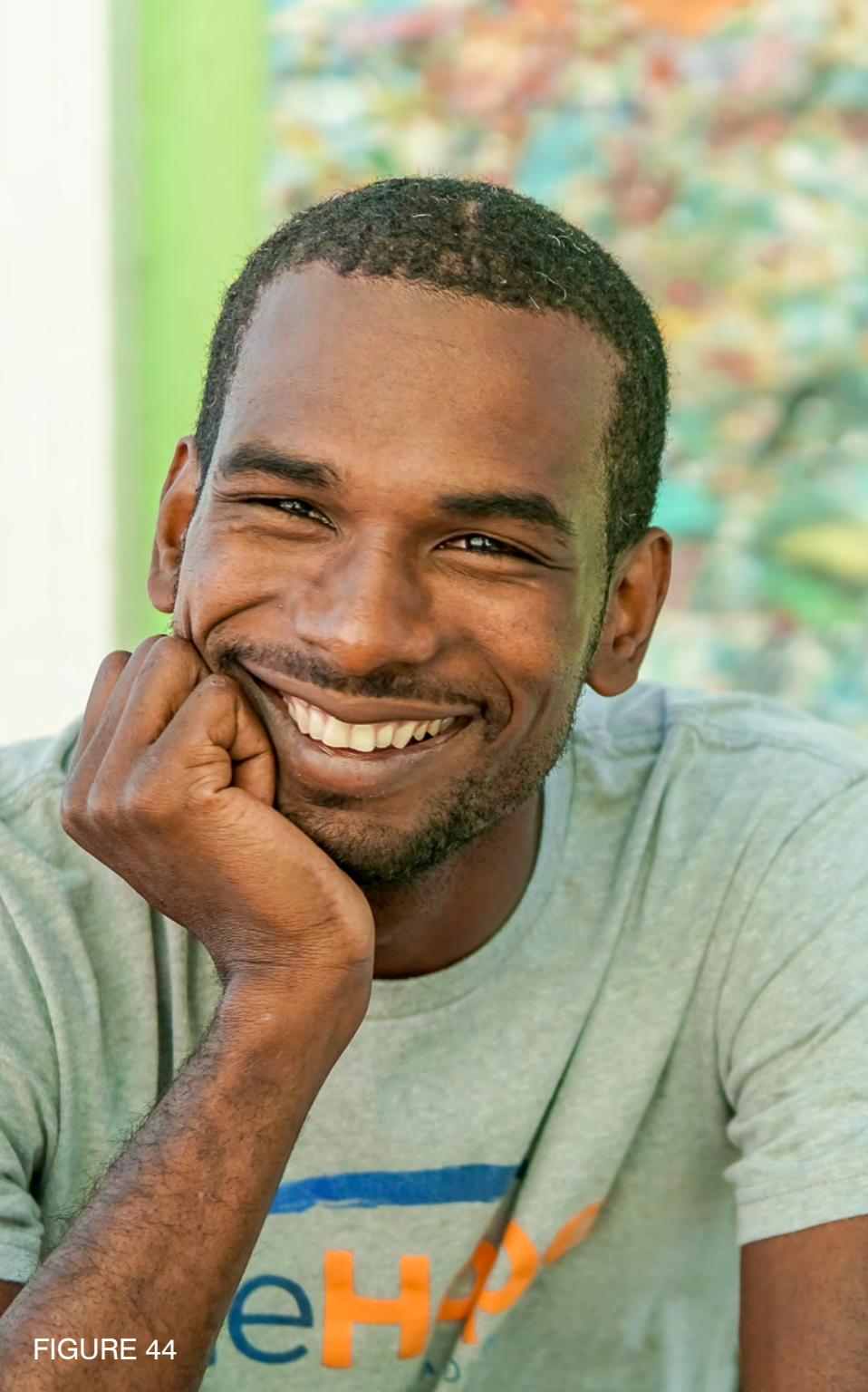
Logical Iteration: Multiple attempts toward the best answer

T I Q R I L C P S L C F A P A



T I Q R L C P S L C F A P A

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Derrick Pitts

Position

Evangelist for Assemblies
of God Church

Expertise

Culture of Belize

Notes

Grew up on the south side of Belize City. Started selling drugs when he was 13, was given a gun at age 14 to make it. Turned his life around upon coming to know Jesus. Now is the lead evangelist for the Assemblies of God Church in Belize

T I Q R L C P S L C F A P A

What holds people back from succeeding in Belize?

“A lot of these guys have the basic knowledge of what they are doing..., but they don’t have the tools. So many of the time they will get a job and most of their money will go into the equipment to get that job done.”

“You can give a person a fish, he will be dependent on you. If you teach a person to fish, that person will bring you back a fish.”

“Empowering the local people in order to take on a task [...] will one, probably uplift them. Not only that, but uplift their families, uplift their communities and as a whole it will empower the nation ”

What would the significance of involving the local population in a project such as this?



Marvin Soso

Position

Student & grounds keeper
at Assemblies of God

Expertise

Culture of Belize

Notes

Comes from a Latino background and has lived in Belize his entire life. Was involved in a gang for quite some time. Street smart and lots of bilingual, bi-cultural understanding of Belize

T I Q R L C P S L C F A P A

Where are the highest crime rates in Belzie?

South side of Belize City. That's where the most Gangs are.

"When I took the course [trade school] that I studied I remember there were 18 of us. . From all of us, it was just 2 of us that got qualified. If you aren't paying for the stuff, you don't cherish it. You aren't going through the work, you're not sweating for it."

"They offer [different trades], they call it building maintenance... engineer, AC & electrical, AC & refrigeration... cosmetology, food prep..."

Do you know if they offer any certification related to building or construction?



Elizibeth Ramos

Position

Latin America Caribbean
Assemblies of God World
Missions

Expertise

Education in Belize

Notes

From the United States
and grew up in New York.
Spent time in Guatemala
and now in Belize. Teaches
at the local bible school
and manages parts of
the Child Care program in
Belize.

T I Q R L C P S L C F A P A

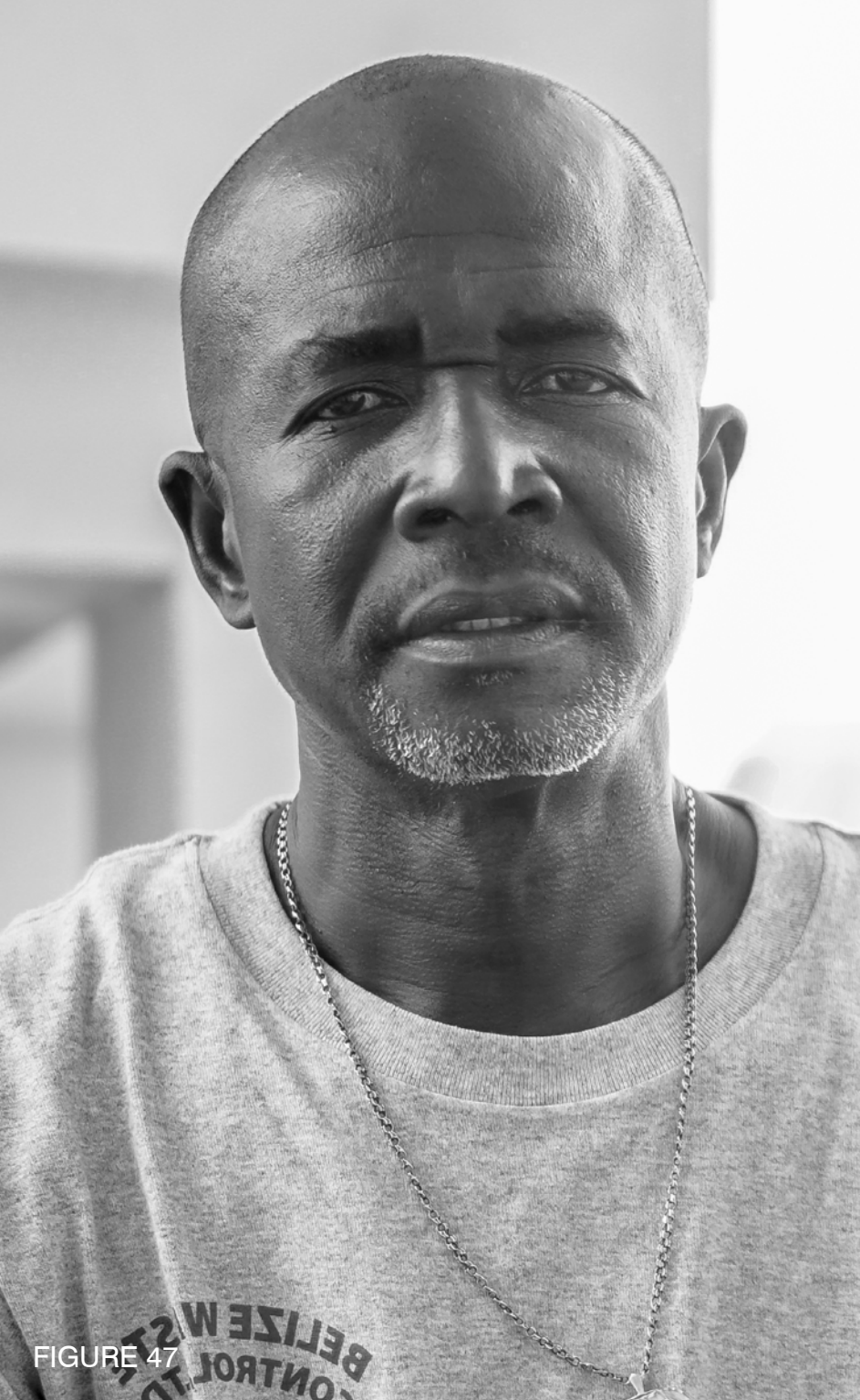
Do students
prefer vocational
opportunities
over lecture/test
based education?

*They don't prefer lecture. They prefer inter-
active, learning from each other; however,
they look up to the teacher for the final say."*

*Larger, column free space that people can
gather around circle is preferable teaching
space. That along with having Air conditioning.*

*"Tend to see 20 year olds
going for associates.
The younger typically
have more education."*

How would you
describe the current
state of education
among adults? Age
18+



George Lamb

Position
Belize Waste Control LTD.

Expertise
Business in Belize

Notes
Born and raised in Belize. George pastors part time at a local church and has been involved in business for a time in Belize

T I Q R L C P S L C F A P A

“Families are not strong families. Fathers are not being fathers. No supervision. Income is low and nutrition becomes an issue. Young girls resort to street very early. Kids hang out in gangs. Family values is at an all time low.”

“[Programs are usually] for a short period of time and don’t get people to buy into it. It always seems as though there is an agenda. There are very little local benefits. There should be a transferal of control to local.”

“People struggling in the city is because there is not opportunity. In general people are hard working people. Being a man is to take care of your family. This is the breakdown that his happening.”

What are your observations about the current condition of people within the city



FIGURE 48

Kathi Moore

Position
Assemblies of God
missionary

Expertise
Education in Belize

Notes
From Southern United States, married to Tom Moore. They have now been Missionaries in Belize since 2003. Besides construction projects, Kathi has been involved with Assembly of God's Children ministry in Belize to get children educated.

T I Q R L C P S L C F A P A

What are the most valuable assets on the south side of Belize City?

“They care about being involved with something. They just want to be included and loved.”

Classrooms are built almost all alike. They need to take more into account with natural ventilation. Making sure that classrooms are accessible. Concrete is great. No more wooden schools. ”

“There are no custodians. No maintenance employee. Just not enough resources/finances.”

Do you feel like the general population maintain their buildings well?



Thomas Moore

Position
Assemblies of God
Missionary

Expertise
Construction in Belize

Notes
From Southern United States, married to Kathi Moore. They have now been Missionaries in Belize since 2003. They lead building projects, the most recent being a camp located ~25 miles out of Belize City.

T I Q R L C P S L C F A P A

What holds people back from succeeding in Belize?

“A lot of these guys have the basic knowledge of what they are doing..., but they don’t have the tools. So many of the time they will get a job and most of their money will go into the equipment to get that job done.”

“It’s not about just teaching new building techniques, it will be implementing those techniques when you’re not there.”

“Empowering the local people in order to take on a task [...] will one, probably uplift them. Not only that, but uplift their families, uplift their communities and as a whole it will empower the nation ”

What would the significance of involving the local population in a project such as this?



Emelio Rodriguez

Position

Drafter at M&M Engineers

Expertise

Construction in Belize

Notes

Born and raised in Belize. Emelio has been with M&M engineering since ~2005. M&M does larger projects in Belize such as the redesign of the Bridge coming from Ladyville to Belize City. Precast concrete plant in Ladyville.

T I Q R L C P S L C F A P A

What is the most common type of construction methods in Belize?

“Concrete, timber is slowly losing its popularity”

“Soil conditions are very poor in Belize. There needs to be some kind of foundation or else the buildings will sink”

“Concrete blocks & timber”

Are there any traditional Belize construction techniques used in construction?



Abel Raymundo

Position

General Superintendent of the Assemblies of God in Belize

Expertise

Construction in Belize

Notes

Born and raised in Belize. Has done many construction projects in Belize and has a good understanding of business as well as foreign aid.

T I Q R L C P S L C F A P A

What is the most common type of construction methods in Belize?

“People are moving more towards cements. Wood is easy to catch fire & termite issues.”

“There is a great need [for security] in Belize. We don’t have good security for buildings. Only big companies have a secure business.”

“Plumbing, Electrical is desperately needed, more advanced block laying techniques (Bond beam).”

How would you rate the skill level of incoming workers?



Ryan Moore

Position

Director of Builders
International

Expertise

Culture and Business

Notes

Son of Tom and Kathi,
Ryan has diverse
experience in foreign
missions and international
building projects.

T I Q R L C P S L C F A P A

What makes international projects successful when coming from outside organizations

“Don’t try & make it happen, project come to life when already started [in that area].”

“Culture is how you reason problems”

*Best results are from the roots up. (*grassroots)*

“Charities can be toxic to the area depending on mission.”

“We are not the hero.”



Denise Lamb

Position

Educational Superintendent
for the Assemblies of God
in Belize

Expertise

Education in Belize

Notes

A majority of the schools
in Belize are ran by the
church. Denise oversees
much of the upper
management of education
in Belize. Very knowledge-
able on large and micro
scale of education in
Belize.

T I Q R L C P S L C F A P A

How do people become
educated in a trade
typically? *“A lot of the people learned through experience.
Working under someone. Entrepreneurship is important.
For architecture they have to go outside of Belize.”*

*“[It’s] difficult to find qualified
teachers. Many temporary teachers
only have a high school diploma”*

*“When speaking with educated people, it seems
hopeless, but they can make a difference. Un-
educated people feel like an injustice has been
done to them. They don’t see how they can
change anything. 25% has a college degree.”*

Do you think that
individuals believe that
they can create positive
change in Belize



Lewis Moses

Position
Electrician

Expertise
Building in Belize

Notes
His father was a builder. Lewis got into drugs including Marijuana and Crack Cocaine upon moving to New York. During various parts of his life, he would find work illegally hooking up electricity for his friends and other odds and ends. Upon finding Jesus, Lewis got his life turned around and is now a pastor.

T I Q R L C P S L C F A P A

Lewis showed a strong testimony of God's work in his life bringing him out of addiction and a way of life that was destroying him.

T I Q R I █ C P S L C F A P A

T I Q R I █ C P S L C F A P A

LITERATURE

Book, documentaries, journals, articles, etc.

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The Architecture of Empowerment

People, shelter and Livable Cities

Edited by
Ismail Serageldin
Forward by
Muhammad Yunus

Forward by
Muhammad Yunus

Description
The architecture of empowerment is a book that takes an in depth look at how we do architecture specifically in regards to poverty alleviation among developing countries.

pg.7 ¶1

The architecture of empowerment invites them to rethink the premises of the process of design as much as the process of building... The idea of empowerment is one that requires commitment, dedication and mental outlook very different to those of conventional architectural practices."

"The innate genius of the local people must be harnessed and their potential unleashed to bring about lasting, profound and sustainable solutions to the problems of cities in the developing world."

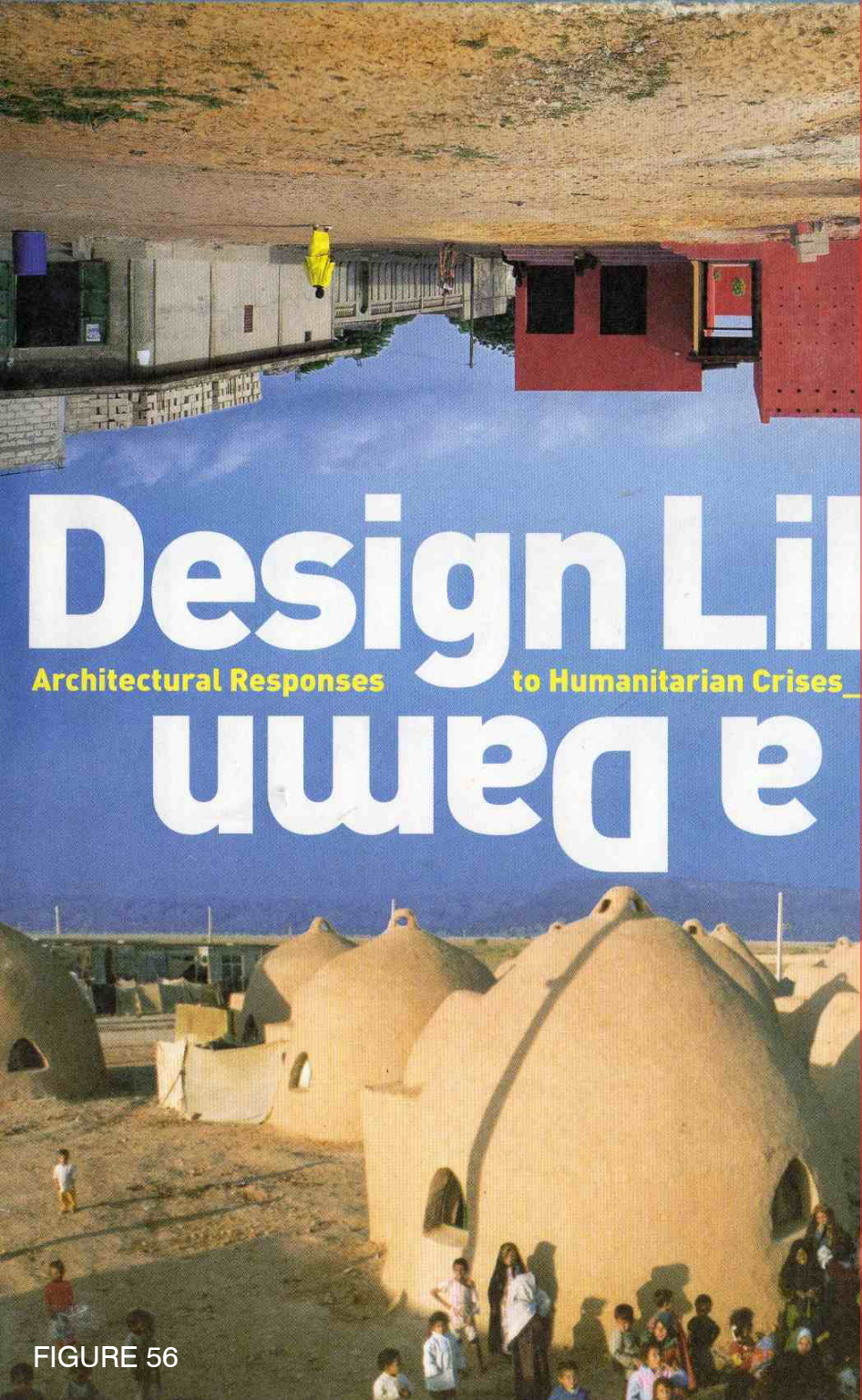
pg.24 ¶6

"...the 'architecture of empowerment'; that is, a built environment which responds to the needs of the poor and destitute, while respecting their humanity and putting them in charge of their own destinies."

pg.8 ¶2



FIGURE 55



Design like you give
a damn

Architectural responses to
humanitarian Crises

Edited by
Architecture for Humanity

Area of Book
Barefoot College
(pgs. 204-207)

Description from publisher
“Architecture for Humanity
has a clear goal: to

pg.204 ¶4

“The project was a joint effort. Everyone who was going to live there was consulted. Everyone’s views had to be respected.” -Jat

“[Barefoot College] was designed and built by the very same rural villagers, many of them semi-literate, that it was intended to train.”

pg.204 ¶2

*Discarded Agricultural implements
are re-purposed to create the struc-
tural members of a geodesic dome”*

pg.206

FIGURE 56

When Helping Hurts
How to Alleviate Poverty
without Hurting the Poor...
and Yourself

Authors
Steve Corbett
Brian Fikkert

Forwards by
John Perkins
David Platt

Description from cover
Unleashing and equipping
people to effectively help the
poor requires repentance
and the realization of our
own brokenness. When
Helping Hurts articulates a
biblically based framework
concerning the root causes
of poverty and its alleviation.

WHEN
HELPING
HURTS
*How to Alleviate Poverty
without Hurting the
and Yourself*

pg.109 | *“... the relief efforts are not prolonged to the point in which they undermine local people’s stewardship of their own live and communities.”*

It would be far better to let a nonemergency need go unmet than to meet that need with outside resources and cripple local initiative in the process.”

pg.121 ¶3

“In addition, legitimate local businesses can be undermined when outsiders bring in such things as free clothes or building supplies , undercutting the price that these local businesses need to survive.”

pg.110 ¶ 2

FIGURE 57

UPDATED EDITION

Serving with Eyes Wide Open

Serving with Eyes Wide Open
Doing short-term missions with cultural intelligence

Authors
David A. Livermore

Description from cover
Short-term mission trips are a great way to impact the kingdom. Yet they can lack effectiveness because of mistakes or naiveté on the part of participants. In this insightful book, David A. Livermore calls us to serve with our eyes open to global and cultural realities so we can become more effective cross-cultural ministers.

DOING SHORT-TERM
WITH CULTURAL INTELLIGENCE

T I Q R I C P S L C F A P A

pg.130

“[L]ess industrialized cultures are far more interested in the priority and obligation of social relationships.”

Hofstede’s Cultural Dimensions

Individualistic / Collectivistic	How personal needs and goals are prioritized vs. the needs and goals of the group/clan/organization.
Masculine / Feminine	Masculine societies have different rules for men and women, less so in feminine cultures.
Uncertainty Avoidance	How comfortable are people with changing the way they work or live (low UA) or prefer the known systems (high UA).
Power Distance	The degree people are comfortable with influencing upwards. Accept of inequality in distribution on power in society.
Time Perspective	Long-term perspective, planning for future, perseverance values vs. short time past and present oriented.
Indulgence / Restraint	Allowing gratification of basic drives related to enjoying life and having fun vs. regulating it through strict social norms.

TABLE 5

similar chart referenced in book

“While things such as food, art, and literature give us visible expression of culture, one of the greatest challenges that comes with understanding culture is that cultural knowledge is largely invisible”

pg.127-8

POVERTY, INC.

Poverty Inc
Film Documentary

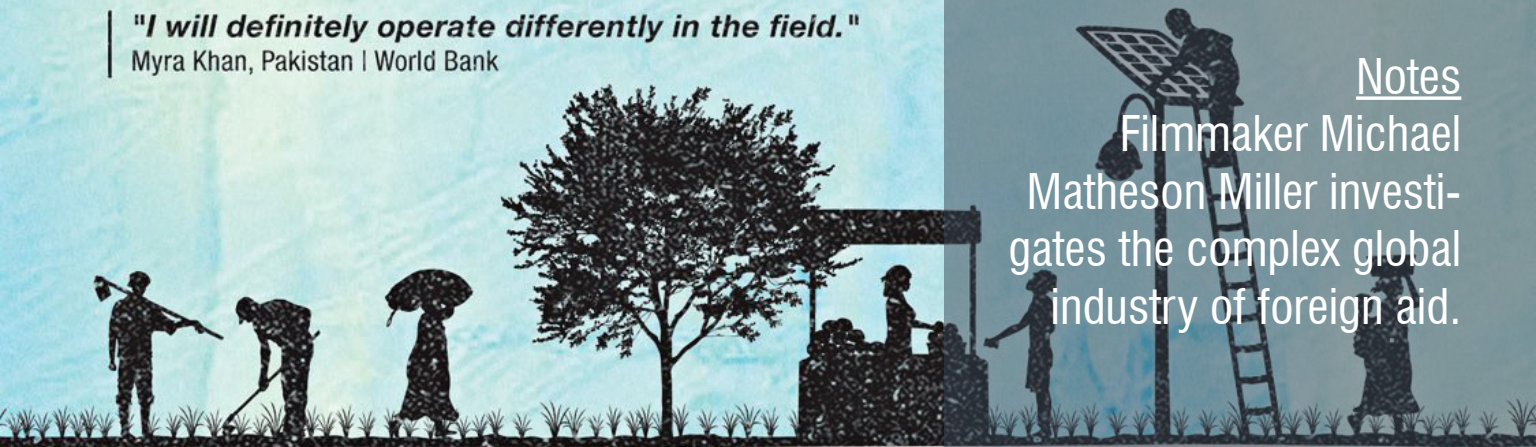


Subtitle
Fighting poverty is big business, but who profits the most?

Notes
Filmmaker Michael Matheson Miller investigates the complex global industry of foreign aid.



"I will definitely operate differently in the field."
Myra Khan, Pakistan | World Bank



FIGHTING POVERTY IS BIG BUSINESS

This documentary looked at a handful of different organizations/groups around the world involved in foreign aid. Both good and bad.

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So how did these interviews & various sources contextualize in the end design?

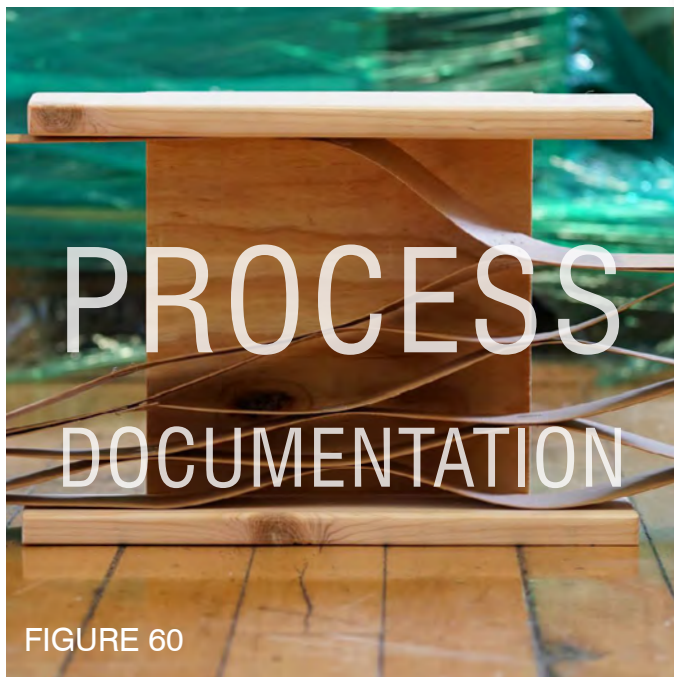


FIGURE 60

The images to the right illustrate taking ideas from interviews, readings, etc. and applying them in floor plan to generally locate positioning of spaces.

SKETCHES

The following sketches from an exhaustive, but give more of an insight into the means in which the ideas, layouts, and concepts contextualized

FIGURE 61



FIGURE 62

In this sketch I began to attempt roof and ground coverings through.

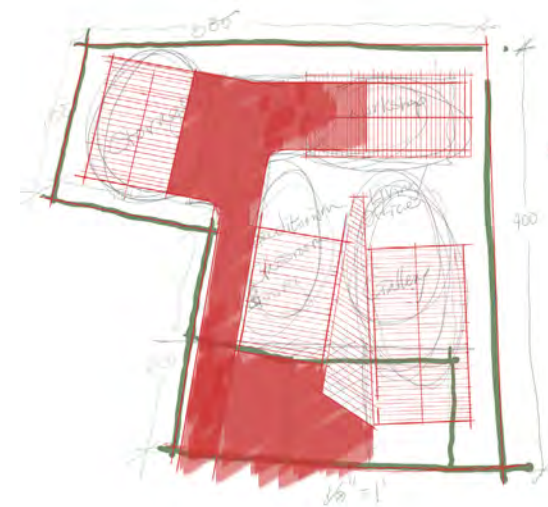


FIGURE 63

In this sketch I began to break down the spaces into things like materiality and how the spaces would begin to lay out more specifically.

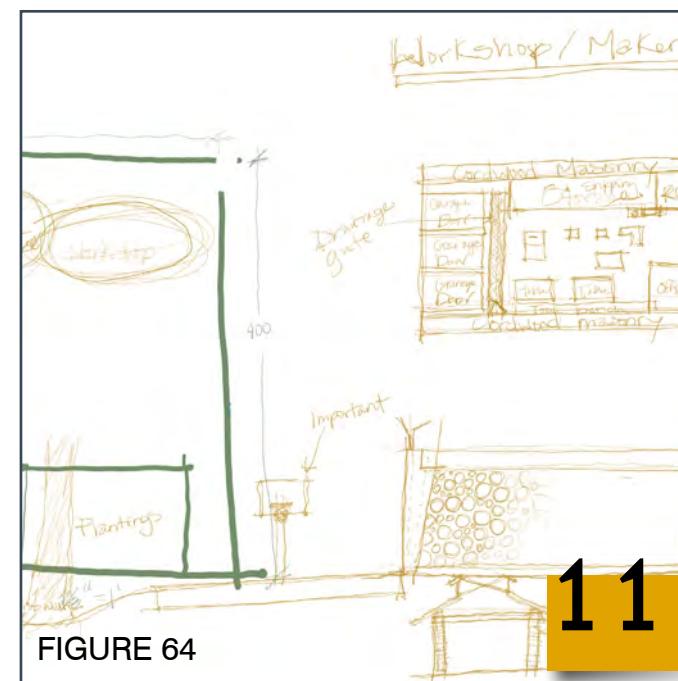


FIGURE 64

T I Q R I L C P L C F A P A

IMAGE OF
QUOTES
SOURCE

“Quotes”

HOW IT APPLIED
IN THE DESIGN

LOCATION OF
RENDER
OR
INSPIRATION



FINAL
RENDERS

FIGURE 65



FIGURE 57

“In addition, legitimate local businesses can be undermined when outsiders bring in such things as free clothes or building supplies, undercutting the price that these local businesses need to survive.”

Once the school is built, it would serve as a place to spur on local business entrepreneurship by providing space, gallery, equipment & education.

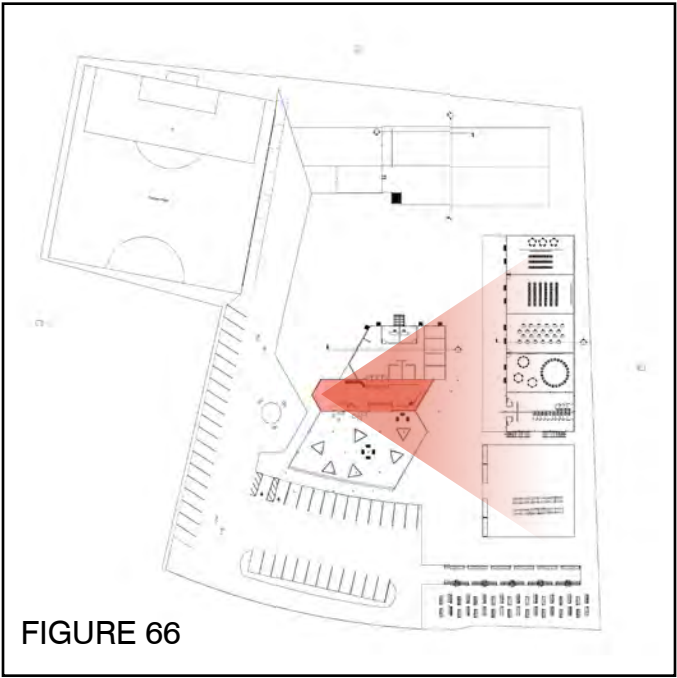
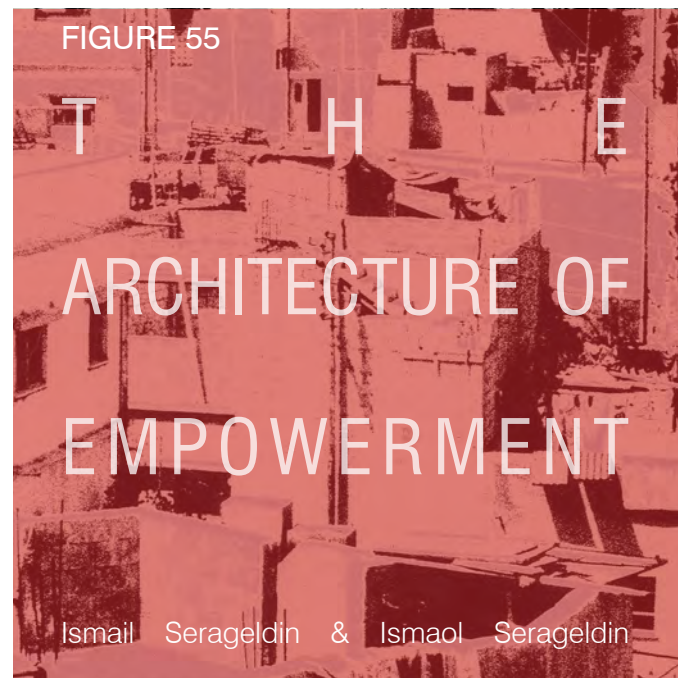


FIGURE 66



FIGURE 67



“Design for the poor must also leave them options for the future. They should be space for expansion; invariably, the poor build incrementally, and it is necessary to allow for the densification.”

BUILT IN PHASES
The nature of developing countries is to build incrementally. Belize is no exception and the response in design is allowing for that to happen on the campus.

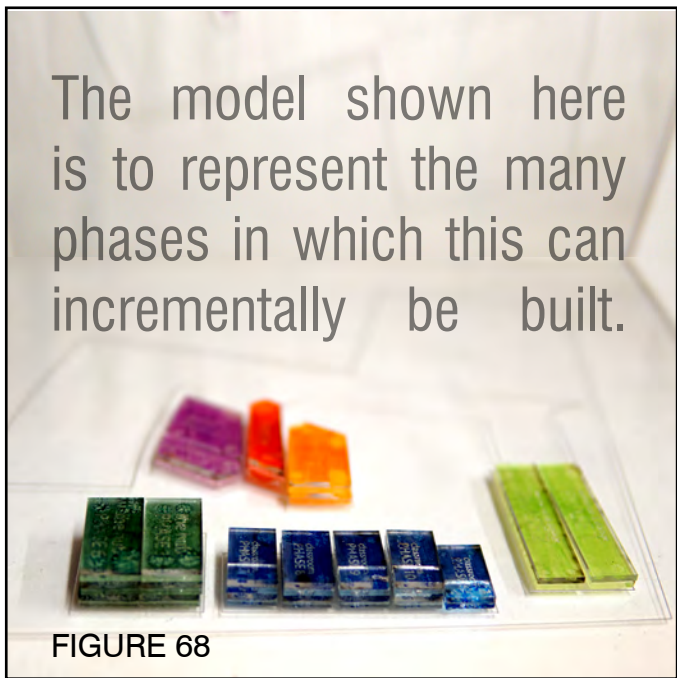


FIGURE 56

DESIGN LIKE
YOU GIVE
A DAMN

Edited by Architecture for Humanity

"[T]he college was designed and built by the very same rural villagers, many of the illiterate, that it was intended to train." -Barefoot College

BUSINESS INCUBATOR

Similar to Barefoot College's approach, this project would engage the locals by creating a pedagogical opportunity through locals building the school itself.

FIGURE 70

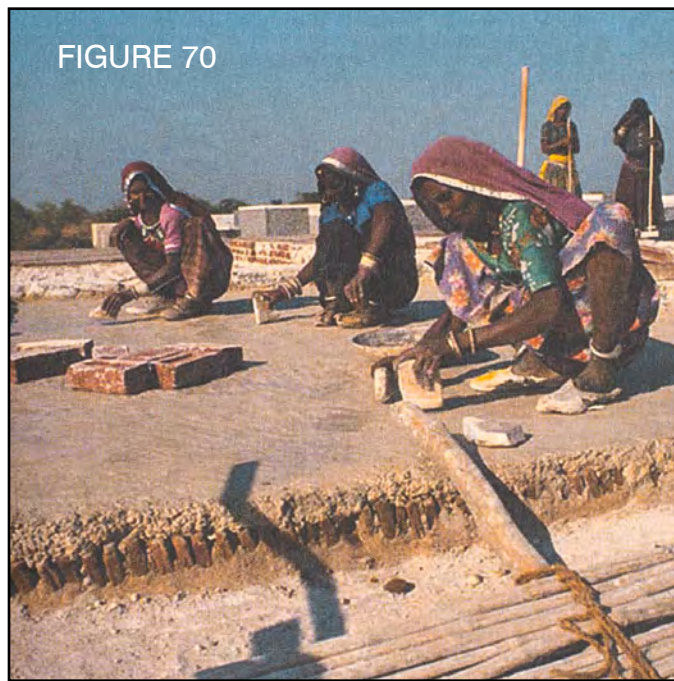


FIGURE 71



FIGURE 53



“[It’s] difficult to find qualified teachers. Many temporary teachers only have a high school diploma”

VOLUNTEER PROFESSORS

Volunteer educators would take time to educate the students. Because of that, housing and offices are provided on site.

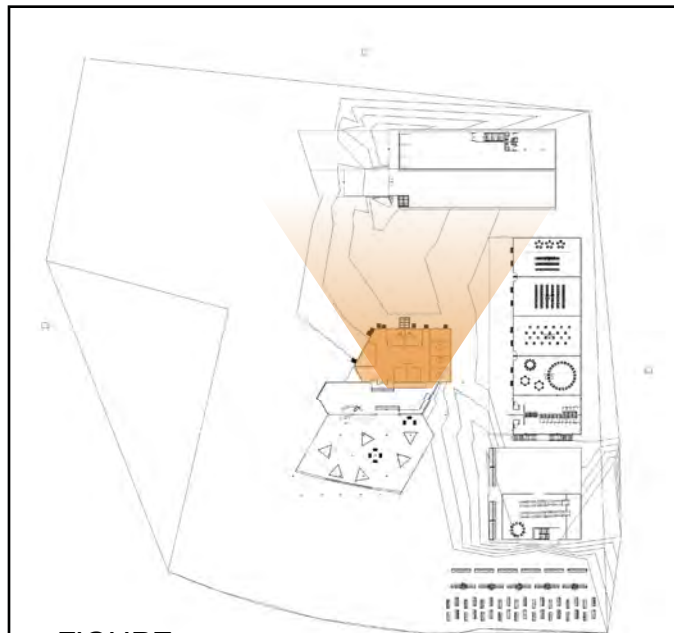


FIGURE 72



FIGURE 73

FIGURE 47



Business owner // native of Belize

“[Programs are usually] for a short period of time and don’t get people to buy into it. It always seems as though there is an agenda. There are very little local benefits. There should be a transferal of control to local.”

MISSION OF THE PROJECT
The main objective of the project is to explore the question of, “How can architecture empower repressed young adults in Belize.”

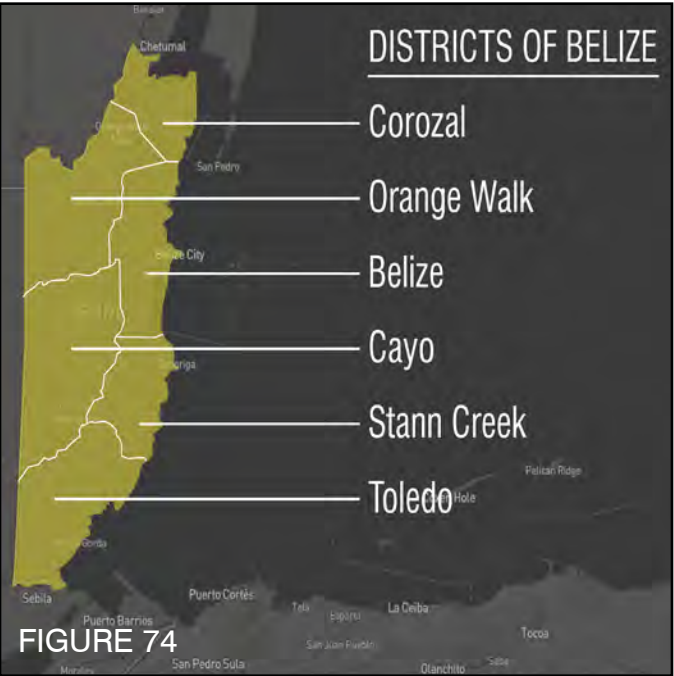
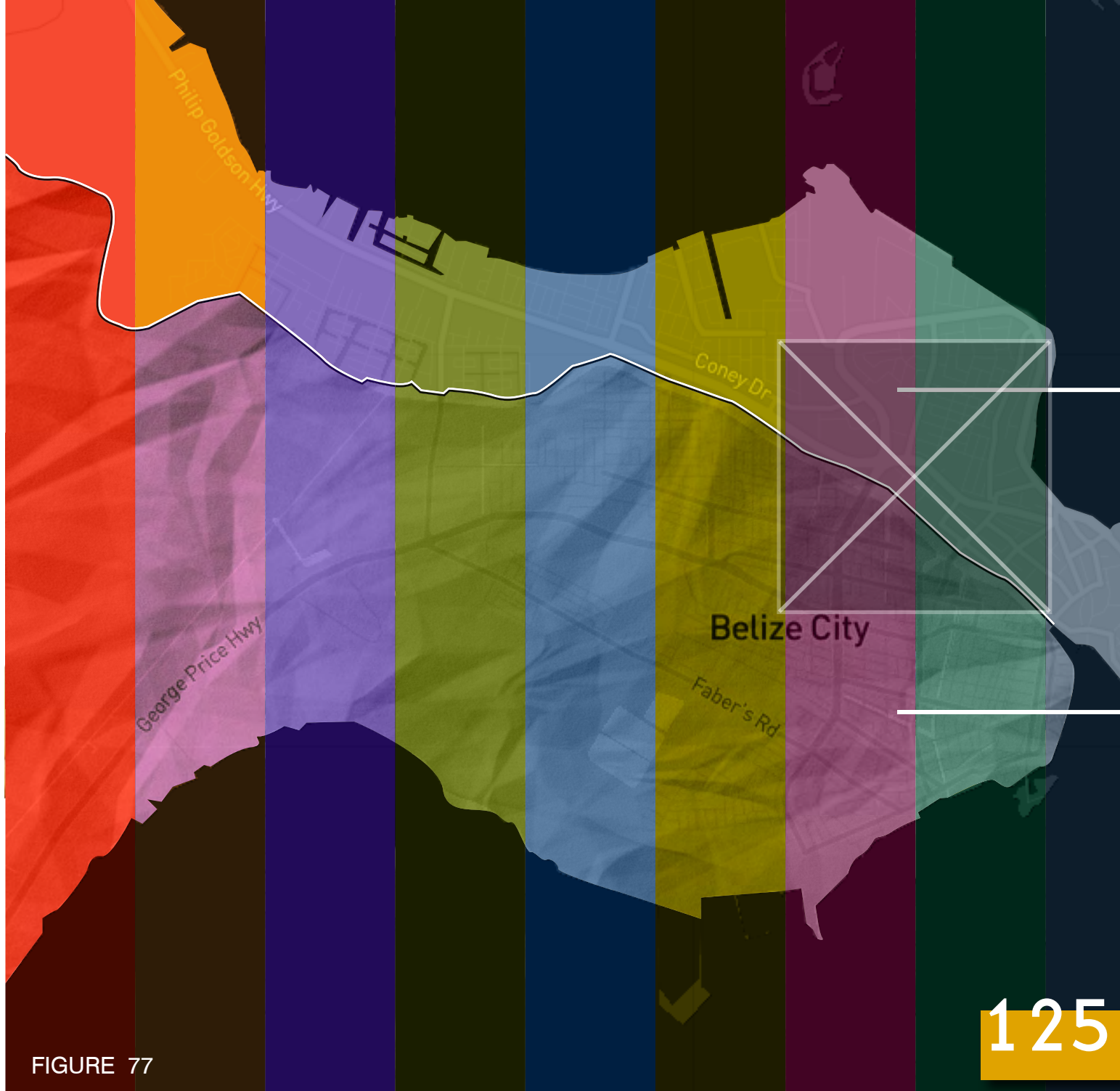


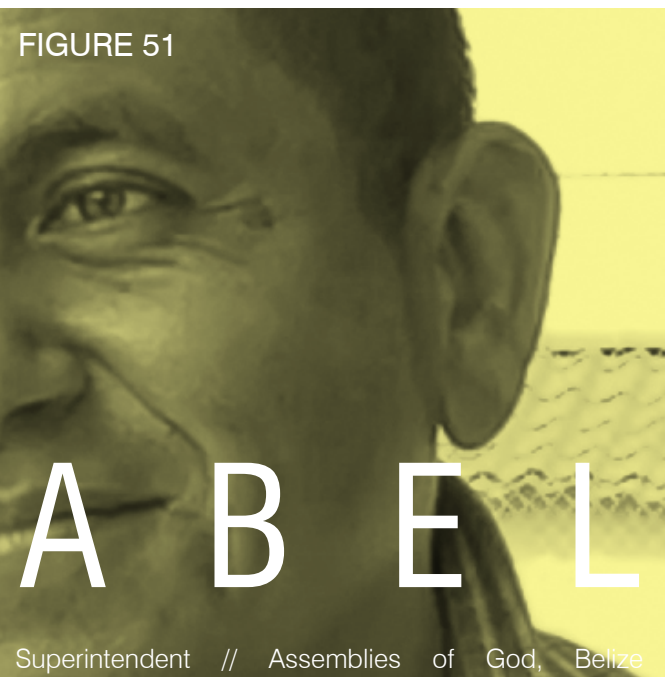
FIGURE 75



“The south side of Belize City are where the most Gangs are”

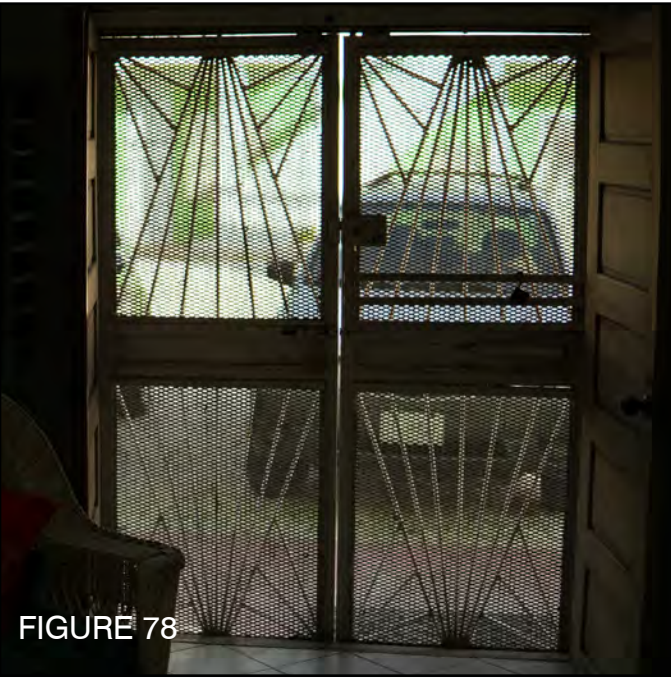
SCOPE OF PROJECT
The populous that this is seeking to engage is young adults that reside primarily in the south side of Belize, where most gangs reside.

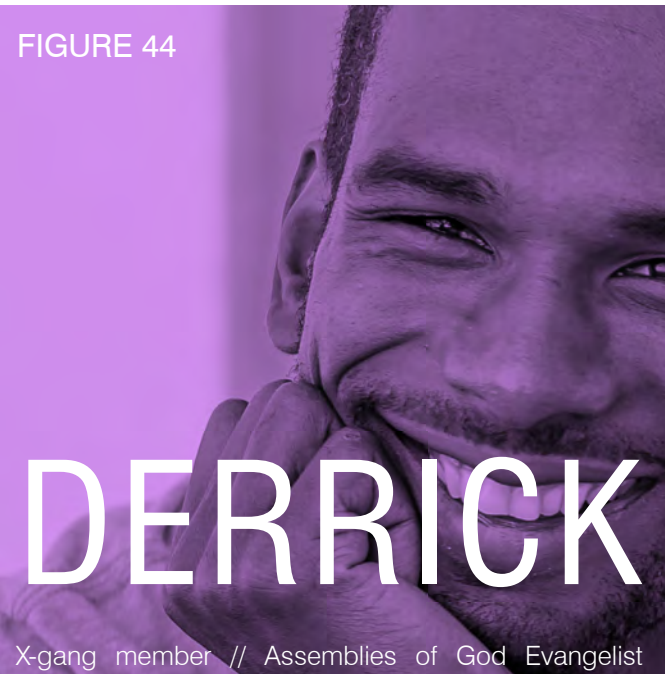




“That is a great need [for security] in Belize. We don’t have good security for buildings. Only big companies have a secure business.”

DEFENSIBLE SPACE
Because of the high crime rates and robberies around Belize City the space needs to easily be defended. Moreover, the space allowed for having key areas that people are able to take ownership of.





“A lot of these guys have the skill, but they don’t have the paper. Or they have the paper but don’t have the tools.”

SHOP & TOOL RENTAL
The program and design included a very large space to secure equipment that could be available for the students to rent, load and unload.

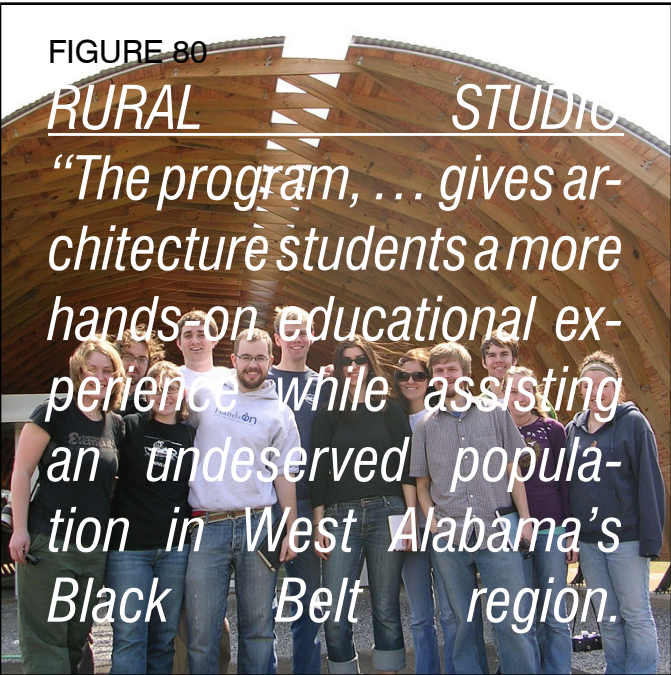


FIGURE 81

FIGURE 46



ELIZABETH

Teacher // Latin America Caribbean World Missions

“Larger, column free space that people can gather around in a circle [would be an ideal teaching space].”

CLASSROOM LAYOUT

The classrooms offer flexible space to the large spans of uninterrupted space. These rooms can be used for classrooms, workshop space, etc.

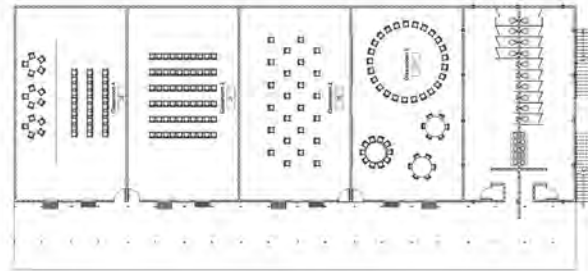
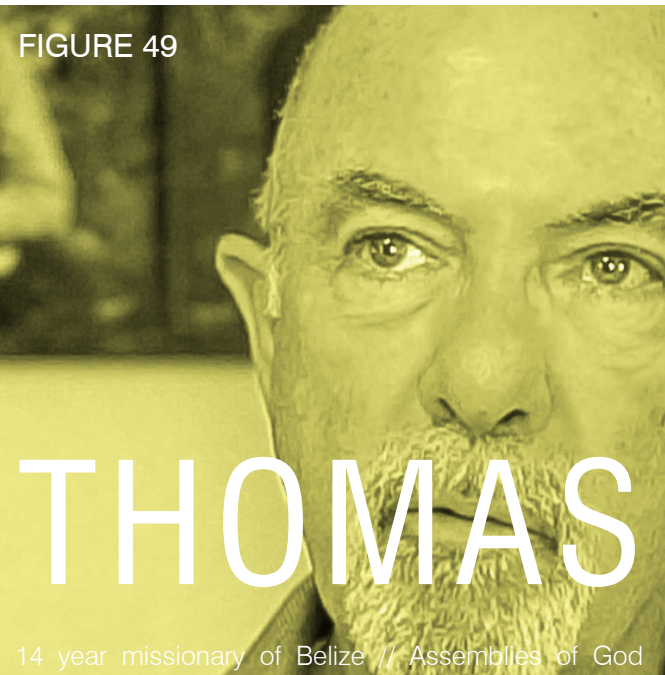


FIGURE 82

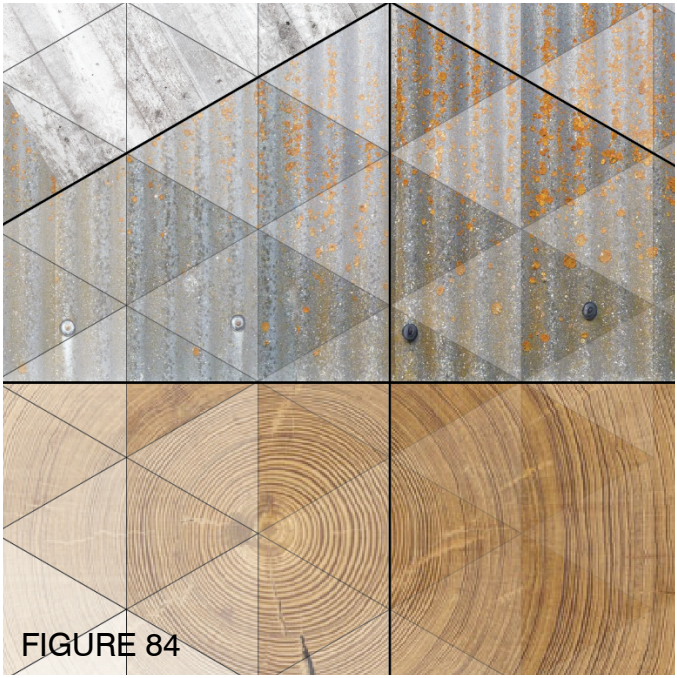


FIGURE 83



“It’s not about just teaching new building techniques, it will be implementing those techniques when you’re not there.”

LASTING & REPLICABLE
Various methods of construction and materials were implemented in the design that are replicable and sustainable such as using cordwood wall construction that uses otherwise underutilized wood.



FORESTRY DEPARTMENT

While in Belize I was able to visit the forestry department where I talked with a gentleman named Hector that helped me find the most sustainable & durable wood types in Belize.



“Culture is how you reason problems”

TRAVEL & INTERVIEWS
I spent 1 month in Belize collectively. While there I conducted 19 interviews as well as a handful in the USA. This gave me a much better understanding of the project than I could achieve on my own.



Location of site - Belize

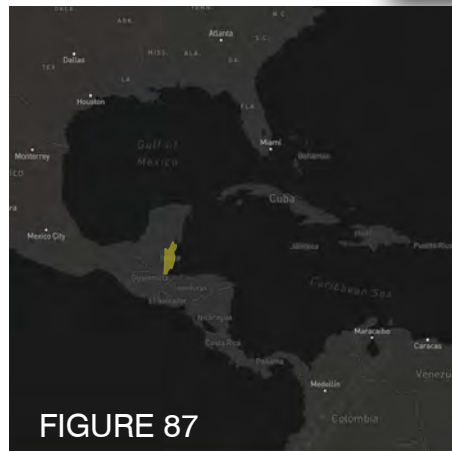


FIGURE 87



FIGURE 88

Context Images



FIGURE 94



FIGURE 95



FIGURE 89

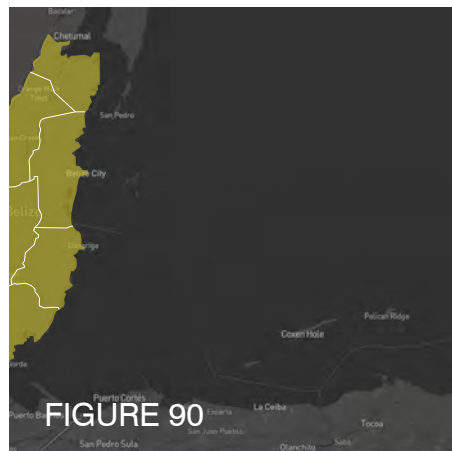


FIGURE 90

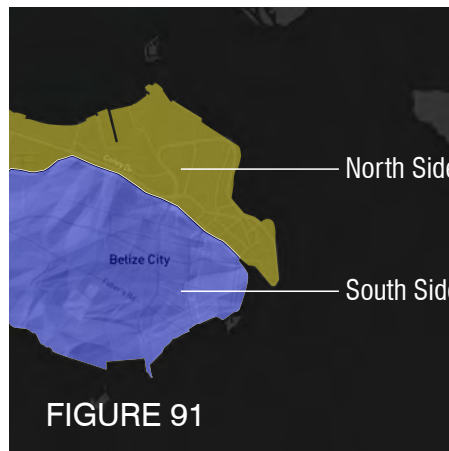


FIGURE 91



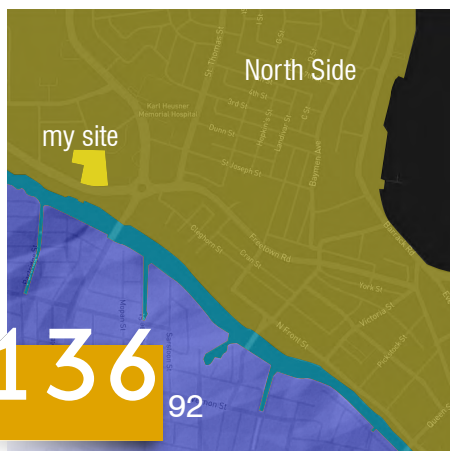
FIGURE 96



FIGURE 97



FIGURE 98



136

92

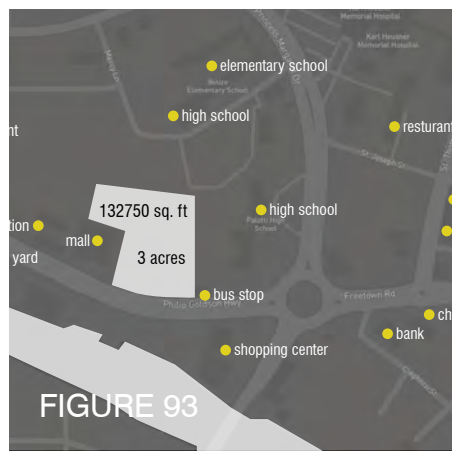


FIGURE 93

Districts of Belize
Corozal
Orange Walk
Belize City
Cayo
Stann Creek
Toledo

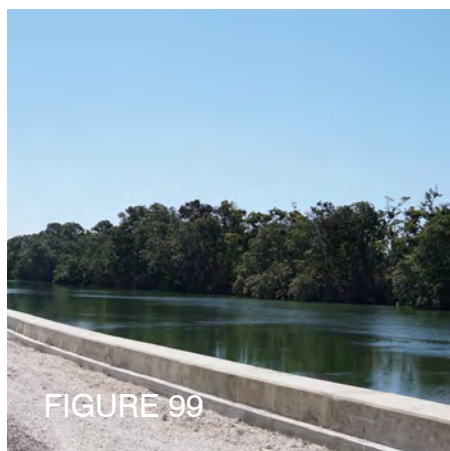


FIGURE 99



FIGURE 100

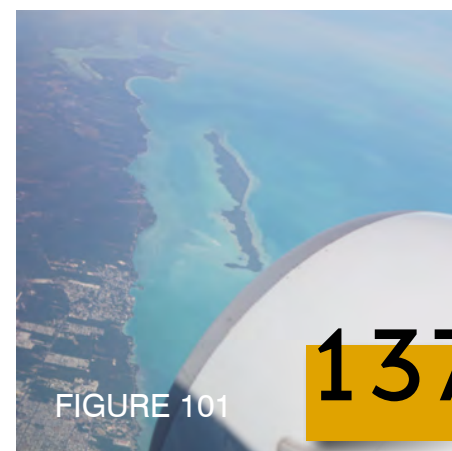


FIGURE 101

137

FINAL FLOOR PLANS

ground // 1st low & high // 2nd low & high // 3rd high

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Collective Floor Plans

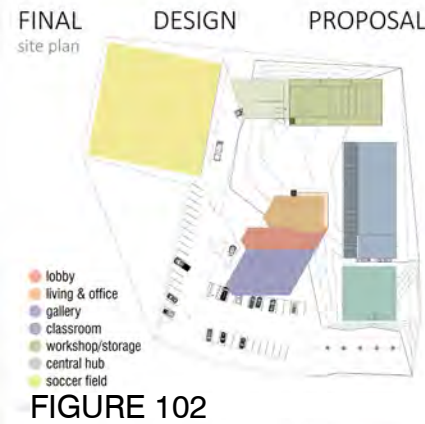


FIGURE 102

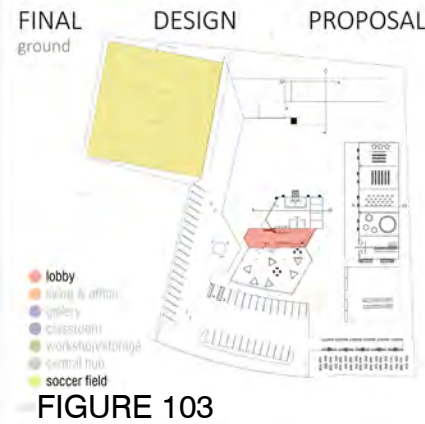


FIGURE 103

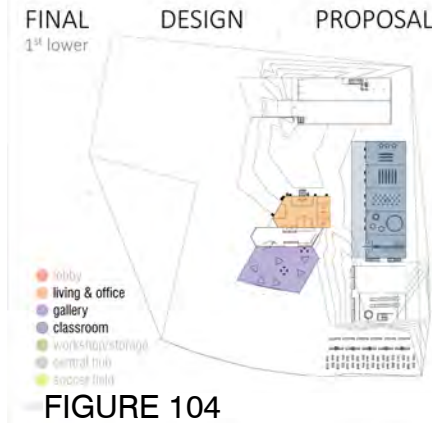


FIGURE 104

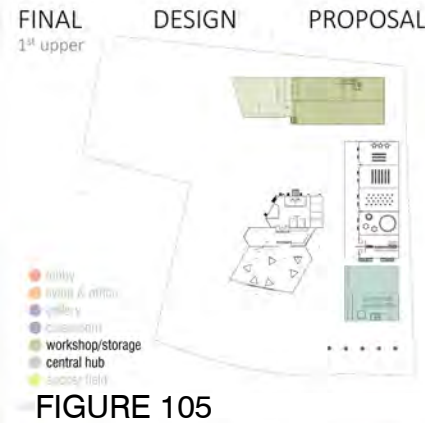


FIGURE 105

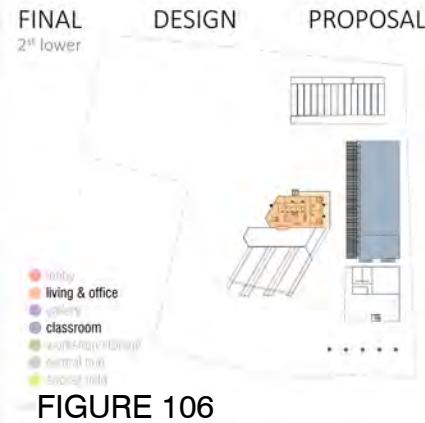


FIGURE 106

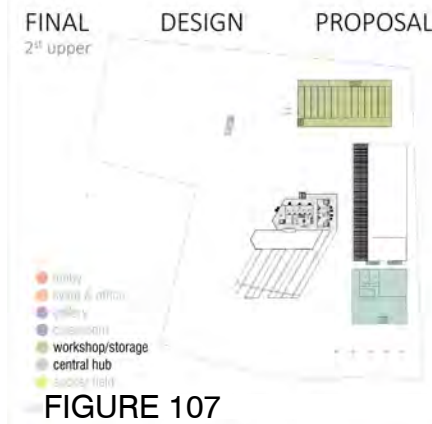


FIGURE 107

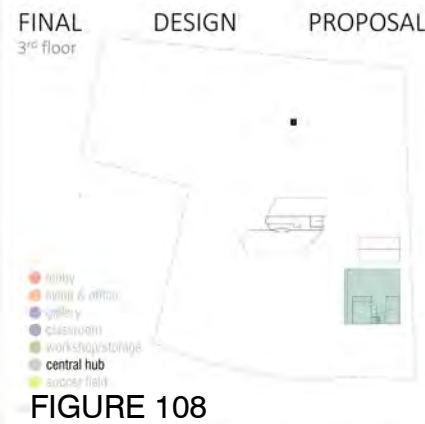
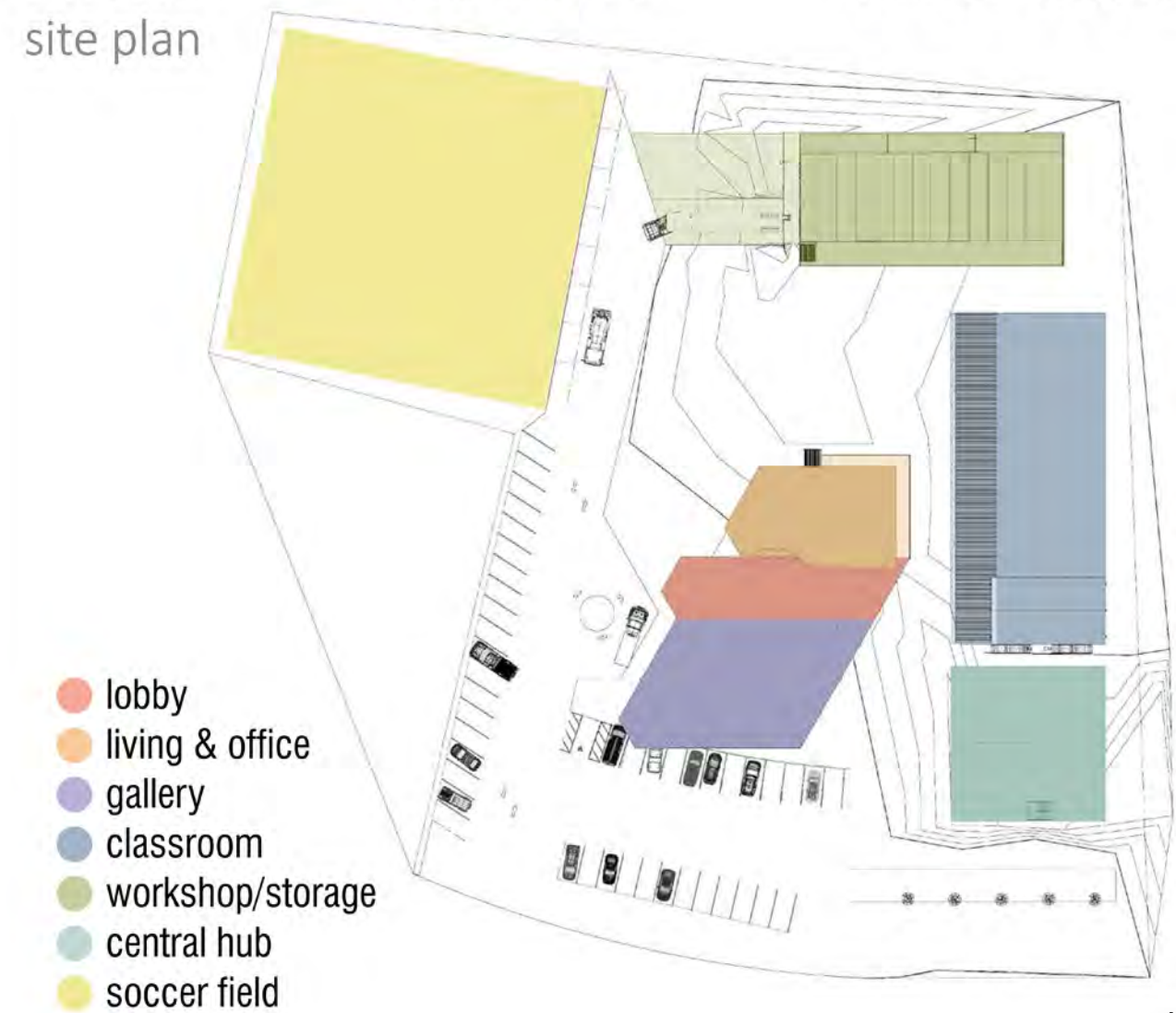


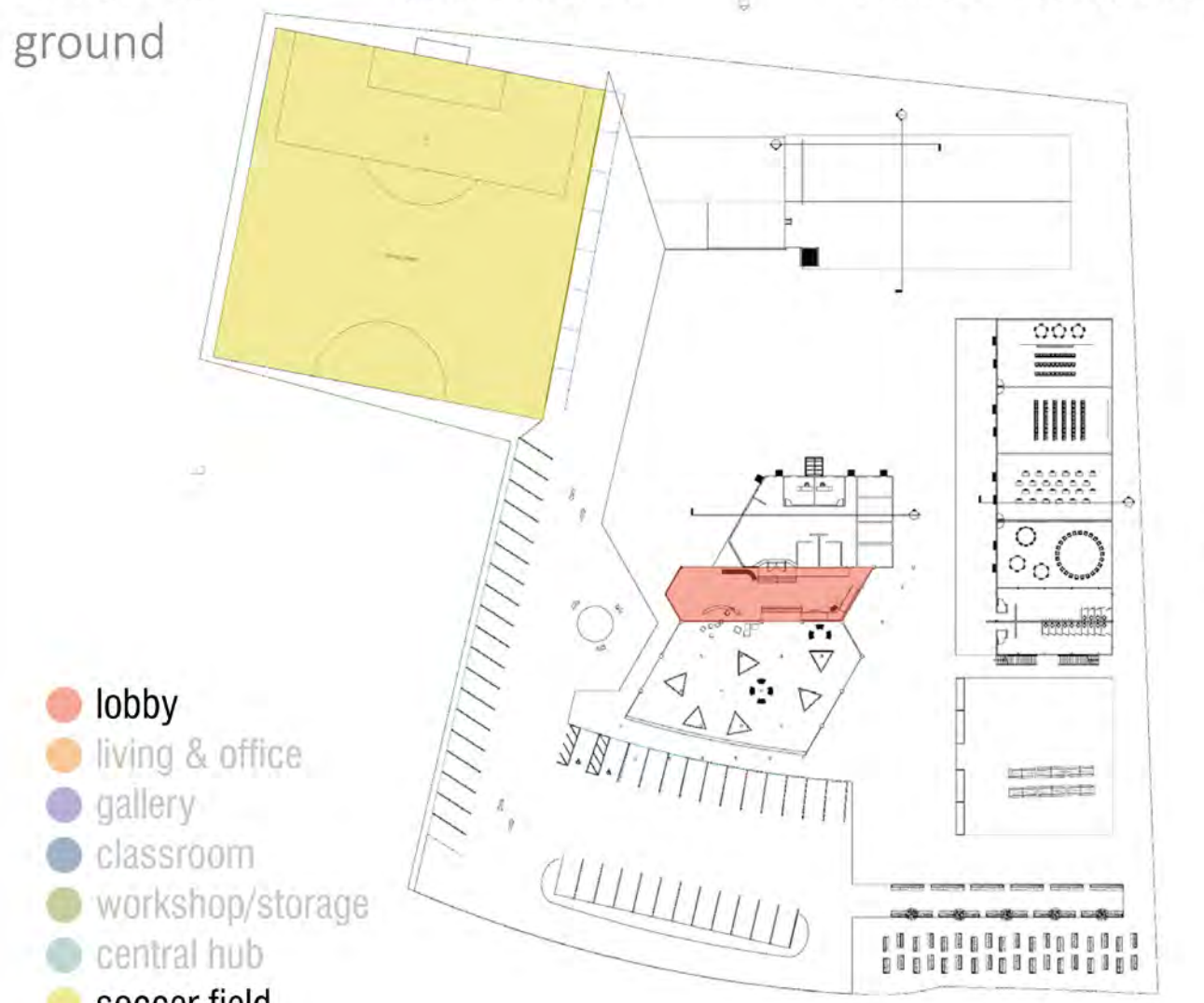
FIGURE 108

lobby
living & office
gallery
classroom
workshop/storage
central hub
soccer field

FINAL DESIGN PROPOSAL

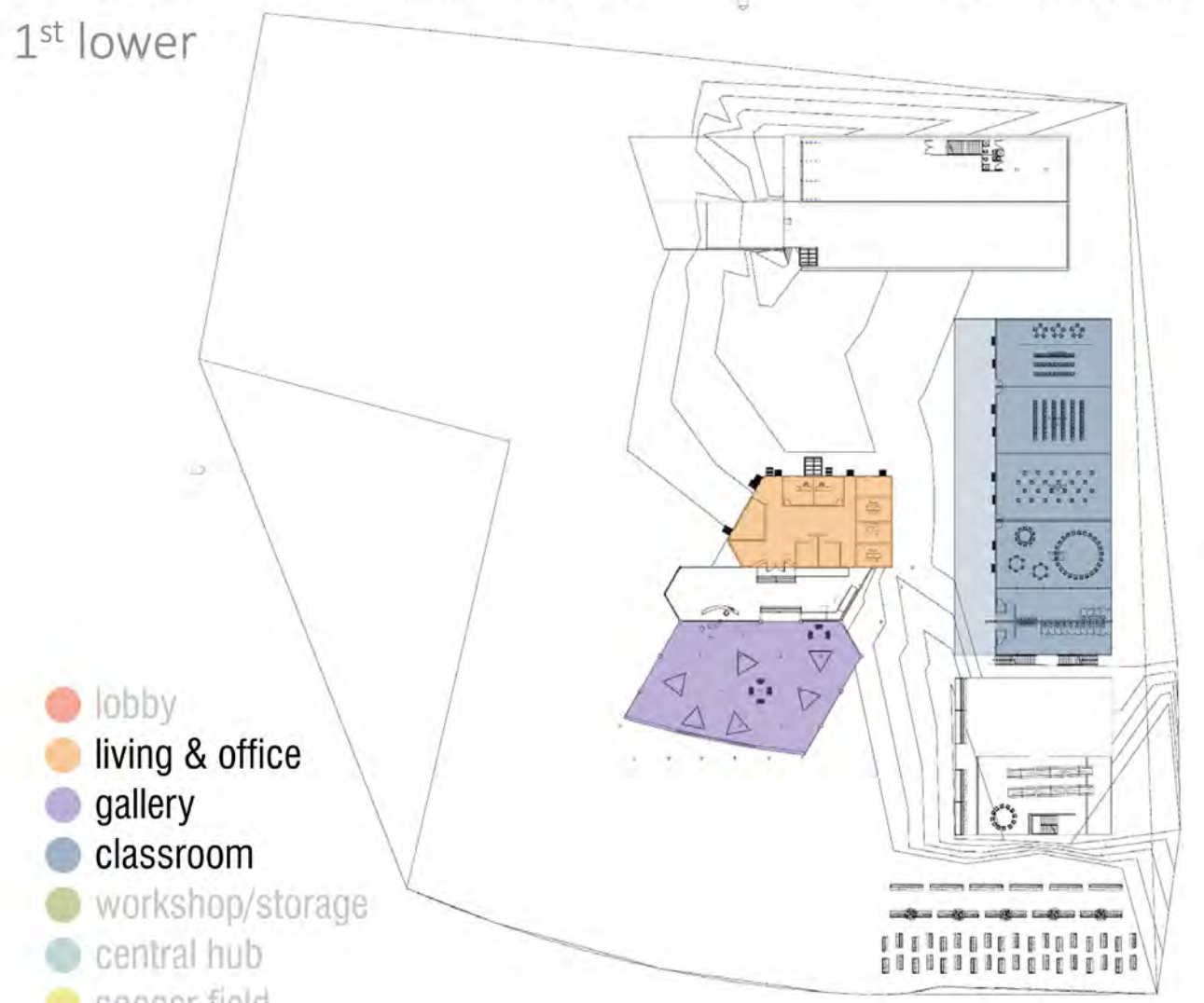


FINAL DESIGN PROPOSAL



- lobby
- living & office
- gallery
- classroom
- workshop/storage
- central hub
- soccer field

FINAL DESIGN PROPOSAL

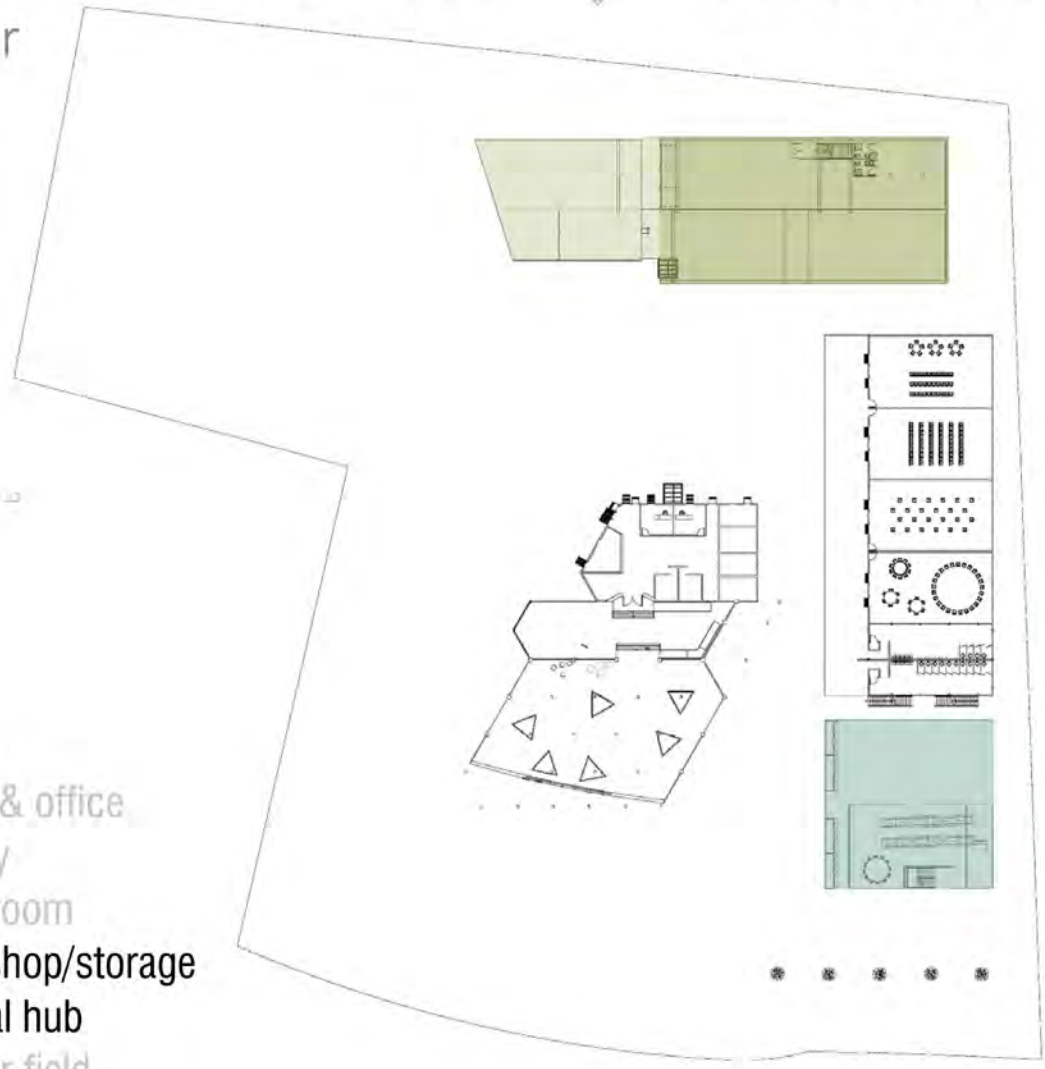


- lobby
- living & office
- gallery
- classroom
- workshop/storage
- central hub
- soccer field

FINAL DESIGN PROPOSAL

1st upper

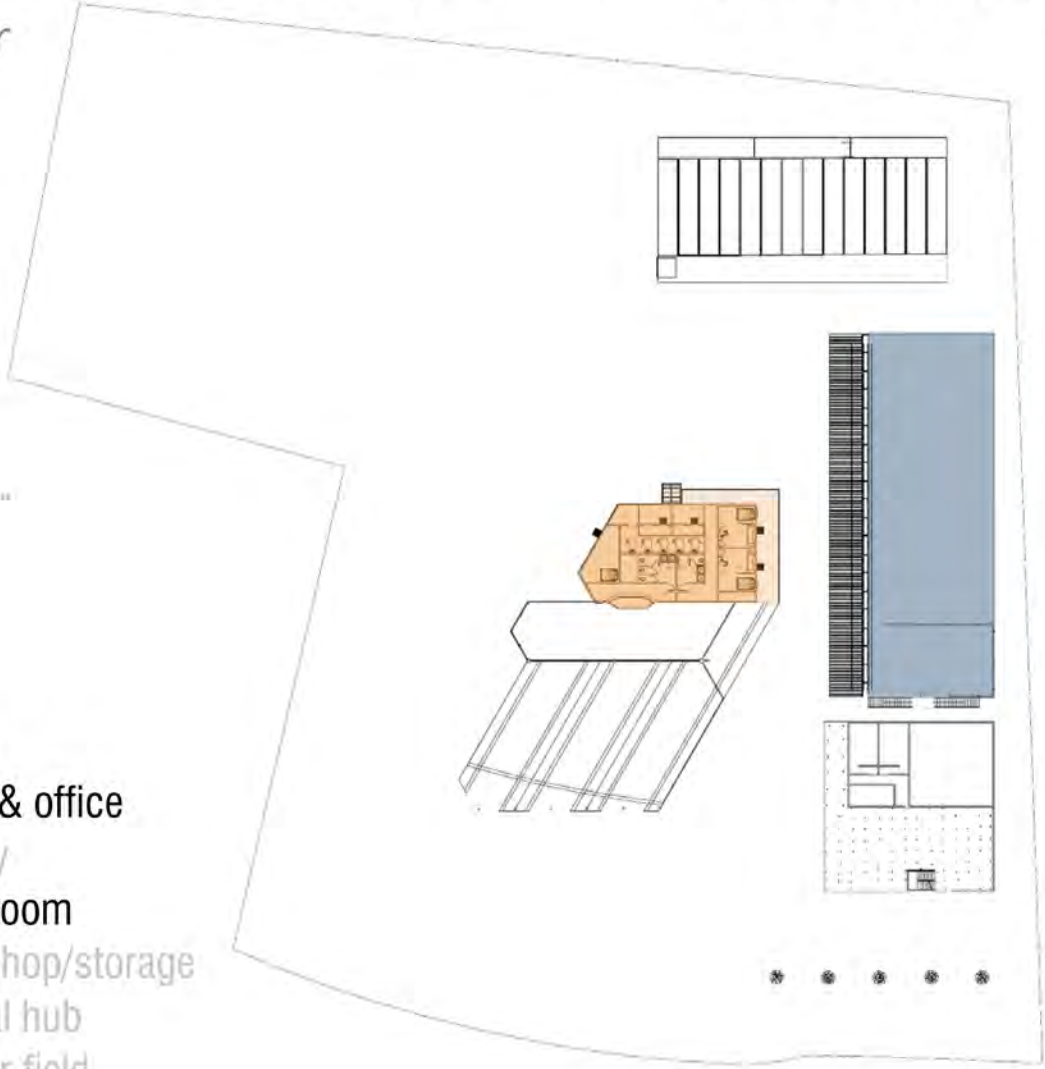
- lobby
- living & office
- gallery
- classroom
- workshop/storage
- central hub
- soccer field



FINAL DESIGN PROPOSAL

2nd lower

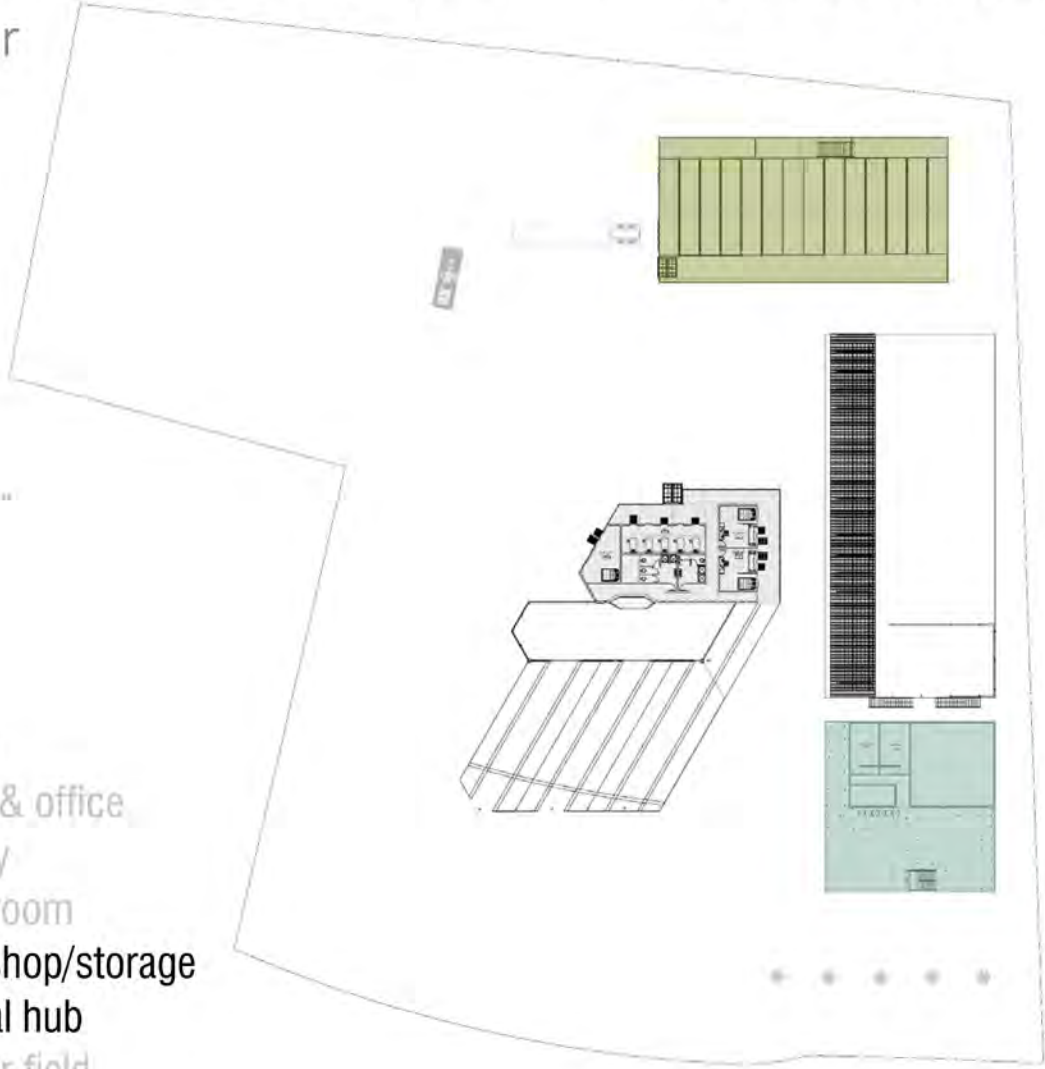
- lobby
- living & office
- gallery
- classroom
- workshop/storage
- central hub
- soccer field



FINAL DESIGN PROPOSAL

2st upper

- lobby
- living & office
- gallery
- classroom
- workshop/storage
- central hub
- soccer field



FINAL DESIGN PROPOSAL

3rd floor

- lobby
- living & office
- gallery
- classroom
- workshop/storage
- central hub
- soccer field

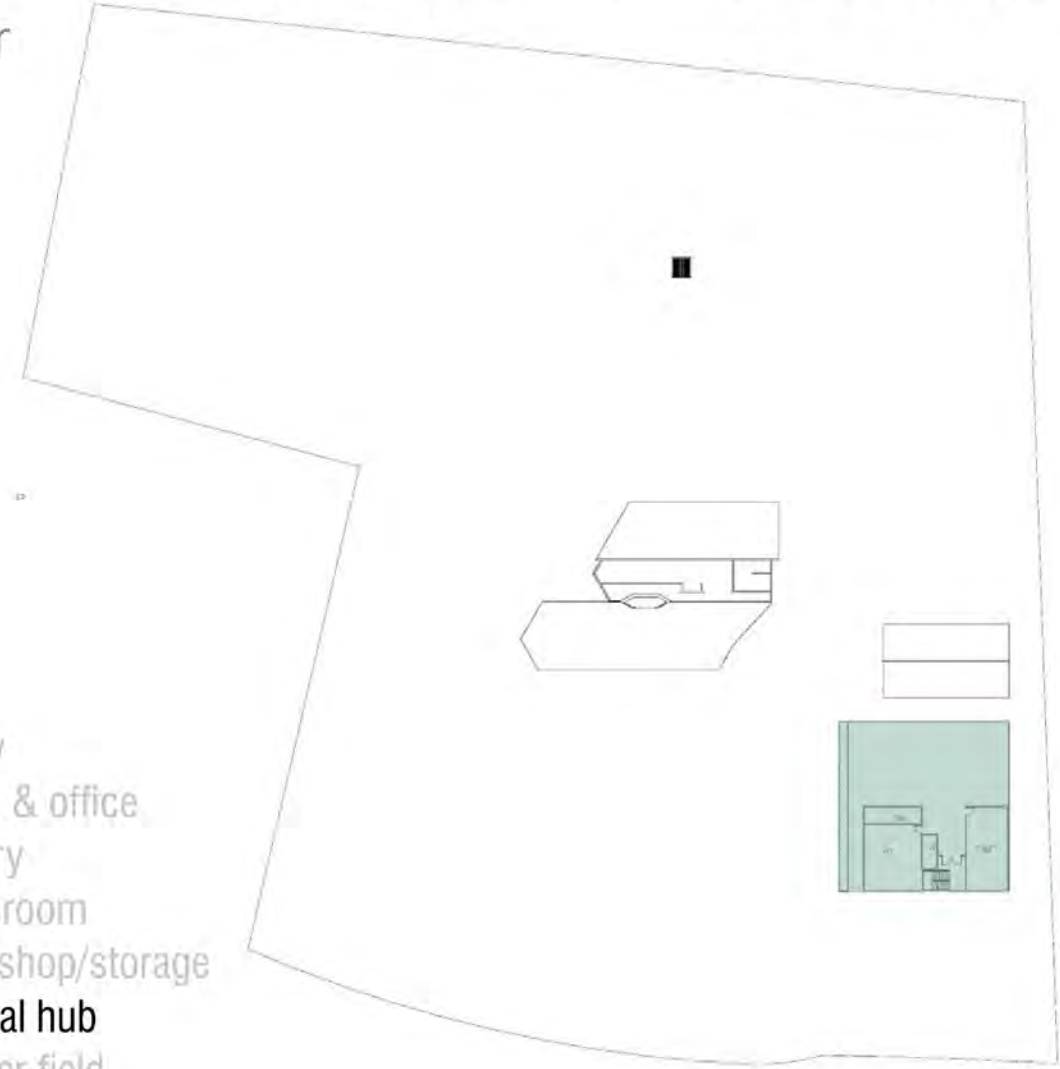




FIGURE 109

FINAL

RENDER

THESIS QUESTION

How can the process of Building empower repressed young adults in Belize through missions?

engagement // education // ownership

So, was the Thesis Question answered?

ENGAGEMENT
Because of Belize's unique gang related activity in South Belize, the location of the site responded very adamantly to problems such as "turf."

EDUCATION
As learned from Case Studies, the enabling of students to be the builders as well as having volunteer professors would seemingly make this a very impactful dynamic.

OWNERSHIP
Defensible space, having the campus built by the students and having the project meet the students where they are could potentially bolster a strong sense of ownership.

A P P E N D I X

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T I Q R I L C P S L C F A P A

T I Q R I L C P S L C F A P A

P R E V I O U S W O R K

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FIGURE 110



FIGURE 111

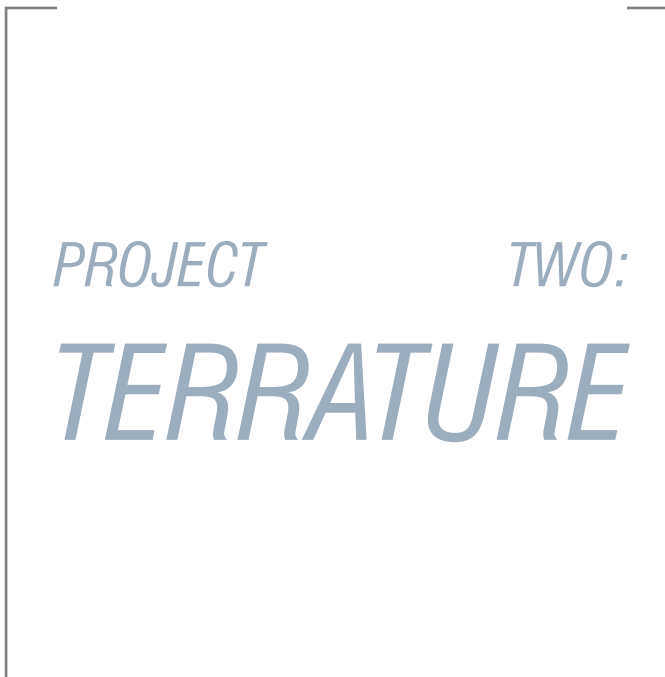


FIGURE 110

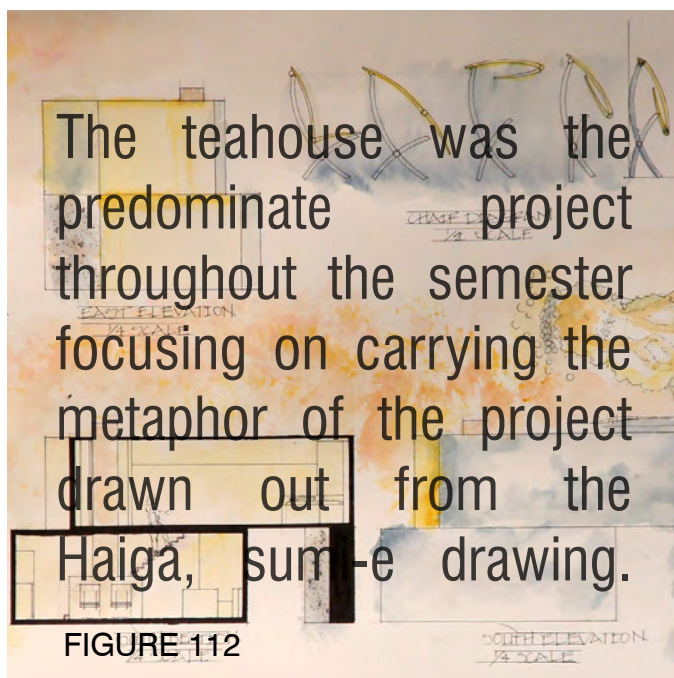
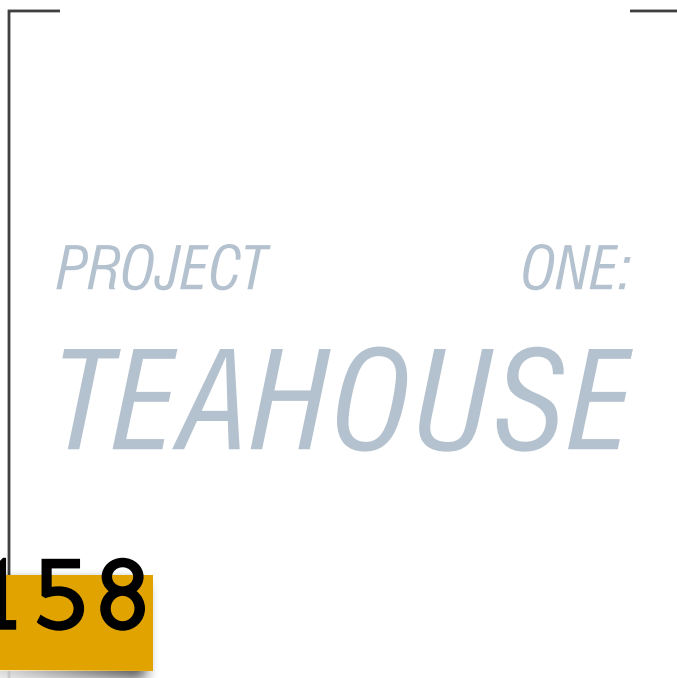


FIGURE 112

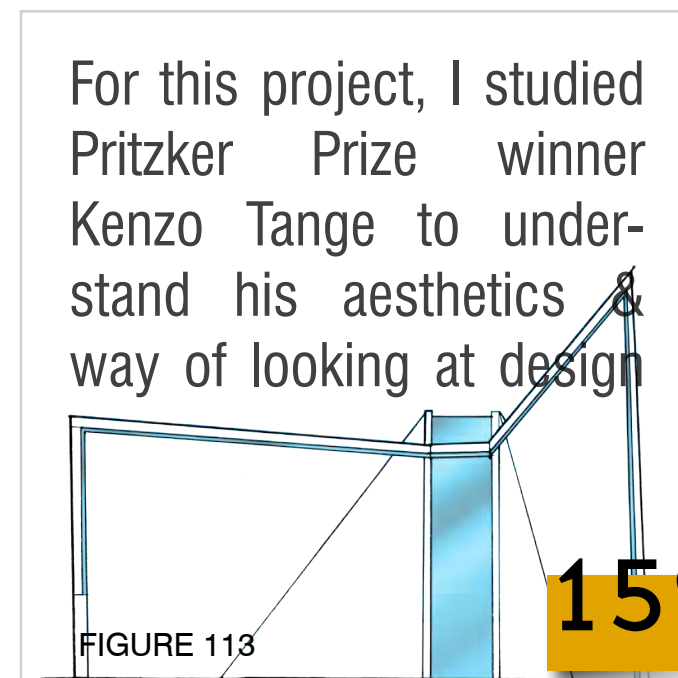
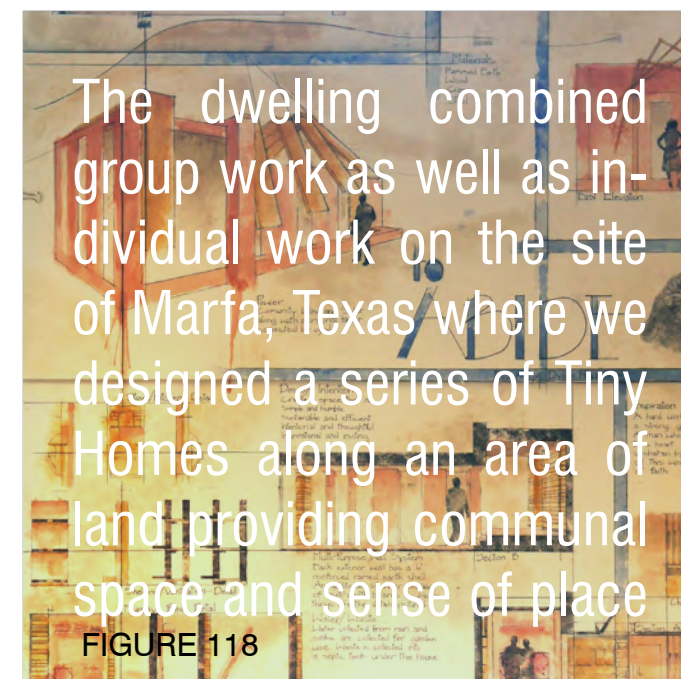
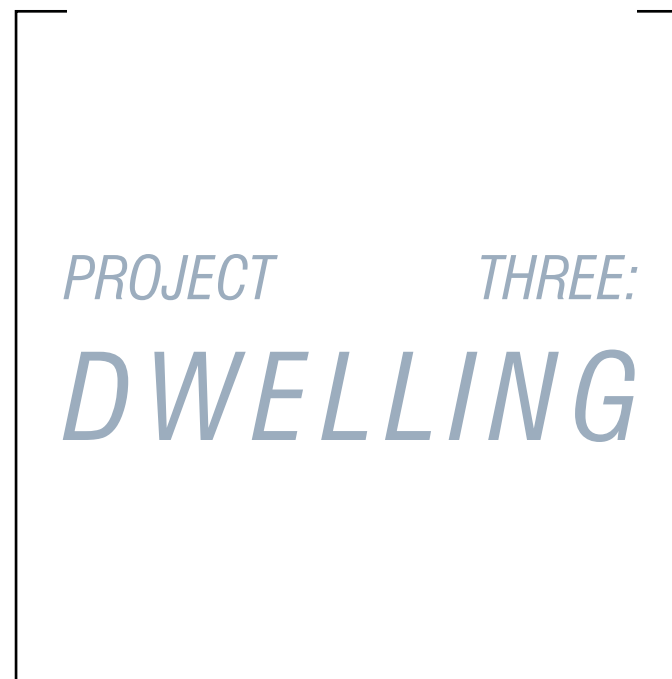
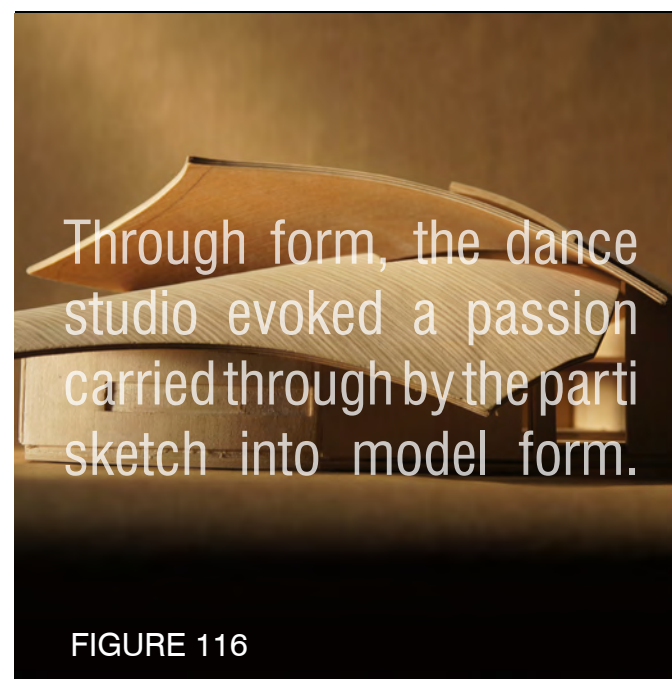
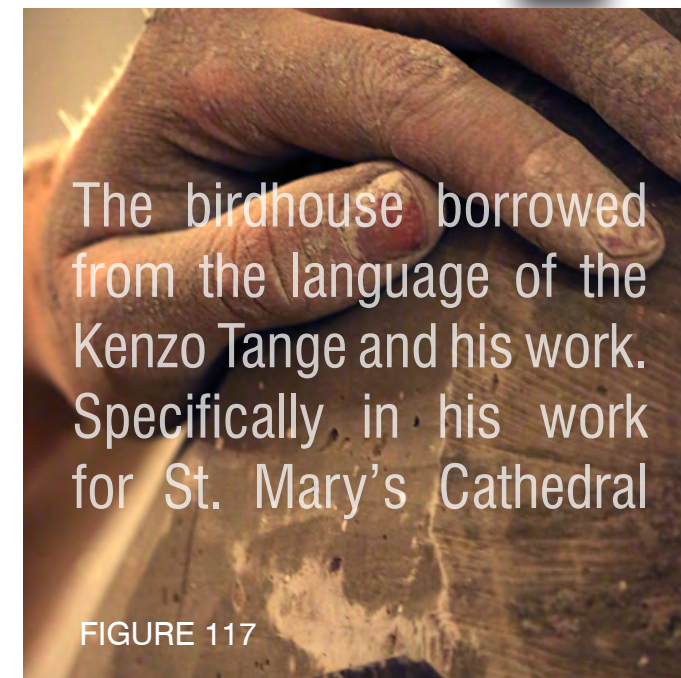


FIGURE 113



T I Q R I L C P S L C F A P A



FIGURE 119

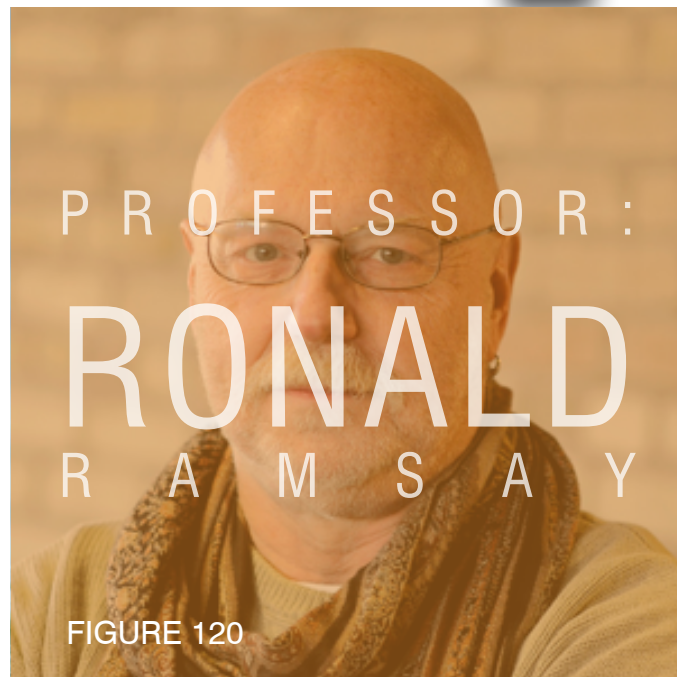


FIGURE 120

T I Q R I L C P S L C F A P A

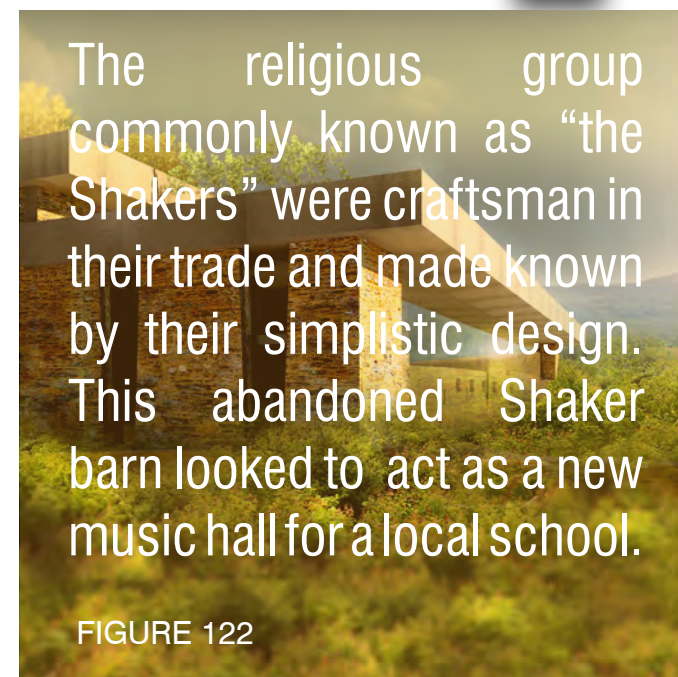


FIGURE 122

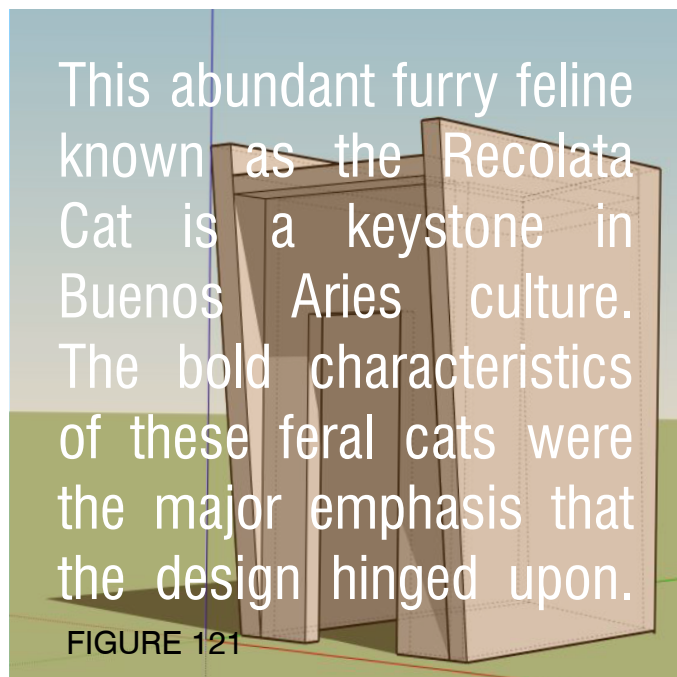
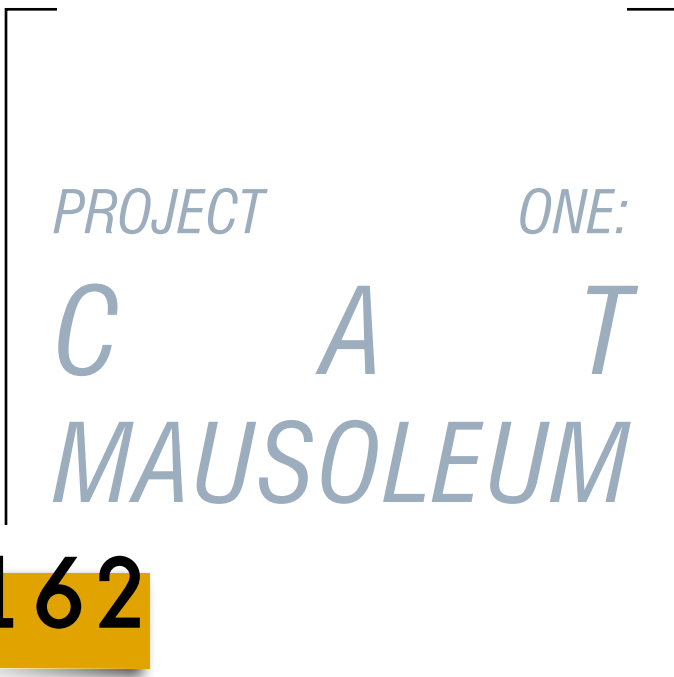


FIGURE 121

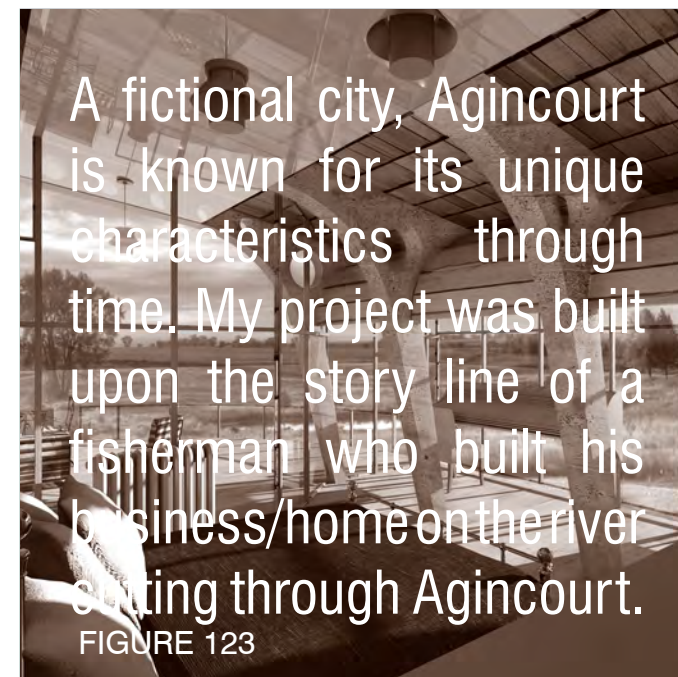
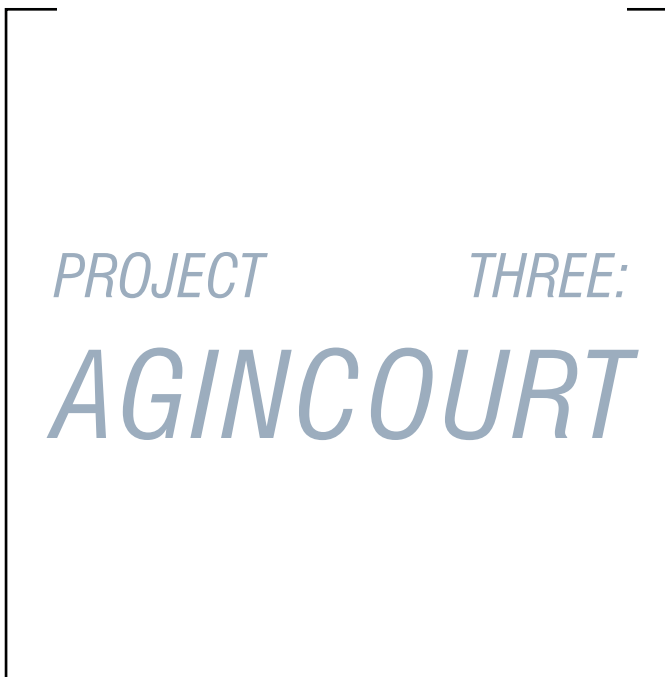
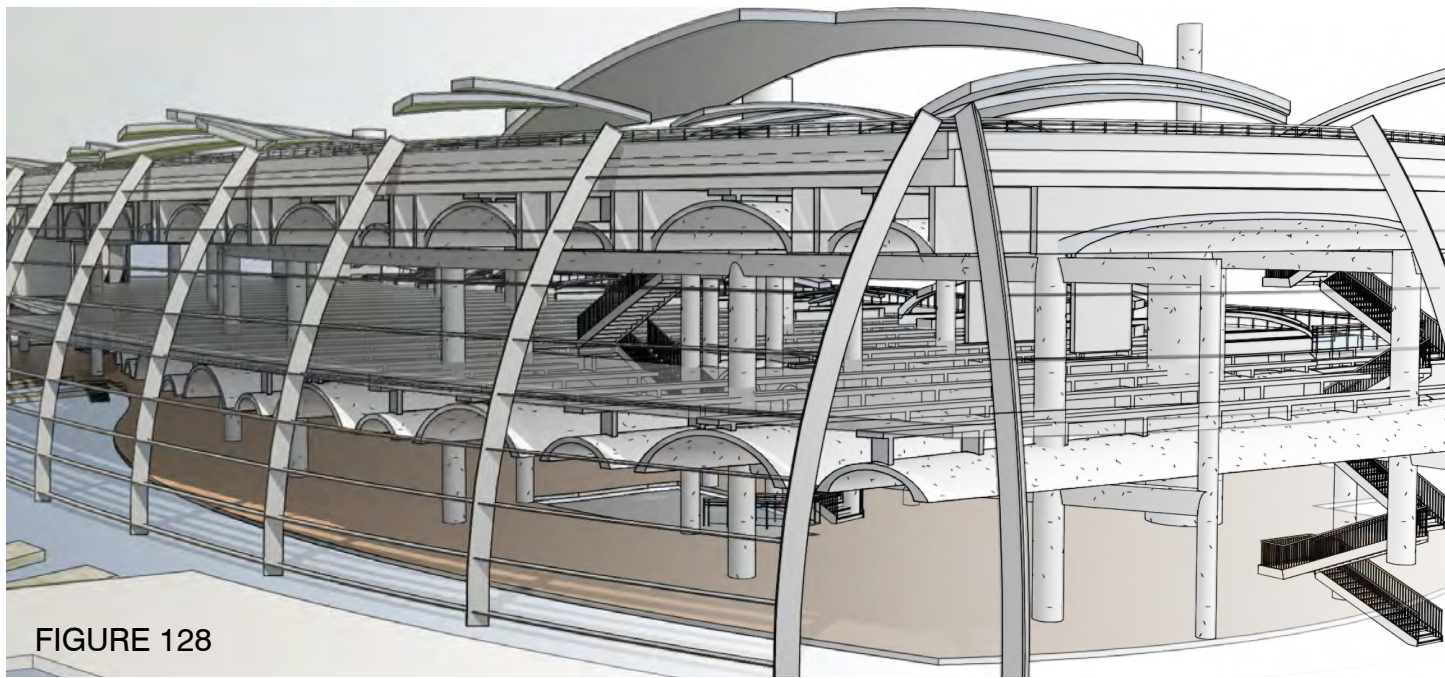
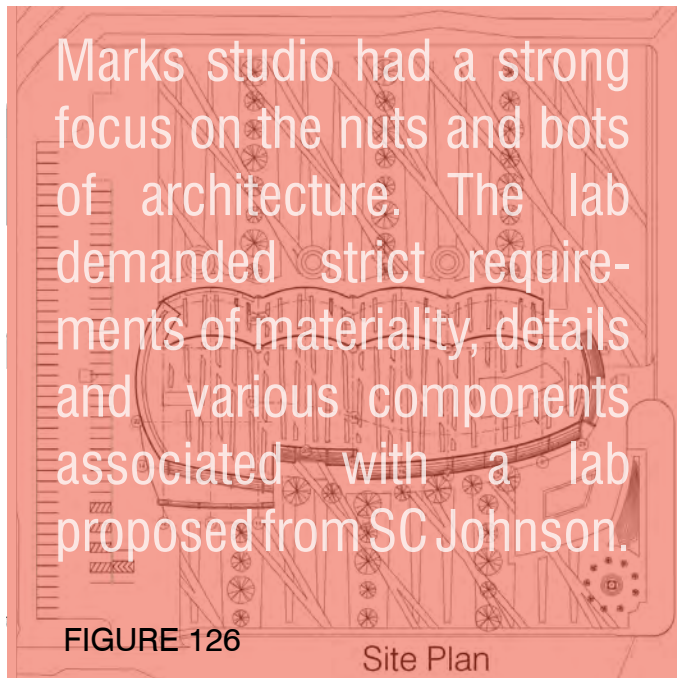
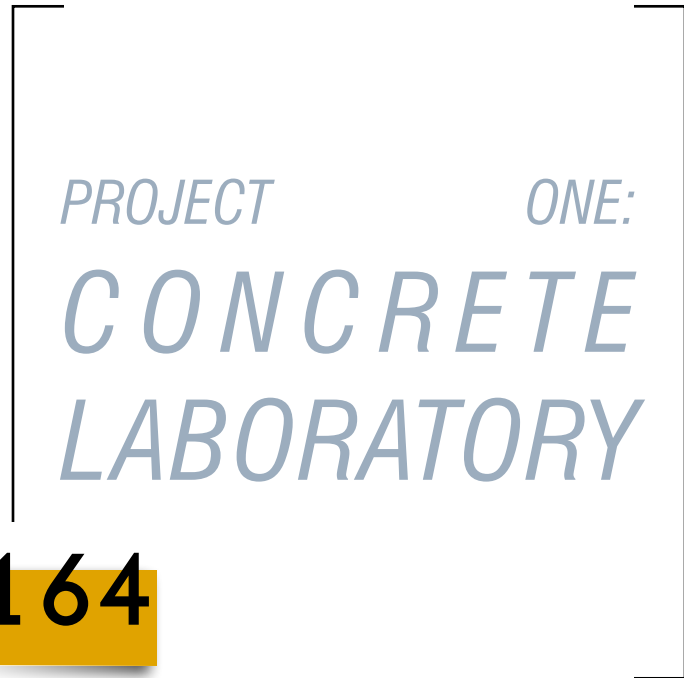
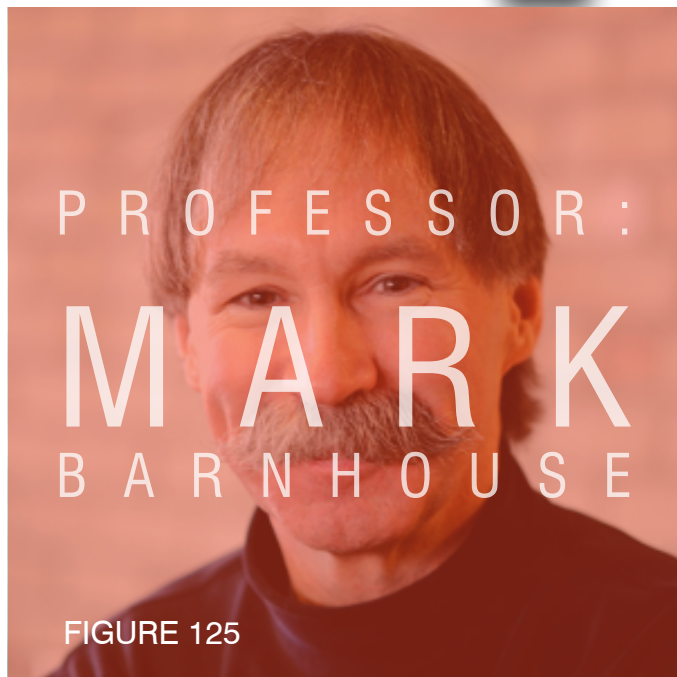
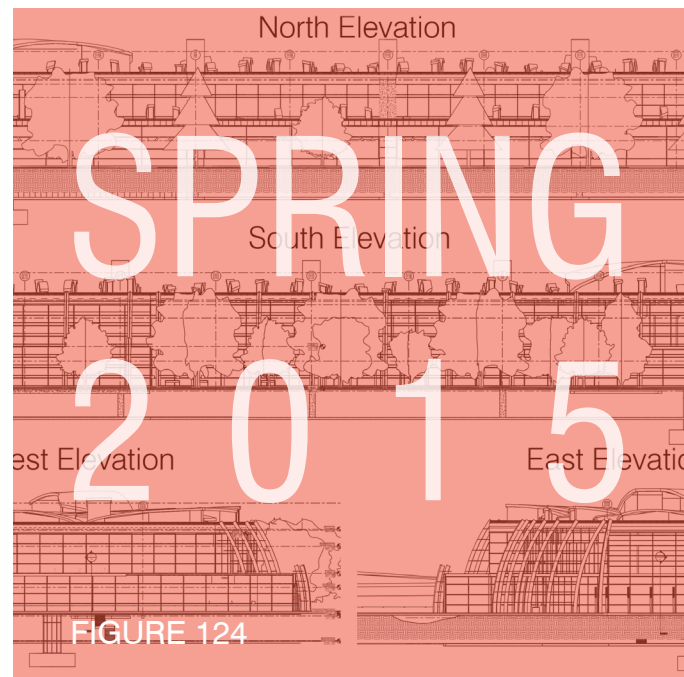


FIGURE 123





For this project we spent several days in San Fransisco where we did multiple site visits as well as explored the area to acquire deeper understanding of what building should be and what the project would address.



PROJECT ONE:
HIGHRISE



The project will be mixed use allowing for residential, retail, public space as well as other flexible accommodations. I used grasshopper to achieve the form and space.

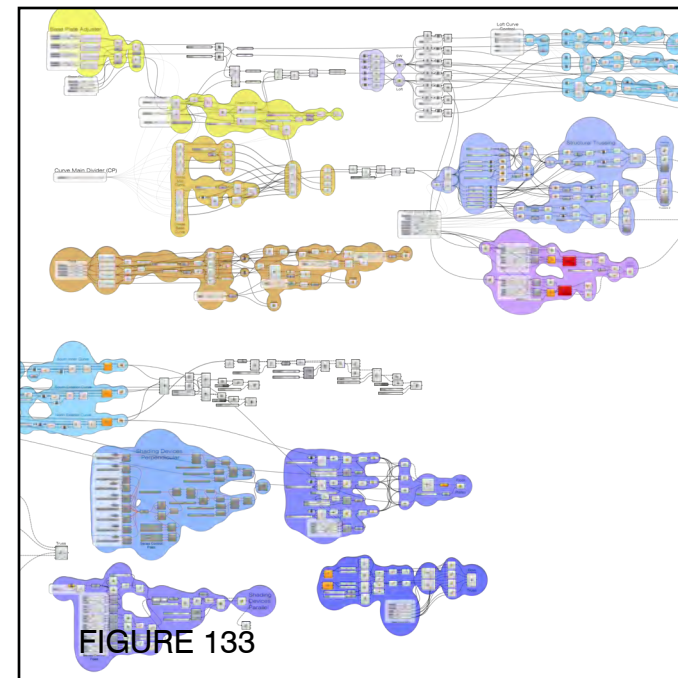




FIGURE 134



FIGURE 135

The proposed project would not only address the concept of the “missing-middle,” the design also called for 2 of the buildings to be Passive House certified which would make them the first Passive house in North Dakota.



FIGURE 137

PROJECT ONE:
 DESIGN
 BUILD
 168

During the course of 1 semester our class of 9 went from having nothing to Construction documents as well as passing a PUD & PLAT rezoning of the land.

FIGURE 136



FIGURE 138



FIGURE 139



FIGURE 135



FIGURE 141

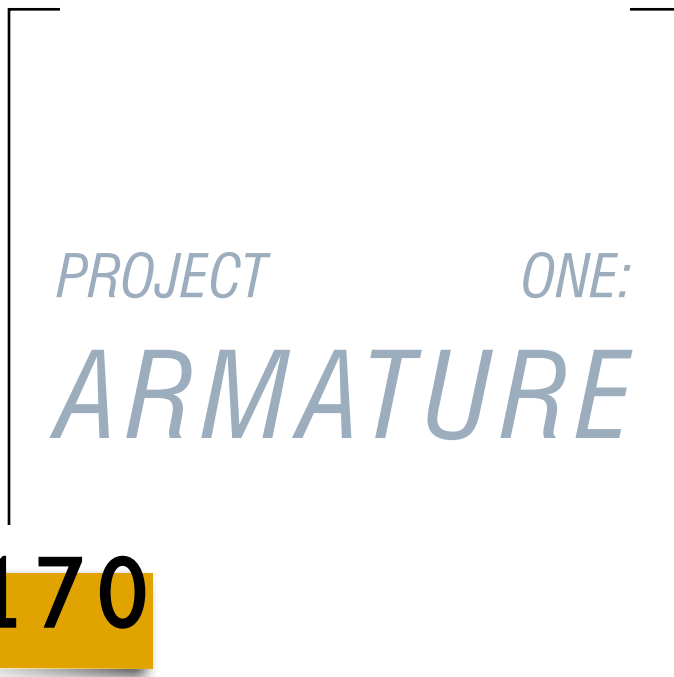


FIGURE 140

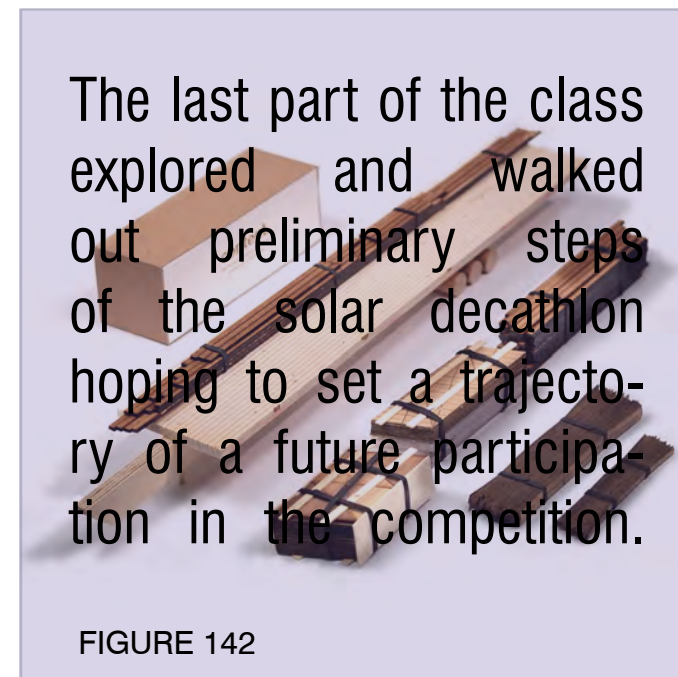
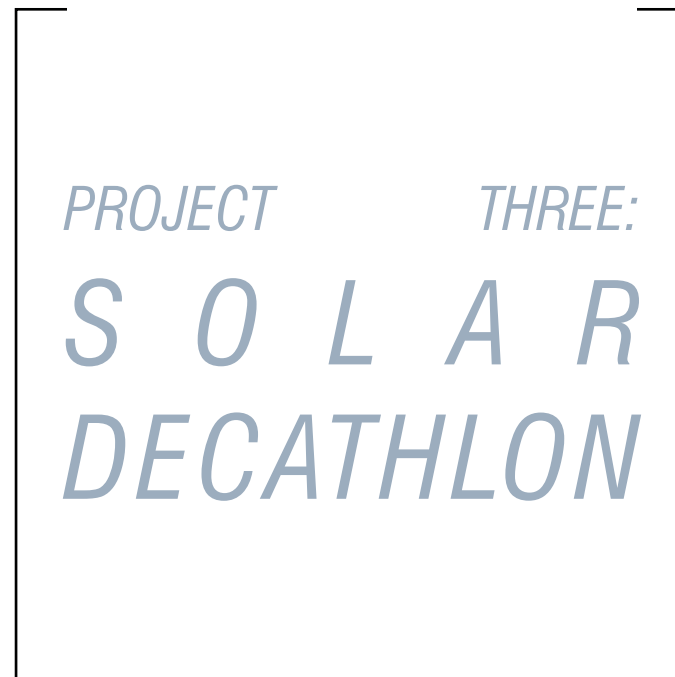
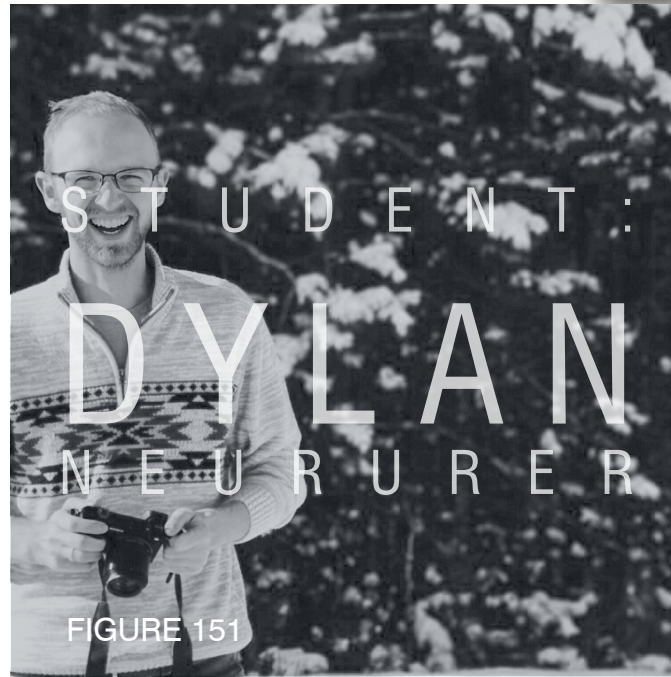


FIGURE 142

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“NDSU Architecture, where community & creative culture can flourish through mutual empowerment.”