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L.I.F.E. is Beautiful

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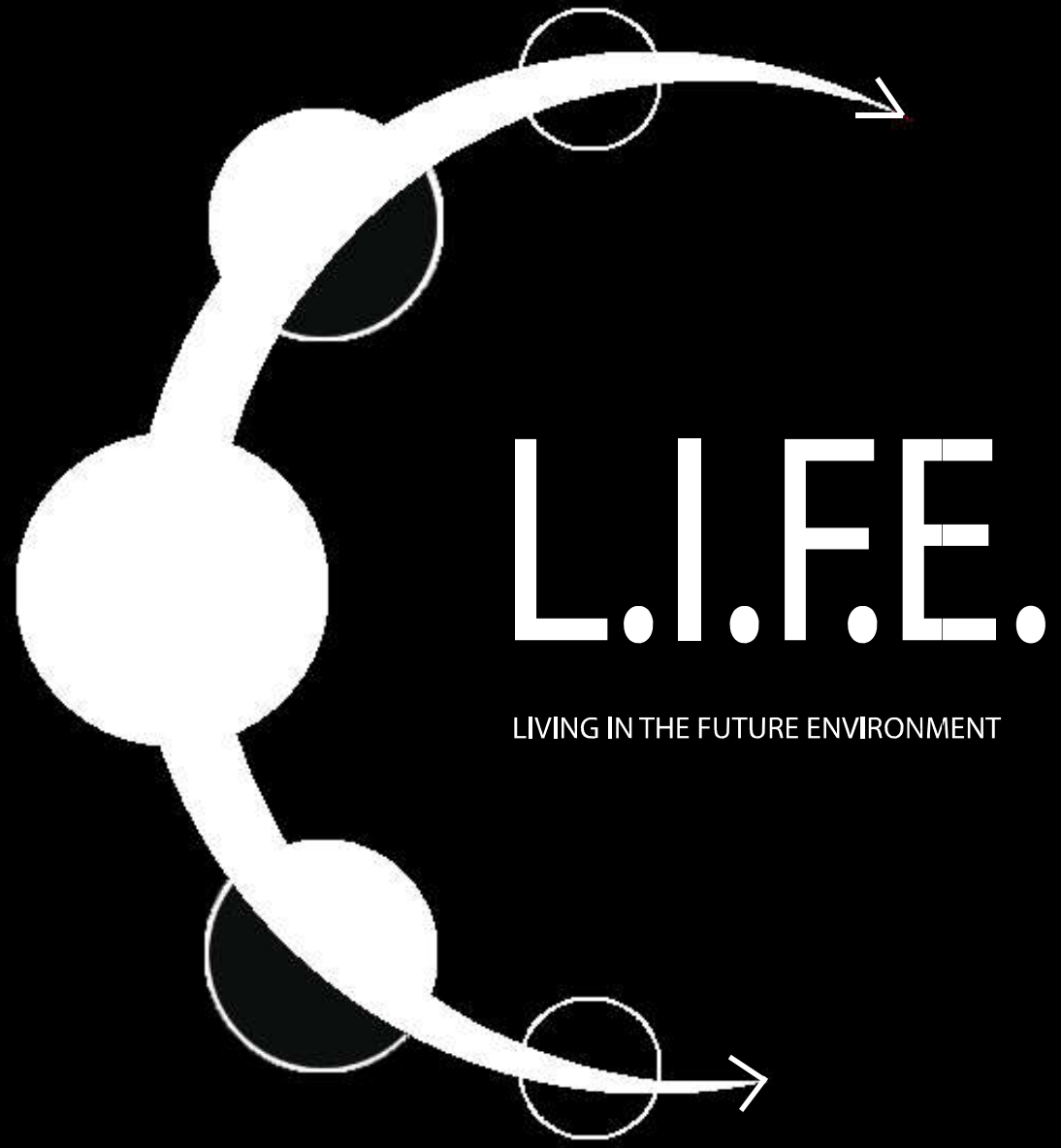


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L.I.F.E.

LIVING IN THE FUTURE ENVIRONMENT

IS BEAUTIFUL

An inquire on the use of small living and architectural design

L.I.F.E. is Beautiful
An inquire on the use of small living and architectural design

Request for Approval of Thesis Research
Project Book Presented to:

Giovanni Loreto

and to the
Faculty of the Department of Architecture
College of Architecture and Construction Management

by

Adalia Sue Fullbeck

In partial fulfillment of the requirements for the Degree

Bachelor of Architecture

Kennesaw State University
Marietta, Georgia

May 1, 2020

DEDICATION

This Thesis is dedicated to

My Son: [Camron Axial Roberts](#)

for giving me the strength to keep going with thesis. I was about to quit this journey until your daddy, and I found out that we were going to be blessed with you. Thanks for all the strength and happiness that you bless me with every day.

My Fiance: [Richard Roberts](#)

for helping me get through those long nights of studio, and for pushing me continuously.

My Parents: [Tanja and Douglas Fullbeck](#)

for encouraging me to pursue architecture and for standing by my side. Also, for encouraging me to be interested in Engineering. Thank you for all that you both have done.

My Grandparents: [Ursula and John Rogman](#)

for all the time I spent working on rental homes and plans with both of you.

My Parents in Law: [Richard and Charlene Minor](#)

for your help and encouragement when I needed it.

& [My Friends](#)

for being there, encouraging me and giving me a break.

This thesis would not be possible without the counsel of my thesis advisor and other faculty members.

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for being my advisor, studio professor and amazing structures professor. Your engineering expertise encouraged me to pursue industrial engineering as a minor. Your mentorship and understanding have made this project enjoyable. Thank you.

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for your motivation and determination to help with my thesis. Under all these circumstances, you have done so much to keep my thesis on track and enjoyable.

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for being the first person to encourage me to pursue my thesis.

Professor [Ameen Farooq](#)

for motivating me since the beginning of workshop, and being there when I had questions.

ACKNOWLEDGMENT

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ONE

INTRODUCTION

As an architect we are supposed to merge the technical aspects with the design. So, for this thesis I want to develop the entire five phase process an architect goes through. That would be from designing the tiny home to having the construction documents ready for me to build the day of graduation.

There are three aspects of research that I will focus on during my thesis. These aspects are the life cycle analysis, design and technology aspects, and the program. Life cycle analysis is defined as the process of assessing the environmental effects associated with production, use, reuse and disposal of a product over its entire useful life. Since I am interested in engineering, I will look at the different ways that I could incorporate robotics into my tiny home. I will be using RVs and tents for this as precedents. The final thing that I will research is the way that program is laid out. My precedents for this would be a typical home, mobile home, and tiny home design for two adults and a child. My focus will be on flex spaces and flow throughout the spaces.

My title Life is Beautiful: An inquire on the use of small living and architectural design. I chose this title because my focus is in looking at the phases of architecture and creating beautiful and life changing architecture with the help of engineering. I aim to transform my families life by creating a small living space that does not only let earth blossom but also our family.

Everyone asks me why I wanted to become an architect. If I had to sum it up, I would say I became an architect so that I could mix my love of art and engineering. Many people refer to an architect as a designer. They typically think we sit inside at desks and play with 3d printers and rendering software.

Designing is a relatively small part of what an architect daily accomplishes. My family and internship experiences have greatly influenced my passion for buildings and the knowledge to understand what an architect does. For instance, my office is typically empty, because everyone is at meetings or on construction sites. Most of our work is in the construction documentation and administration phases. With my thesis I would like to understand the process an architect goes through, from design to the built. The way that I will go through the phases myself is through the design of my own tiny home on wheels.

My goal is to merge elements that I have learned from my Industrial engineering minor. That would be about sustainability to make my home off the grid. This could be the use of tesla batteries, solar panels, compost toilet, etc. Another aspect is looking at the cost of materials, labor costs, and life span of those said materials. The final aspect is to look at the life span of the home and trailer, seeing how it would with stand being moved with relation to the weight of materials and its overall weight. The aspect of architecture in my project would be to look at the spatial quality, because that's huge in roughly 700sqft. Also, to look at the zoning, transportation limits, building classification and the way those are affected by it being able to transport.

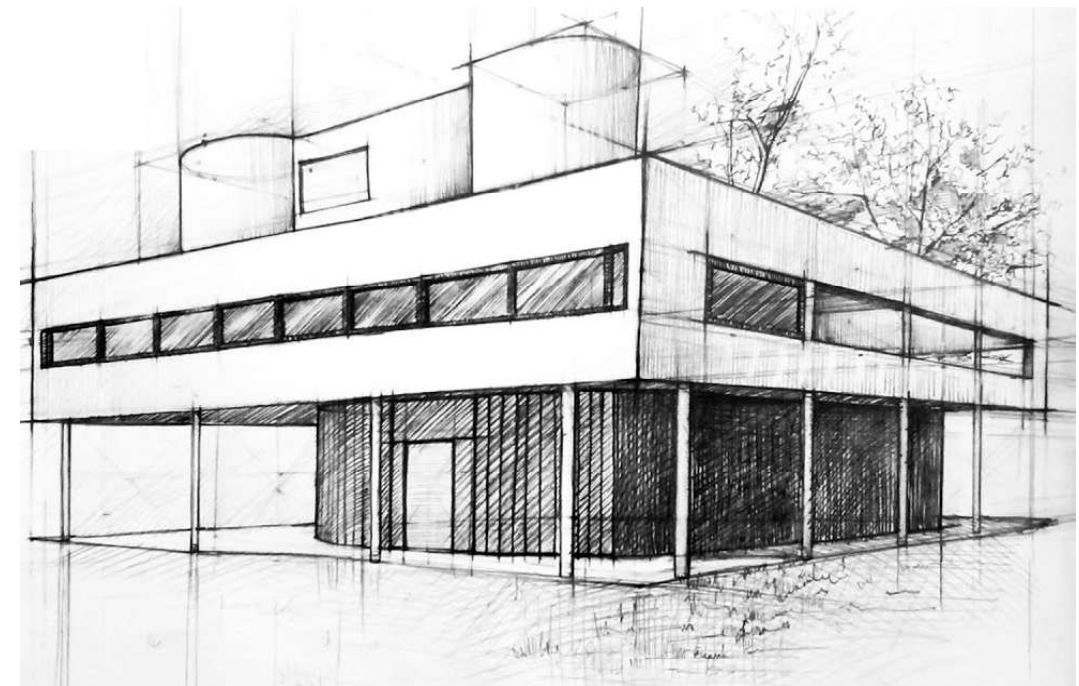
ABSTRACT

For my thesis I am designing a tiny home on wheels, as result of my research. The limitations I hope to overcome are producing a large scale tiny home that is built to replace that of a mobile home. There are many restrictions on mobile homes that by classifying a home as a T.H.O.W. could be resolved.

Tiny homes on wheels are a max of eleven feet by fifty-three feet at the base level. When the home starts to reach that width of twelve feet, the home is classified as a wide load mobile home and needs special permits. [My thesis](#) is investigating the way to keep the size and feel of a mobile home, but create the; mobility, aesthetic and functionality of a tiny home on wheels. By merging these typologies, I hope that the home goes back to the owner not to the corporations and land owners.

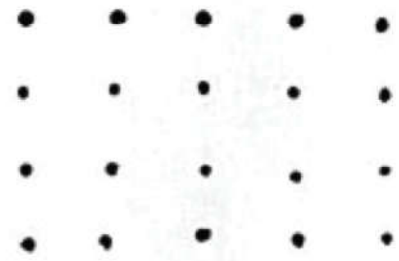
RESEARCH QUESTION

ARCHITECTURE INSPIRATION

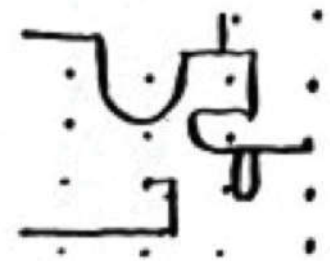
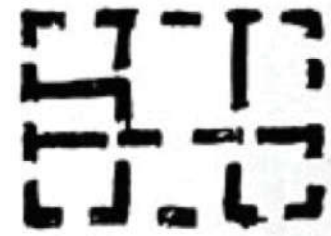


VILLA SAVOYE SKETCH BY LE CORBUSIER

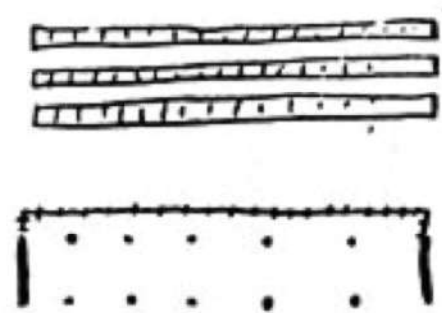
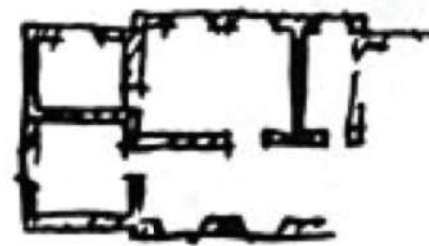
FIVE POINTS OF ARCHITECTURE BY LE CORBUSIER



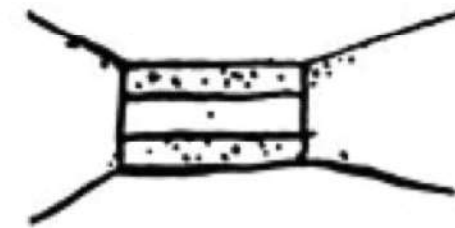
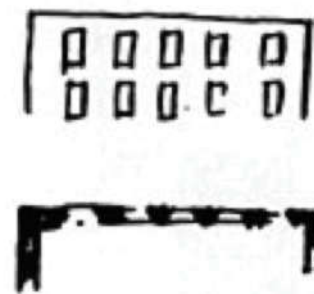
1. PILOTIS



2. FREE PLAN



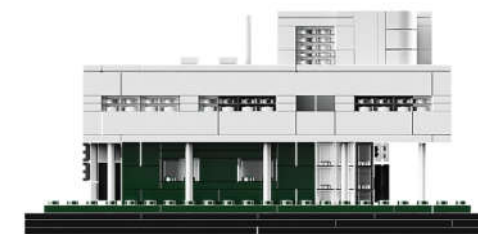
3. FREE FAÇADE



4. RIBBION WINDOWS THAT SLIDE SIDEWAYS



5. ROOF GARDEN



LEGO ARCHITECTURE MODEL





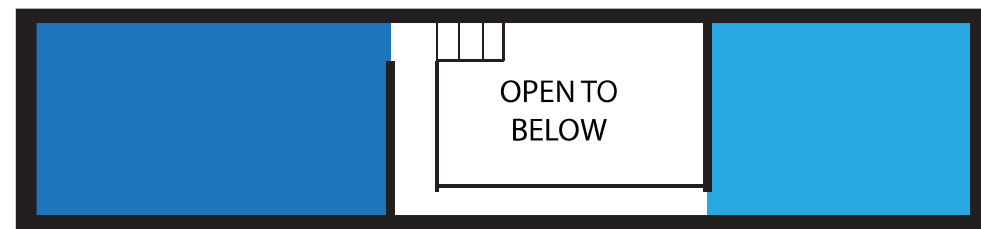
TWO

CASE STUDIES

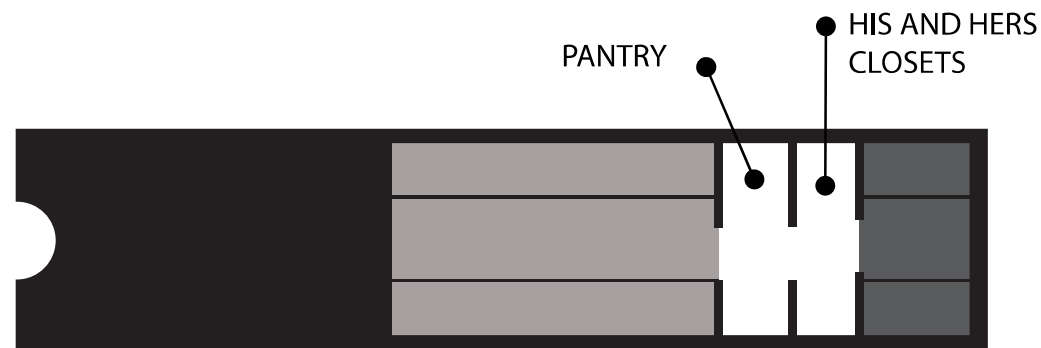
Chapter 2 is where I will compare and contrast the six small home case studies. These studies range from tiny homes on trailers to foundations. The five-component structure to quantify this investigation is; person quantity, type of home, cost of the build, location and the square footage. When flipping through this chapter there will be icons that correlate with these five components. After looking at that data there will be conceptual spatial plans per case study. These show program relationship and size comparisons.

2 | CASE STUDIES

- BATHROOM
- ROOM
- KITCHEN
- LIVING ROOM
- MASTER BEDROOM
- OTHER PROGRAM



SECOND FLOOR
SCALE 1/8"=1'0"



FIRST FLOOR
SCALE 1/8"=1'0"

This was my first case study choice. This is a Tiny Home on the Wheels or a T.H.O.W. According to Living Big in a Tiny Home, this house was built for a couple living in Victoria. This T.H.O.W. comes out to 400 SQFT, not including the loft bedrooms and connecting catwalk. The cost for this T.H.O.W is about 57,000 dollars. There is a full-size shower and sky lights.

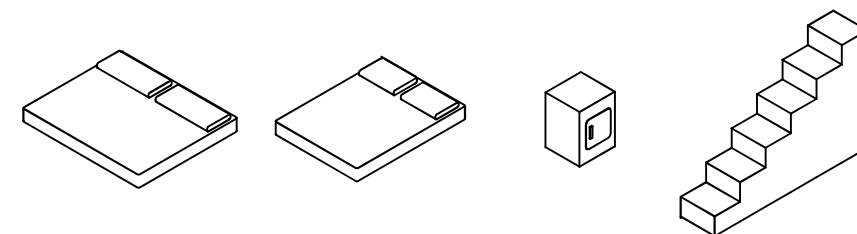


Fig. 2.1: ULTRA MODERN TINY HOME ON WHEELS

BATHROOM
 ROOM
 KITCHEN
 LIVING ROOM
 MASTER BEDROOM
 OTHER PROGRAM



SECOND FLOOR
SCALE 1/8"=1'0"



FIRST FLOOR
SCALE 1/8"=1'0"

This was my second case study choice. This T.H.O.W has one level, at about 430 SQFT. It is designed for a family of four people. It is an earthquake resistant T.H.O.W This house is placed in New Zealand and was built for 55,000 dollars. There is a doghouse under the porch.

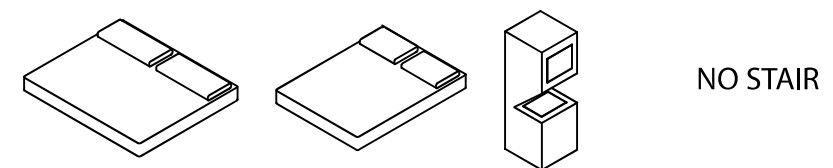
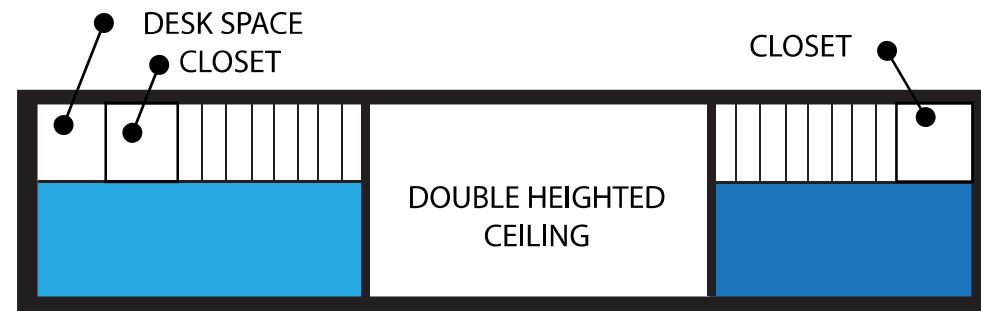
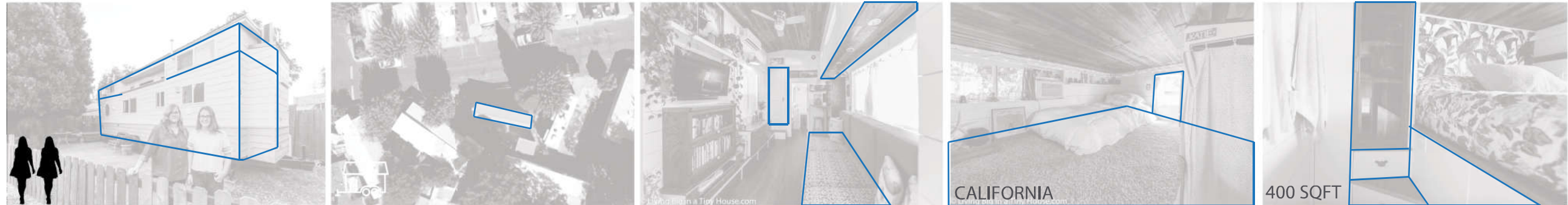


Fig. 2.2: PASSIVE TINY HOME ON WHEELS

- BATHROOM
- ROOM
- KITCHEN
- LIVING ROOM
- MASTER BEDROOM
- OTHER PROGRAM



SECOND FLOOR
SCALE 1/8"=1'0"



FIRST FLOOR
SCALE 1/8"=1'0"

This was my third case study choice. A mother and her daughter live in this two-bedroom T.H.O.W. They live in California, at a mobile home park. The mother built this home, majority by herself. There are two rooms and two stairs. The stairs are lower than the second floor to allow for standing and for closets.

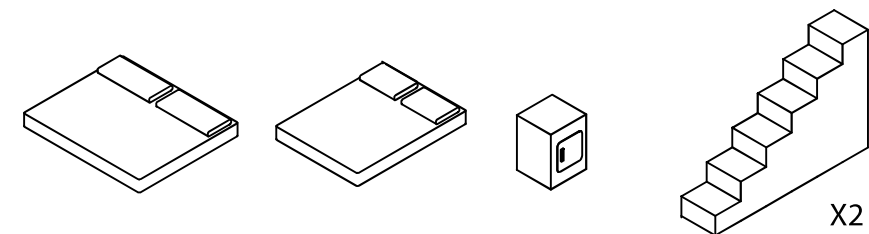
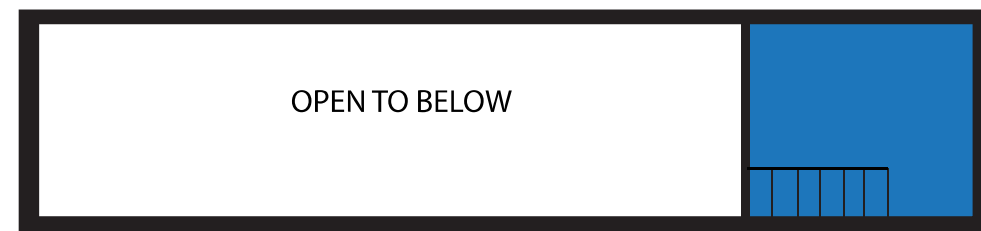


Fig. 2.3: TWO BEDROOM TINY HOME ON WHEELS

BATHROOM
 ROOM
 KITCHEN
 LIVING ROOM
 MASTER BEDROOM
 OTHER PROGRAM



SECOND FLOOR
SCALE 1/8"=1'0"



FIRST FLOOR
SCALE 1/8"=1'0"

This was my fourth case study choice. This house is different because it is a tiny house on a foundation. The pool is about the same size as their house. A family of four (a couple and two small daughters). They live in this house in New South Wales. This is a 340 SQFT house, not counting the triple bunks, and parents' upstairs bedroom.

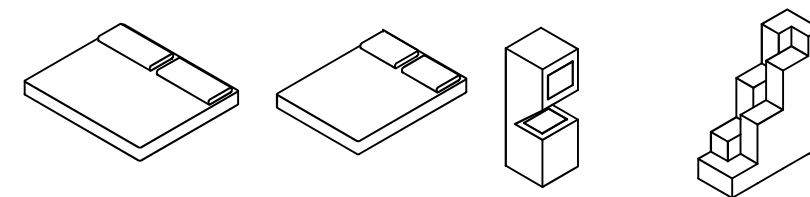


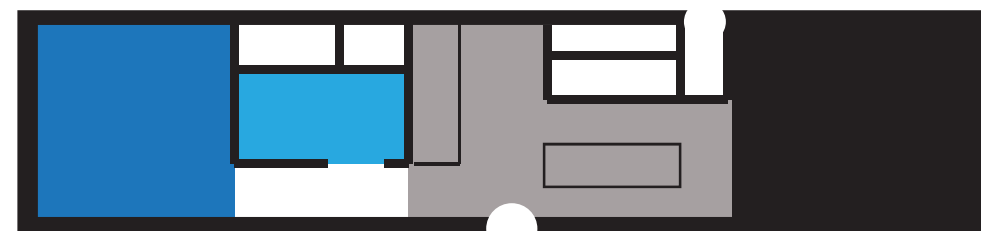
Fig. 2.4: INDOOR/OUTDOOR LIVING TINY HOME ON A FOUNDATION

BATHROOM
 ROOM
 KITCHEN
 LIVING ROOM
 MASTER BEDROOM
 OTHER PROGRAM



SECOND FLOOR
SCALE 1/8"=1'0"

This was my fifth case study choice. This is a modern style mobile home or a prefab home, set on concrete masonry unit blocks or cmu. This house is about 300 SQFT and costs about 510,868 dollars. The reason the house can not be permanent is because it sits on a nature reserve.



FIRST FLOOR
SCALE 1/8"=1'0"

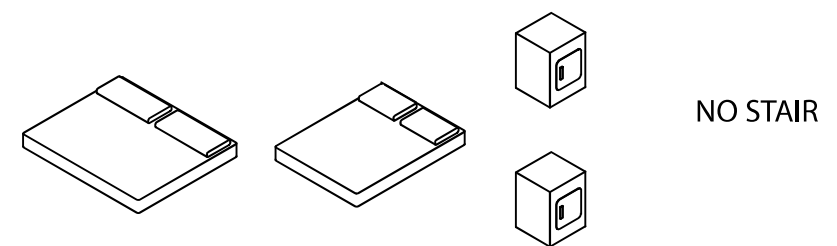
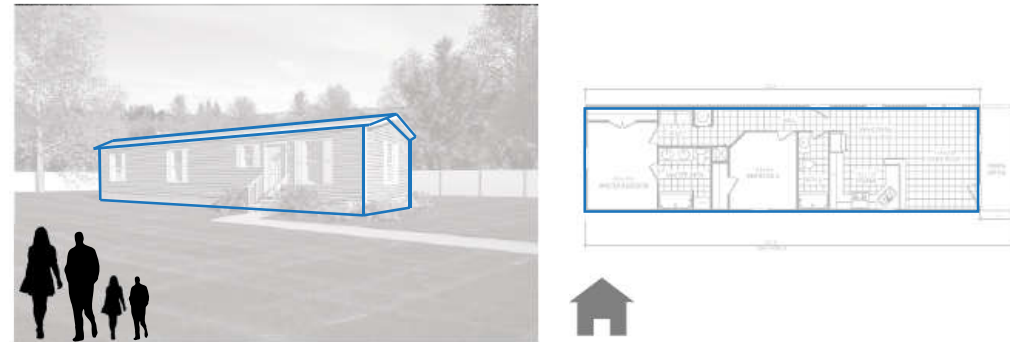


Fig. 2.5: PRE-FAB TINY HOME ON CMU BLOCKS

BATHROOM
 ROOM
 KITCHEN
 LIVING ROOM
 MASTER BEDROOM
 OTHER PROGRAM



SECOND FLOOR
SCALE 1/8"=1'0"



FIRST FLOOR
SCALE 1/8"=1'0"

This was my sixth case study choice. This is also a mobile home that costs about 50,000 dollars. This place is also placed on cmu blocks when at the site. The reason that I chose this house was to show a bad example of a tiny home. It is built on the cheap side, which makes it hard to move after ten years. Though the positive to this house is that it is 930 SQFT, but that does not account for all the wasted storage space or non-second floor/lofts.

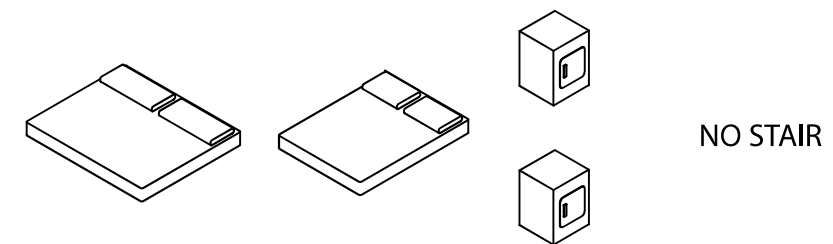


Fig. 2.6: CLAYTON PRE-FAB TINY HOME ON CMU BLOCKS



THREE

CONCEPT STUDIES

Chapter 3 is where I investigated transportation restrictions for different types of homes. There are sketches of the way in which to place windows and solar panels. The basic rooms of a house that I collected from chapter 2 were studied here. I also created a 3D physical program model, to look at overlapping spaces. This model correlates to a matrix that I created for space connections. The last thing studied in this chapter, is the way the sun moves over the year and the best placement to maximize natural light.

3 | CONCEPT STUDIES

There are many factors that come with creating a T.H.O.W. There are the hauling loads and dimensions, the space qualities, programming and design. Here I am talking about the hauling loads and dimensions. Out of my case studies I talked about three T.H.O.W's and two mobile homes. The hauling loads and dimensions are controlled by AAA. (Fig. 3.2: HAULING CAPACITY AND DIMENSIONS)

For a T.H.O.W they are:

- Total length is 100 feet
- Trailer length is 53 feet
- Total width is 10 feet
- Inside house width is 8 feet 6 inches
- Total height is 13 feet 6 inches

For a mobile home they are:

- Considered an oversized load
- They are 13 feet by 68 feet.

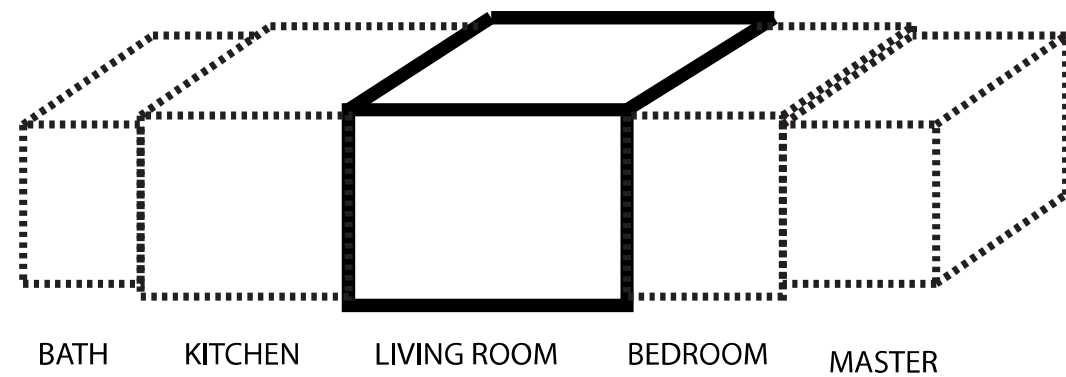


Fig. 3.1: ROOM CONFIGURATION

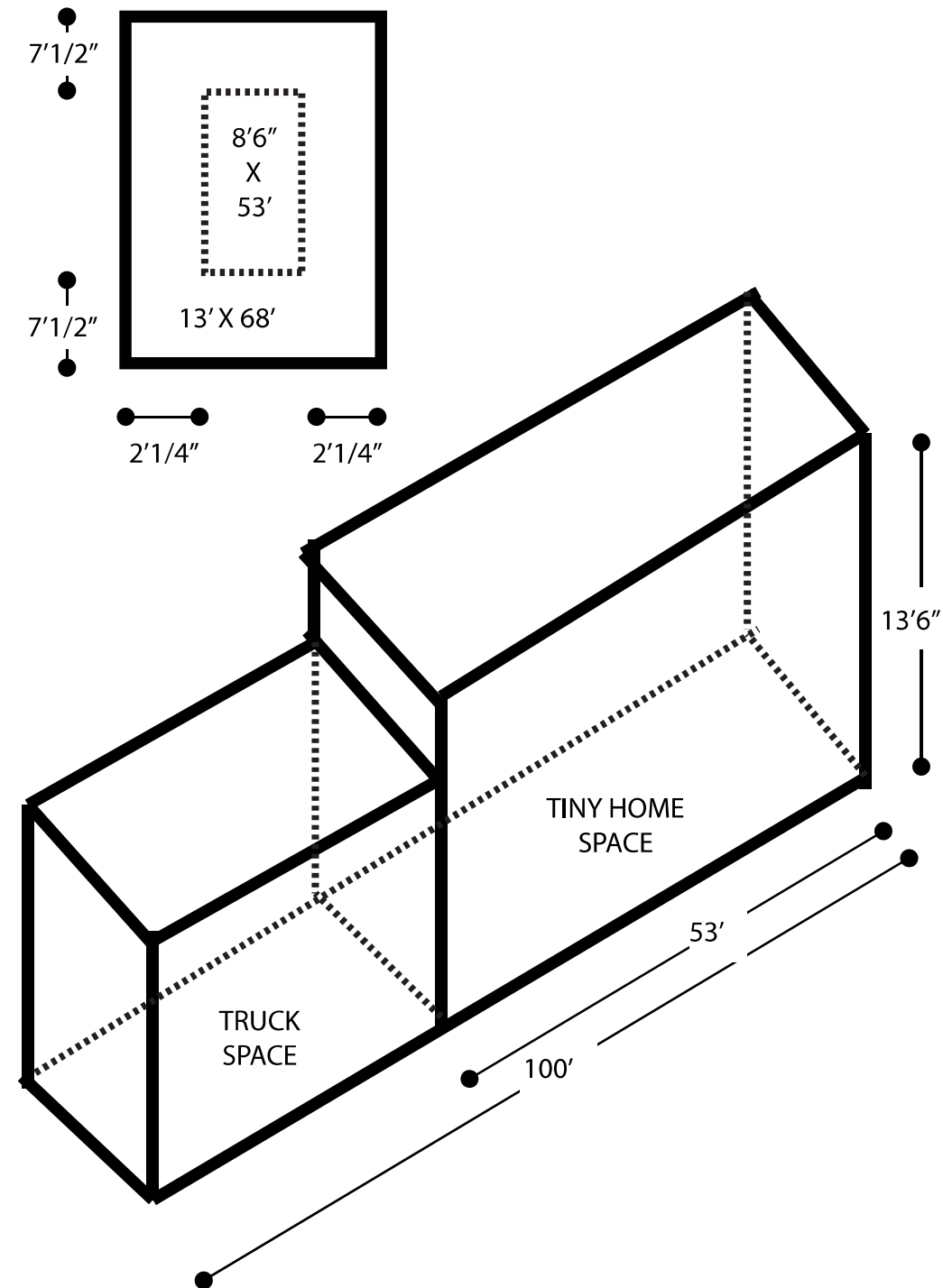


Fig. 3.2: HAULING CAPACITY AND DIMENSIONS

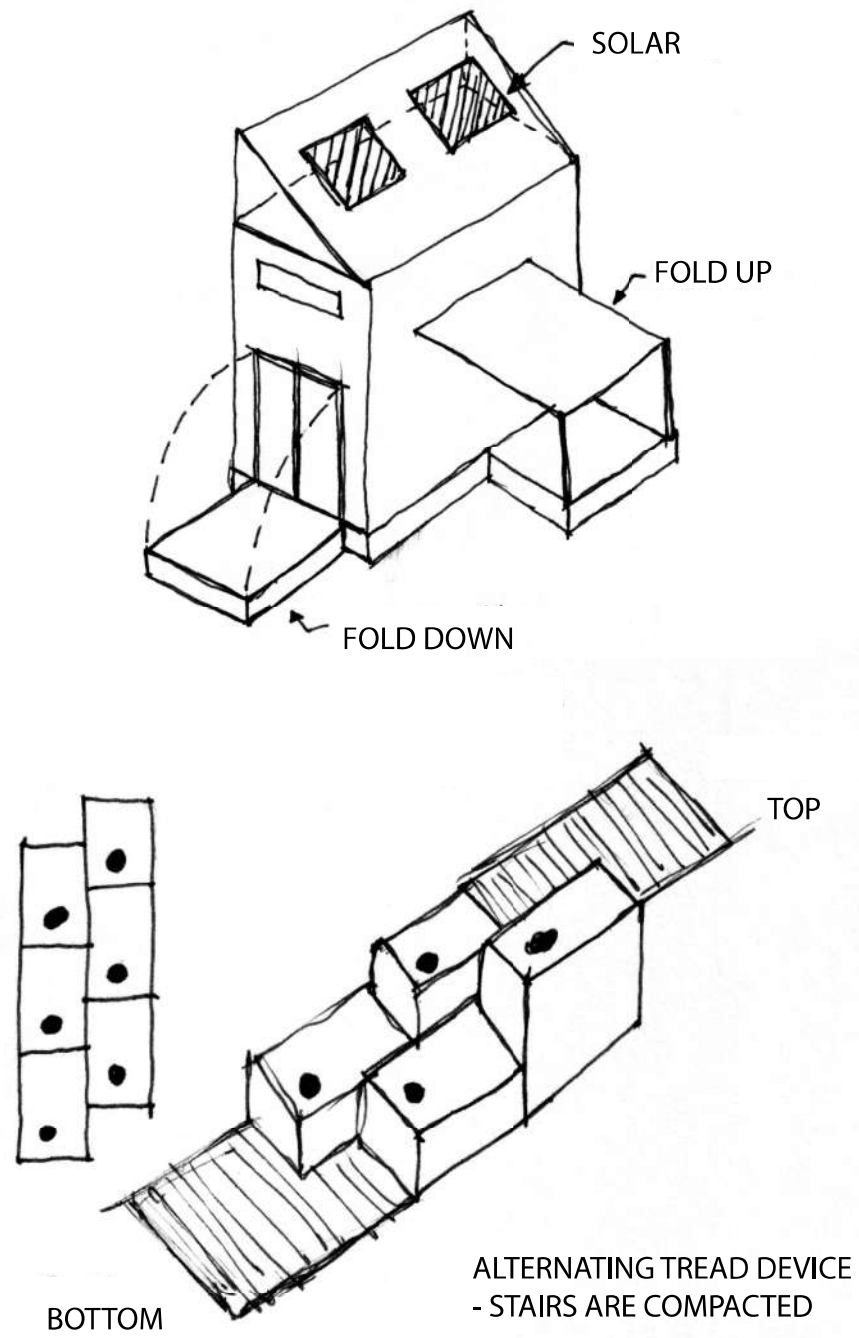


Fig. 3.3: FORM STUDIES

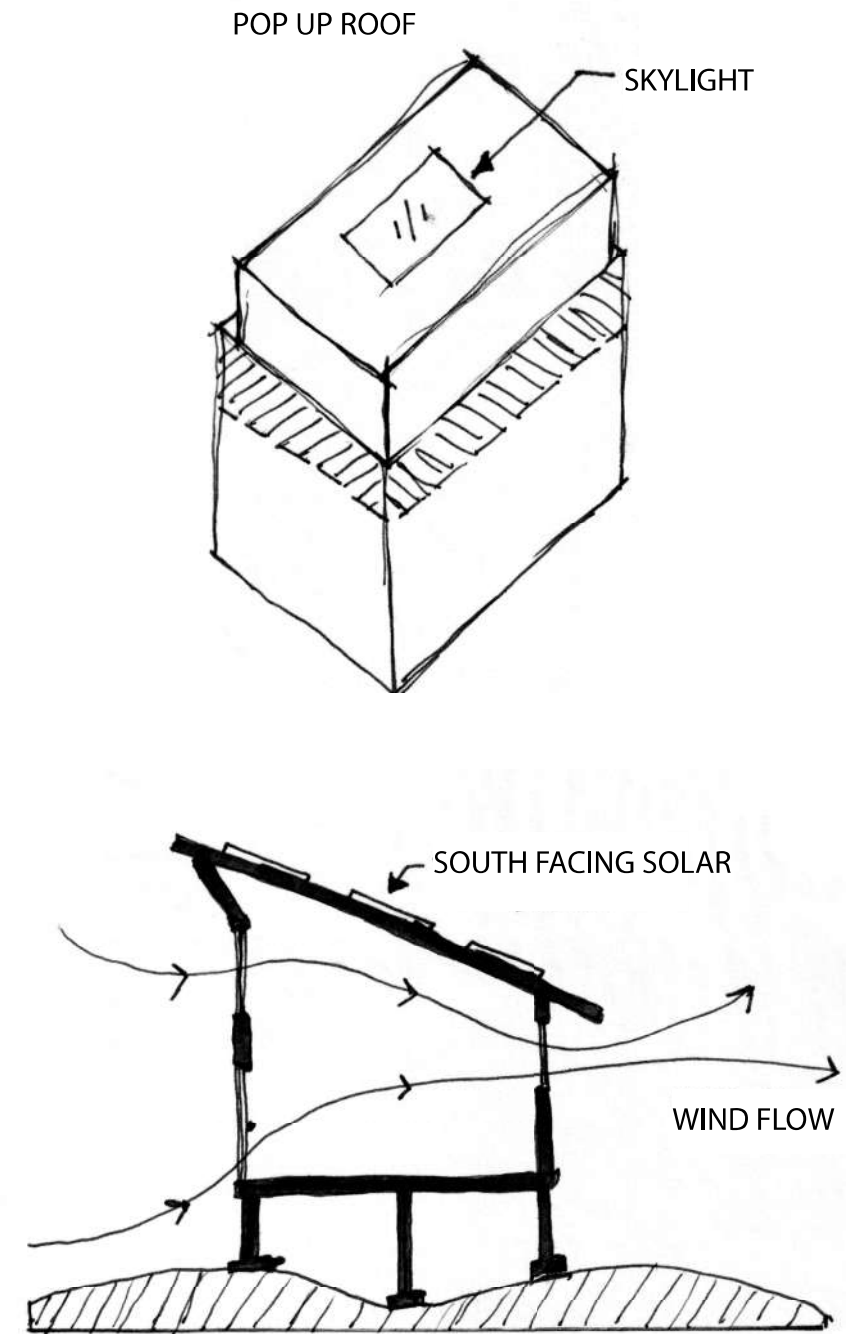


Fig. 3.4: ENVIRONMENTAL STUDIES

PROGRAM STUDIES



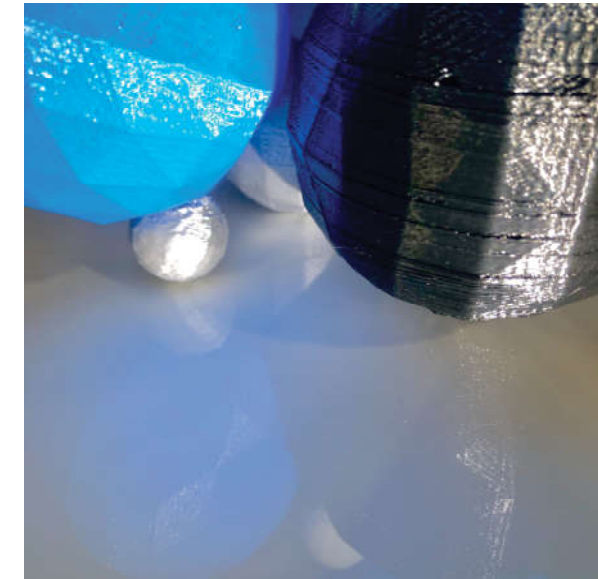
A. OVERALL PROGRAM



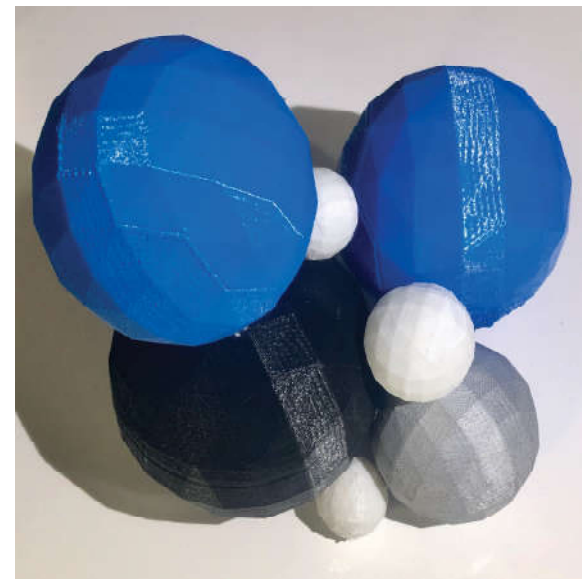
B. KITCHEN AND OTHER PROGRAM



C. BOTH BEDROOMS



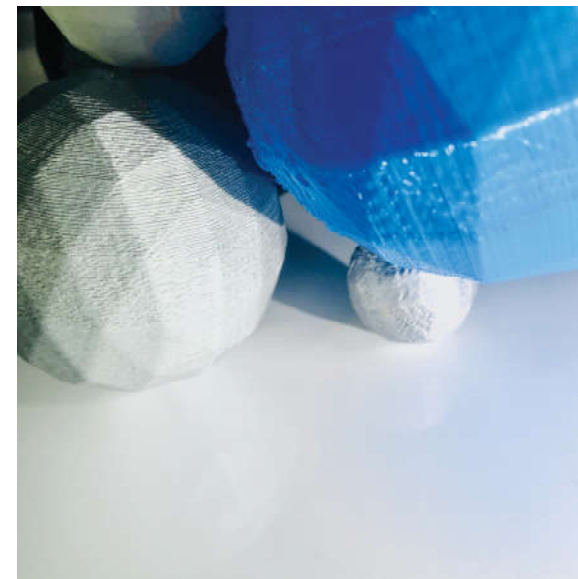
D. LIVING ROOM AND BATHROOM



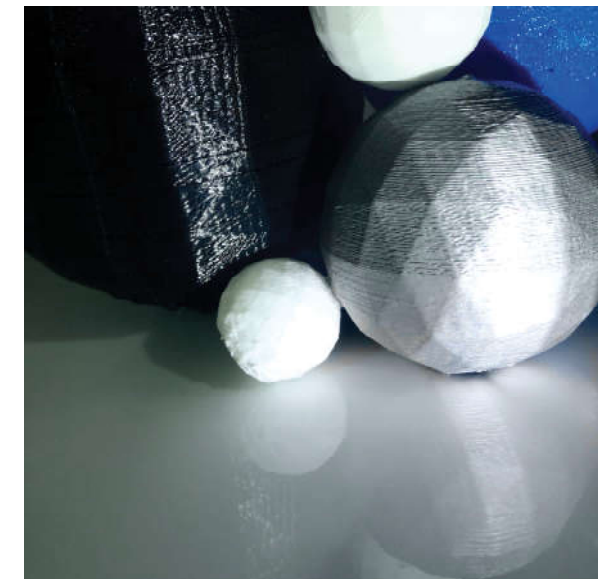
E. OVERALL PROGRAM



F. OVERALL PROGRAM



G. KITCHEN, BATH AND BEDROOM



H. LIVING ROOM, AND KITCHEN

Fig. 3.5: SPHERICAL STACKING PROGRAM MODEL

SPHERICAL STACKING PROGRAM MODEL

If you look at Fig. 3.1 on the left of this text, you will see a study model. This is a spherical stacking program model. They represent room types at 1/4"=1'0" scale. When the spheres touch, that means those rooms should be side by side. When they are not close together, that means the rooms should not be close. (Fig. 3.1: A-H)

DESIGN MATRIX

Fig. 3.6: DESIGN MATRIX, is illustrated to show an example. As an architect intern and Industrial engineer minor, I use these types of matrix to collect data and look at adjacencies. This lets me quickly recognize which rooms are to be right next to each other by using the large blue dots. The black dots show the rooms that should be in proximity. There are many ways to design and use a matrix. An example from the matrix is to look at the word kitchen on the horizontal side and the word pantry on the vertical side. If you use your fingers to follow them to the blue dot, you will see that the rooms are supposed to be next to each other. This is a useful tool for many uses besides room configurations. (Fig. 3.6: DESIGN MATRIX)

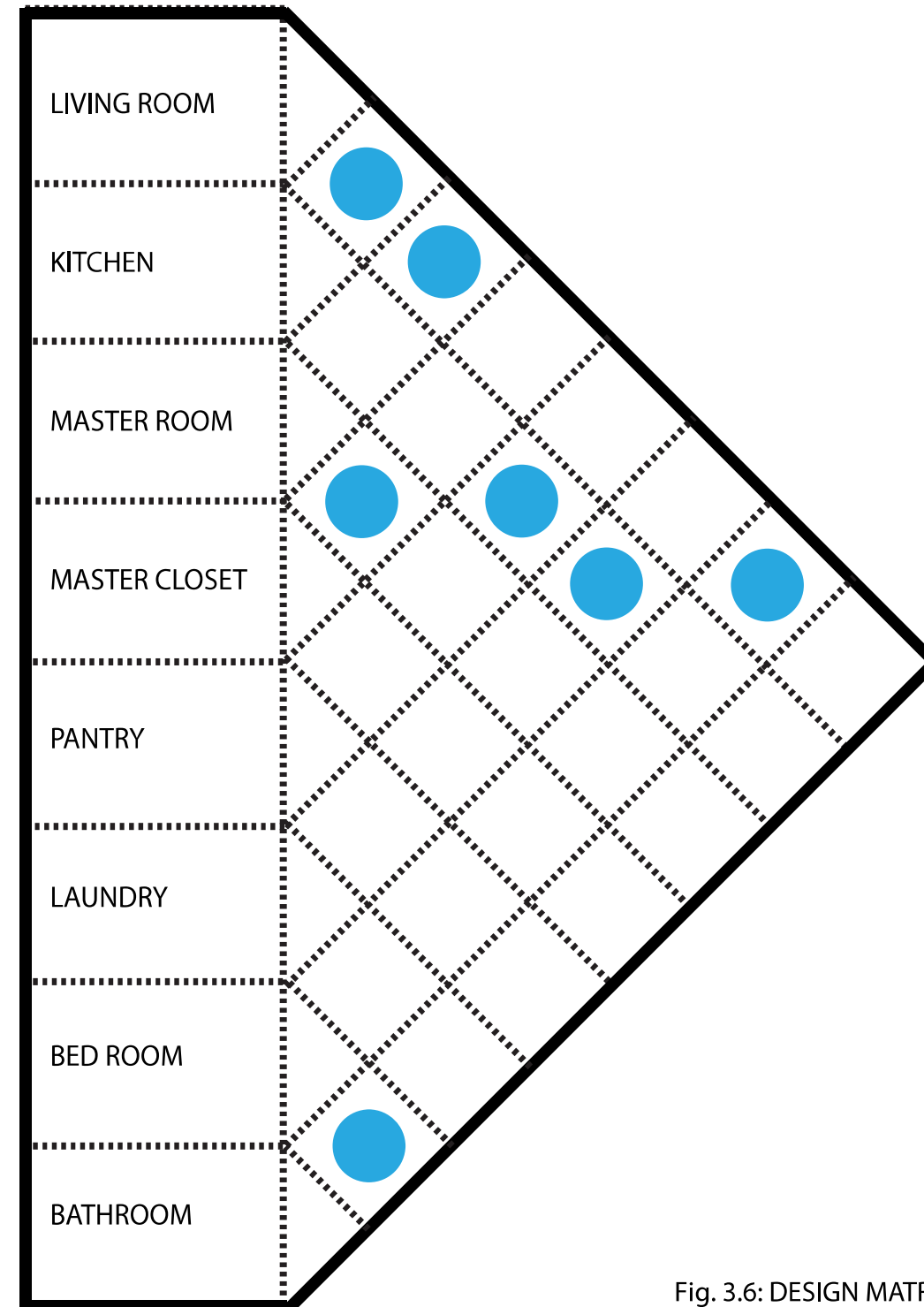


Fig. 3.6: DESIGN MATRIX

LIGHT STUDIES

Figure 3.7 is a top down view of a study model. This model was created using 1/16" acrylic that was painted grey where the walls would be located. This shows the overall SQFT that a T.H.O.W. can be built to.

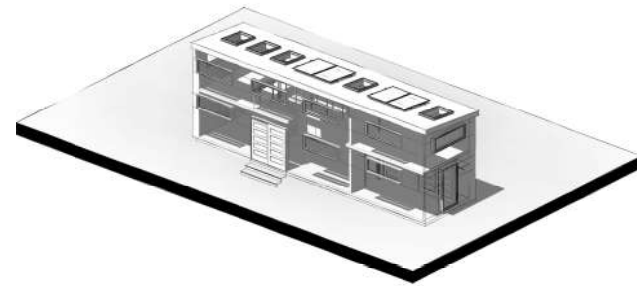


Fig. 3.7: LIGHT AND FORM STUDY

Figure 3.8 is a top down angle view of the same study model. This picture showcases different shadows that could be produced. The model also shows where doors could be placed to maximize the space.

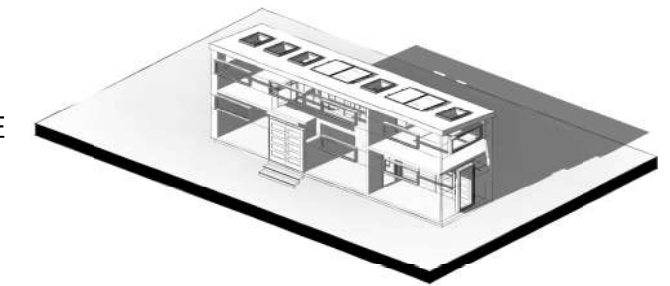


Fig. 3.8: LIGHT AND FORM STUDY

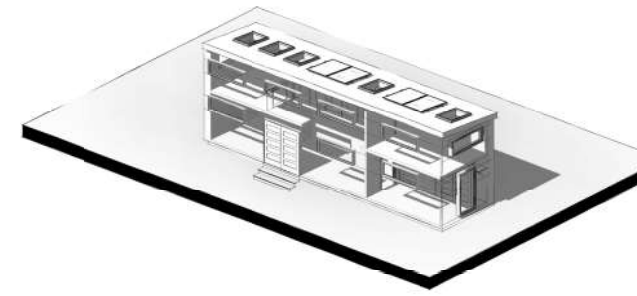
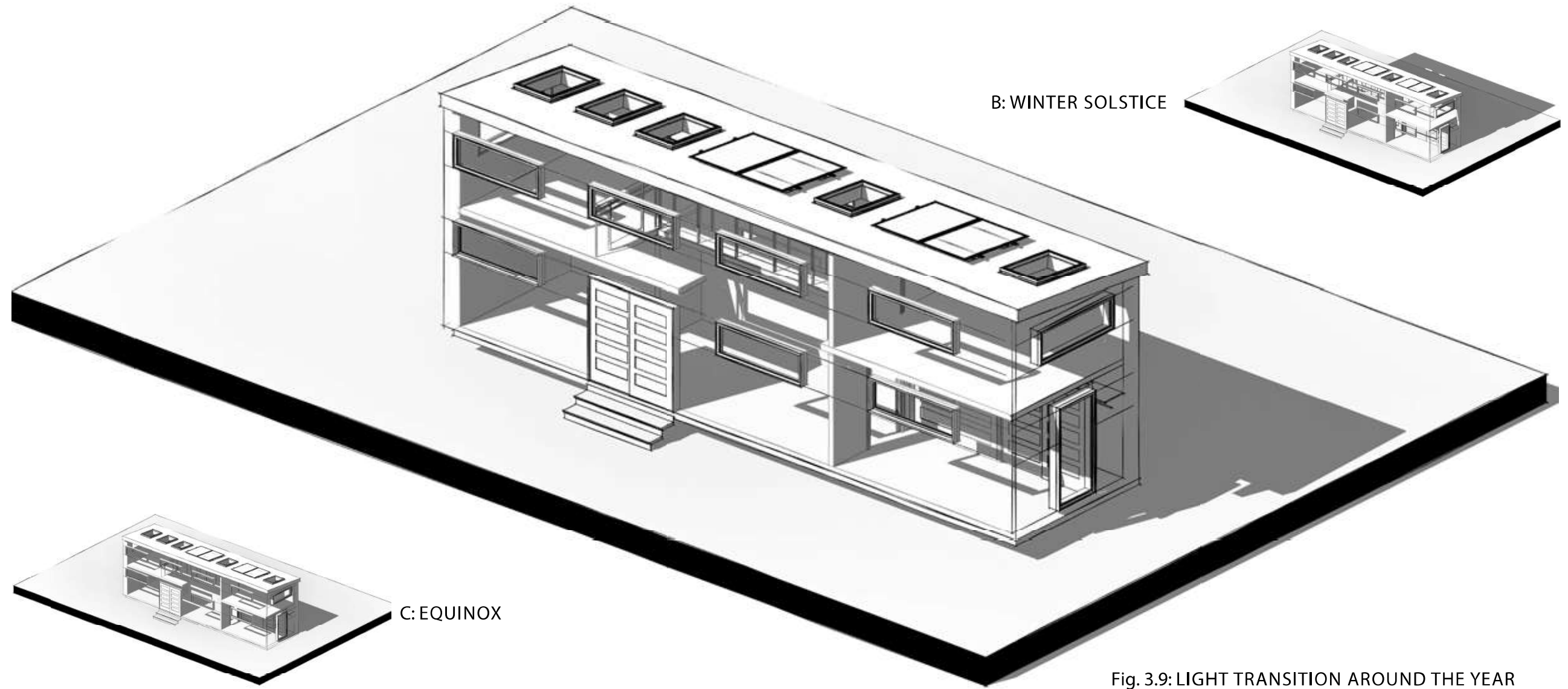


A: SUMMER SOLSTICE

Figures 3.7,3.8 and 3.9 represent the dimensions of T.H.O.W's and the placement of windows. When you live in a space of about 200 SQFT – 400 SQFT, natural light is very important. Most windows would be placed as ribbon windows. This is do to the fact that it is dead wall space and light that will not glare on T.V.s or computer screens.



B: WINTER SOLSTICE



C: EQUINOX

Fig. 3.9: LIGHT TRANSITION AROUND THE YEAR



FOUR

DESIGN STRATEGIES

Chapter 4 investigates 7 program diagrams, based off my case studies (chapter 2). These program diagrams look at the way spaces overlap and the way spaces should be connected. The matrix and 3D physical program model, was the base for these diagrams. As seen in figure 4.1, which is the matrix translated into a program diagram. The second part to chapter 4 is the investigation of spaces between flatbed and gooseneck floor plans. The last part of this chapter is a LEGO like model investigation to figure out the final design for chapter 5.

4 | PROGRAM DIAGRAMS

● BATHROOM ● ROOM ● KITCHEN ● LIVING ROOM ● MASTER BEDROOM ○ OTHER PROGRAM

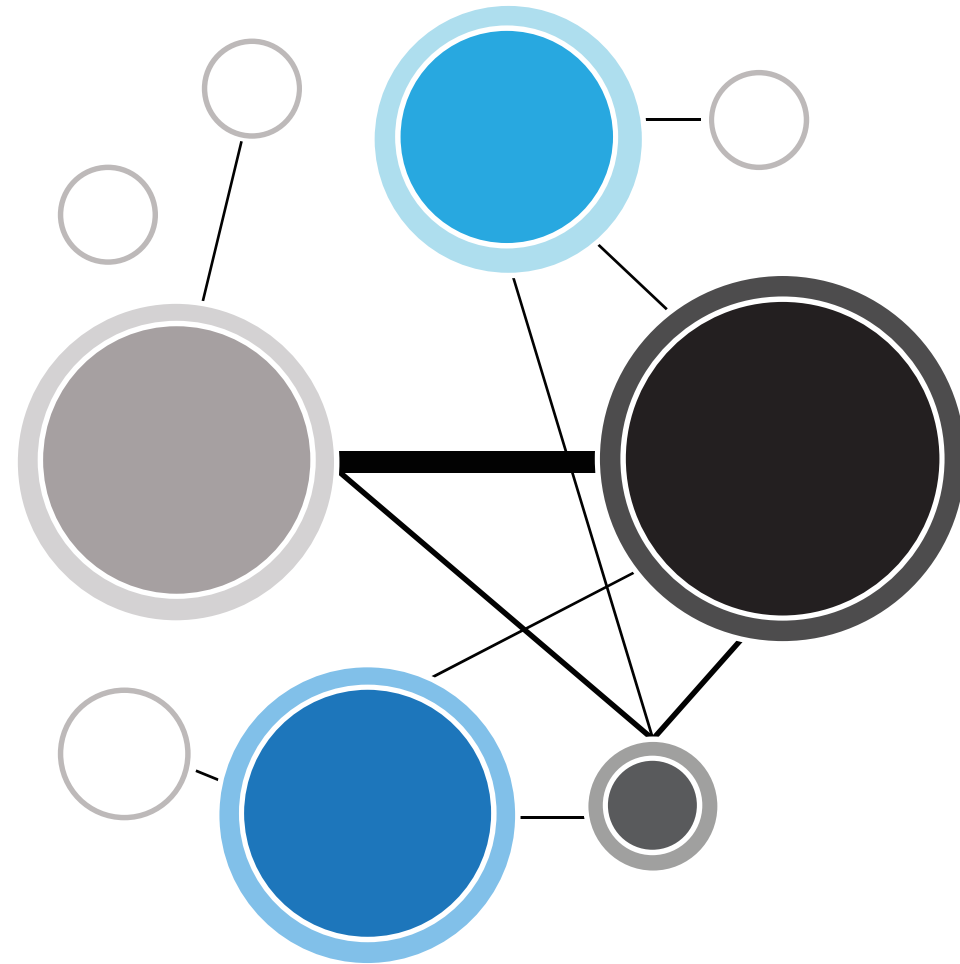
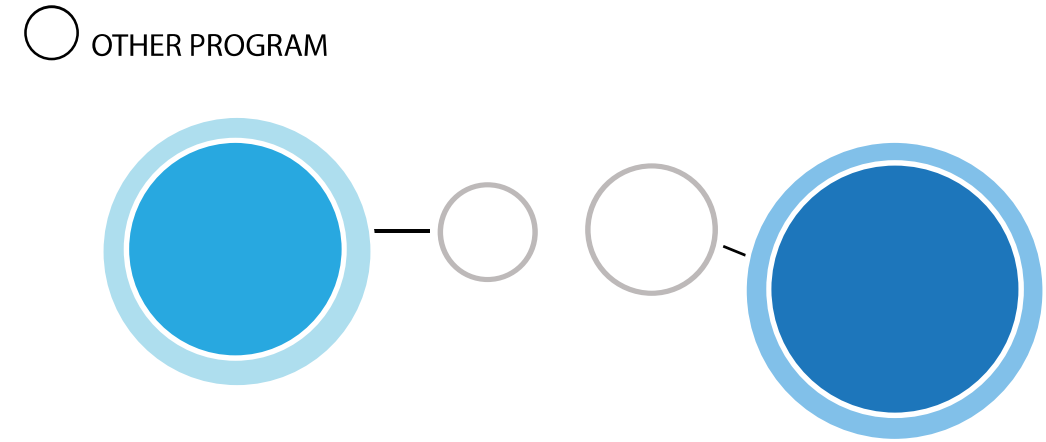
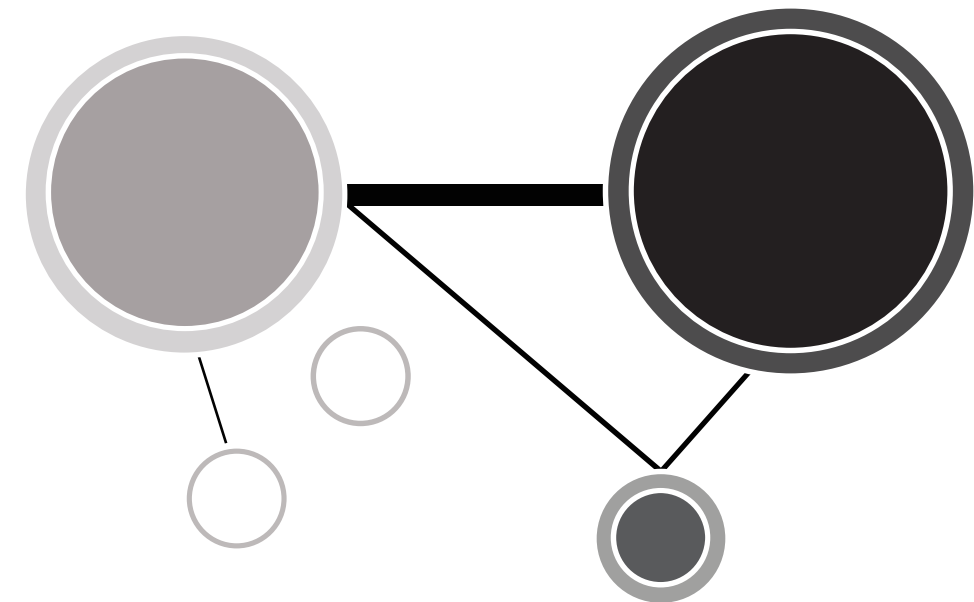


Fig 4.1: ALL PROGRAM

A bubble diagram is a diagrammatic drawing that is predominantly used by architects and interior designers for space planning. These bubble diagrams mixed with a matrix are what set the motion for the next phases architecture. The bubble diagrams that I have created are to explain room adjacencies.

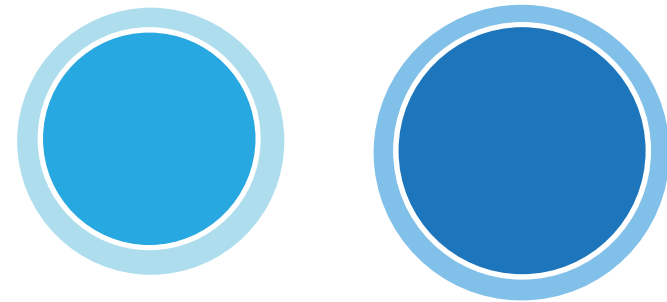


SECOND FLOOR
On this floor, each bedroom has its own closet.

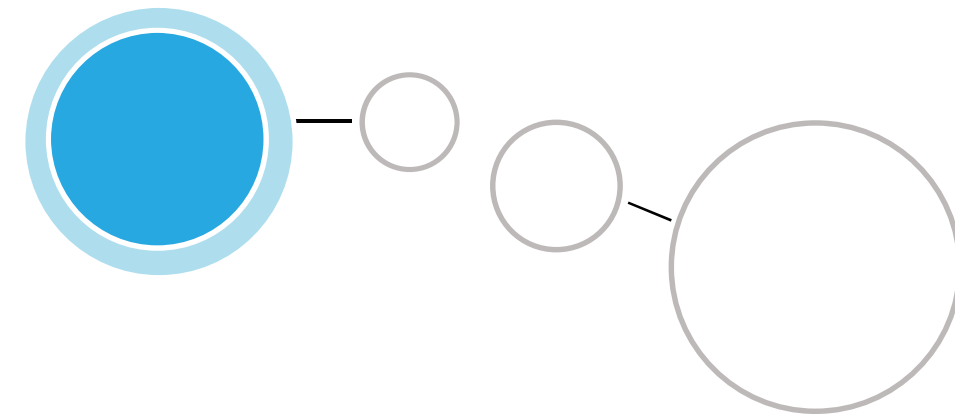


FIRST FLOOR
Fig 4.2: On this floor, the kitchen is attached to the pantry. The bathroom is attached to the kitchen and living rom to create a triangle.

● BATHROOM ● ROOM ● KITCHEN ● LIVING ROOM ● MASTER BEDROOM

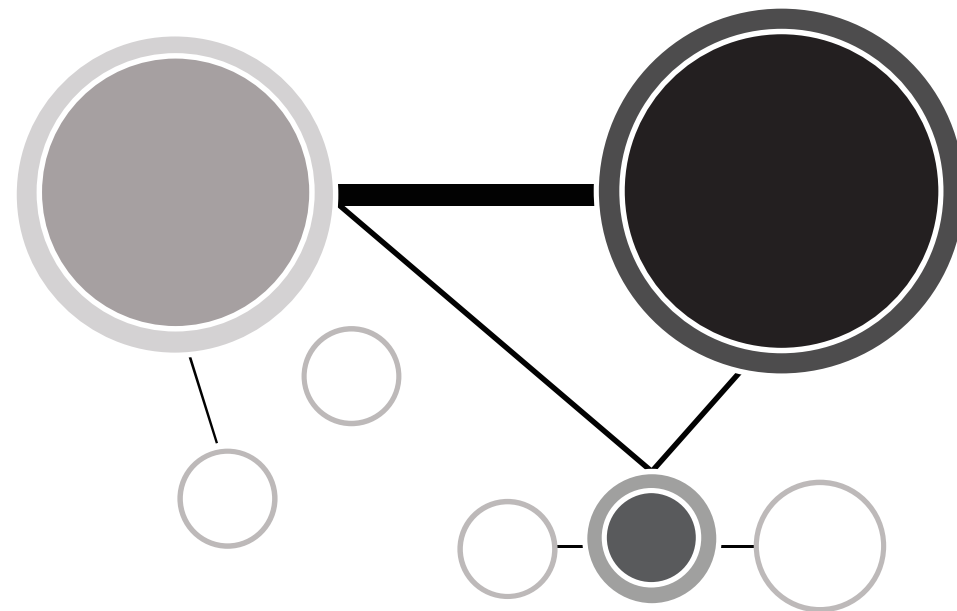


○ OTHER PROGRAM



SECOND FLOOR

On this floor, each bedroom has no closet.

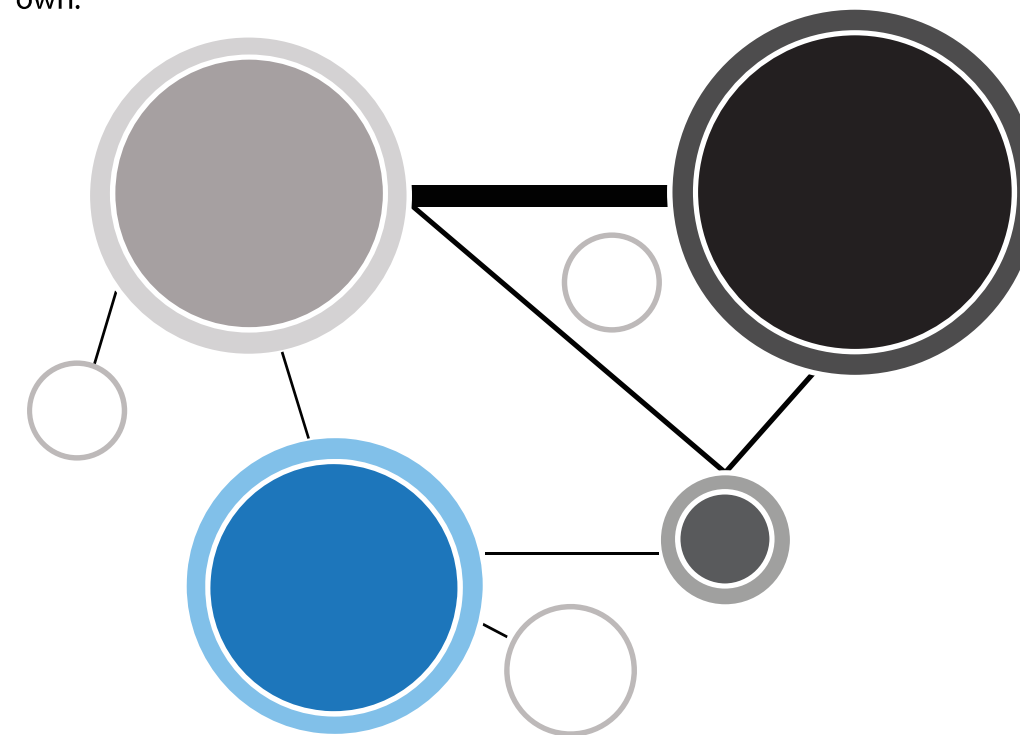


FIRST FLOOR

Fig 4.3: On this floor, the bathroom creates a triangle with the kitchen and living. The closets are off the bathroom. The pantry is off the kitchen.

SECOND FLOOR

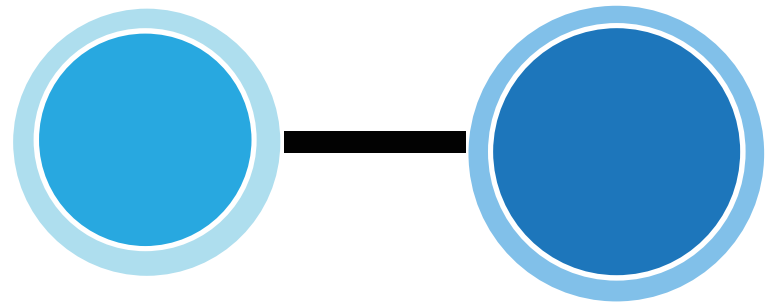
On this floor, the bedroom has a closet. There is a spare room with a closet of its own.



FIRST FLOOR

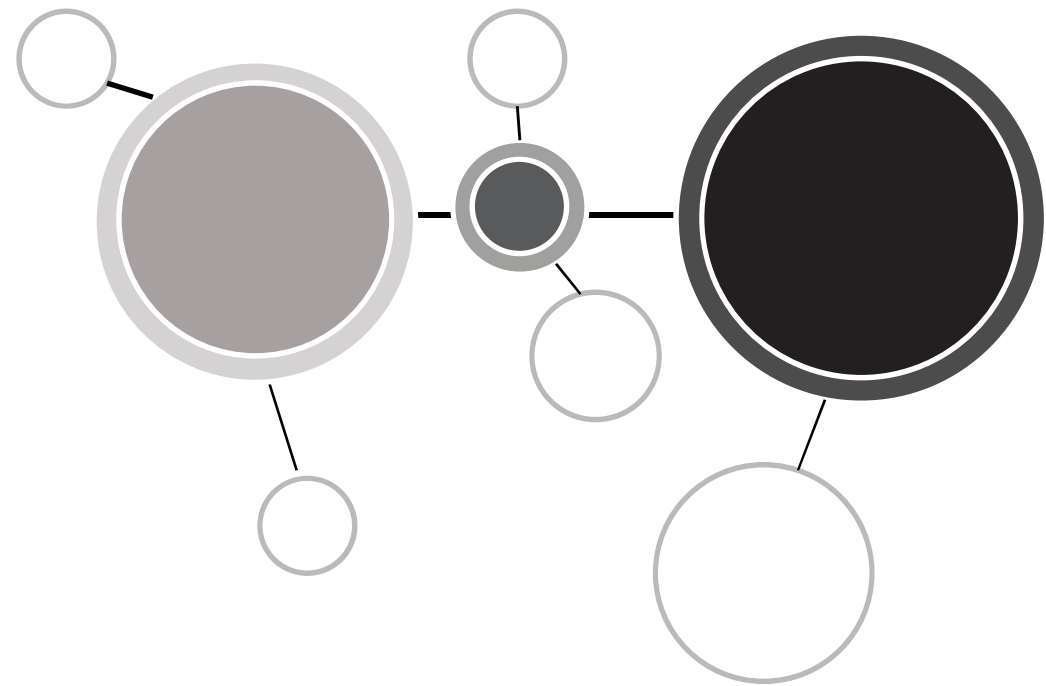
Fig 4.4: On this floor, the kitchen is attached to the pantry. The bathroom is attached to the kitchen and living room to create a triangle.

● BATHROOM ● ROOM ● KITCHEN ● LIVING ROOM ● MASTER BEDROOM



SECOND FLOOR

On this floor, each bedroom are directly connected by a catwalk.



FIRST FLOOR

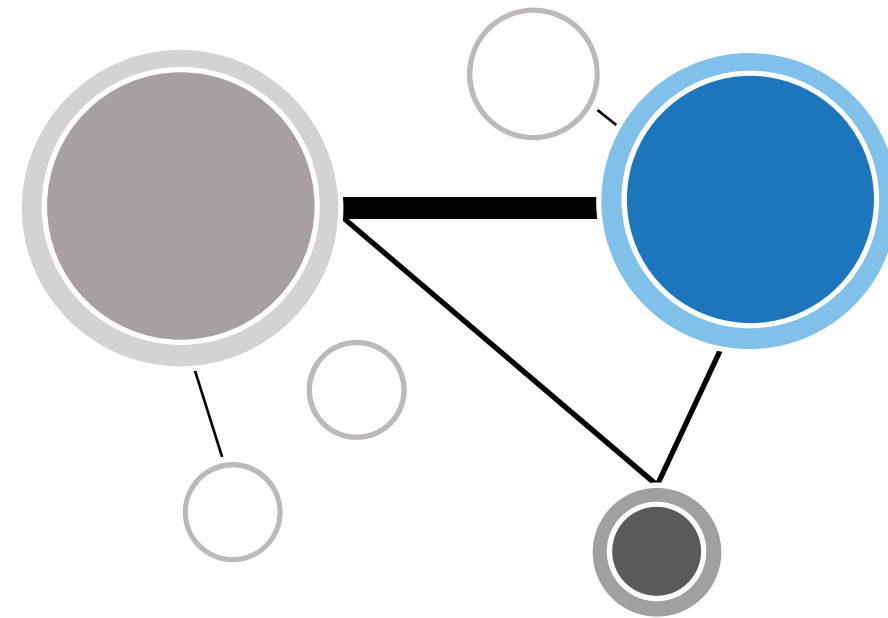
Fig 4.5: On this floor, the kitchen is attached to the pantry and lundry. The bathroom is attached to the kitchen and living.

○ OTHER PROGRAM



SECOND FLOOR

On this floor, the bedroom has a closet and there is the living room.



FIRST FLOOR

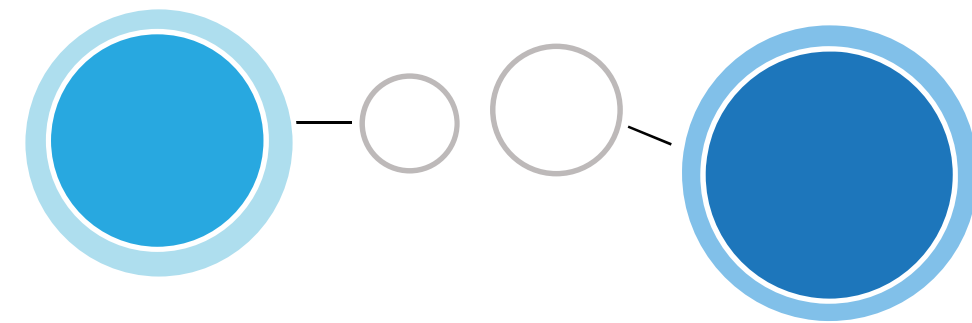
Fig 4.6: On this floor, the kitchen is attached to the pantry. The bathroom is attached to the kitchen and master to create a triangle.

● BATHROOM ● ROOM ● KITCHEN ● LIVING ROOM ● MASTER BEDROOM

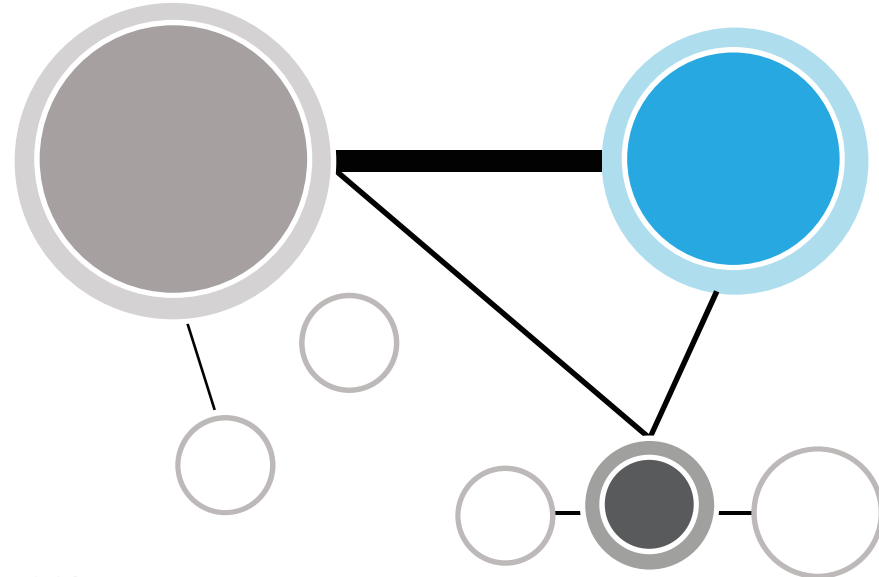


SECOND FLOOR
On this floor, there is the master bedroom and the living room.

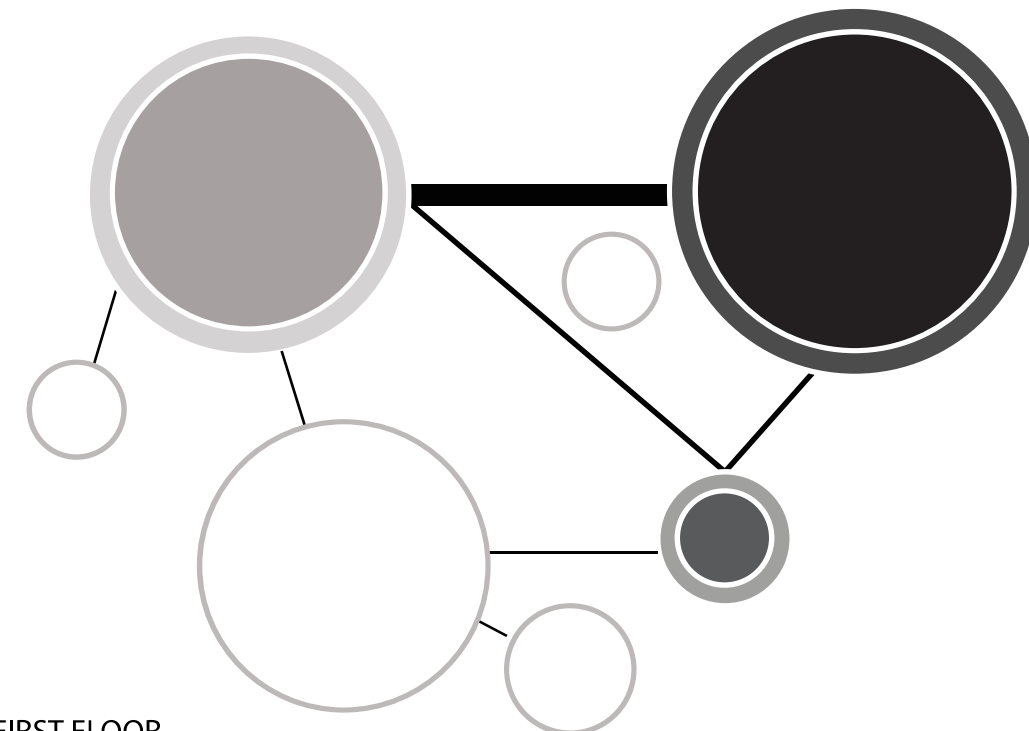
○ OTHER PROGRAM



SECOND FLOOR
On this floor, each bedroom has its own closet.



FIRST FLOOR
Fig 4.7: On this floor, the kitchen is attached to the pantry. The bathroom is attached to the kitchen and bedroom to create a triangle.



FIRST FLOOR
Fig 4.8: On this floor, there is a office off the kitchen. The bathroom is attached to the kitchen and living room to create a triangle.

There are seven program diagrams and one overall program diagram in chapter 4. Architects use program diagrams for space planning. These are diagrammatic drawings that are used early in the design phase.

The main data that has been gathered, is to have the bedrooms as lofts. The other thing is to have the bathroom, kitchen and the living room on the main floor. The kitchen will have a pantry and be used as circulation. There should be a direct connection from the living room to the kitchen.

PROGRAM DIAGRAMS CONCLUSION

FLATBED FLOOR PLANS

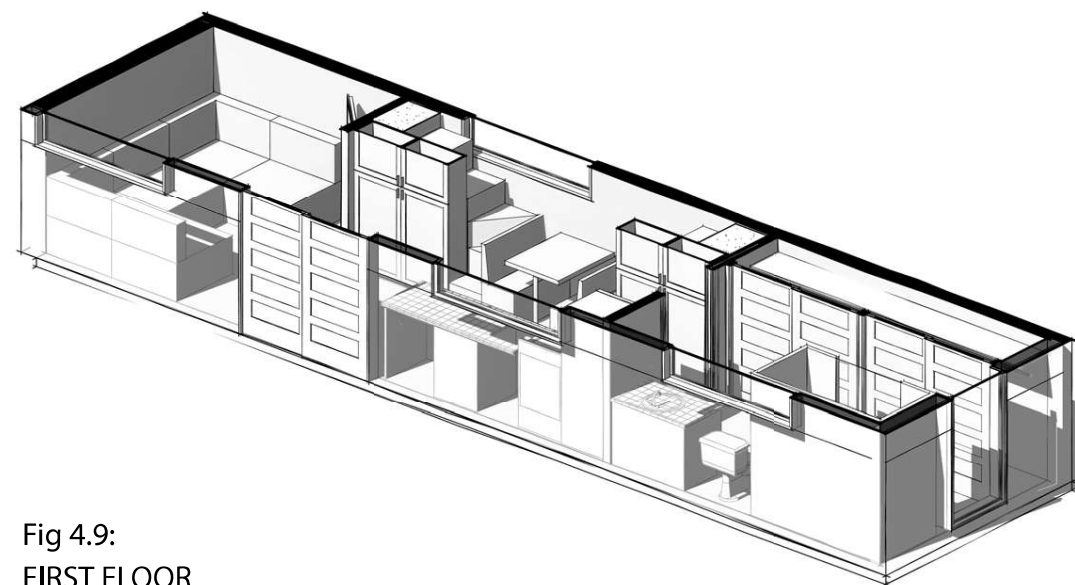
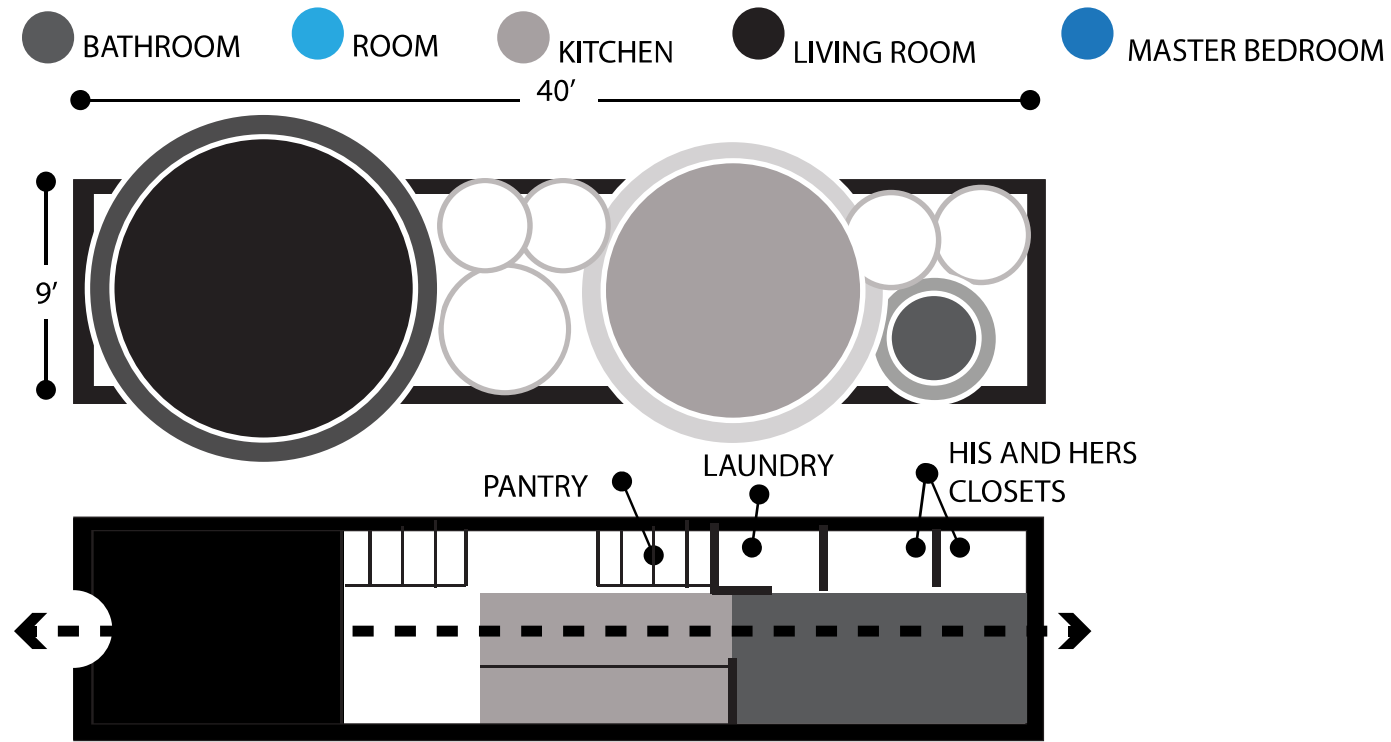


Fig 4.9:
FIRST FLOOR

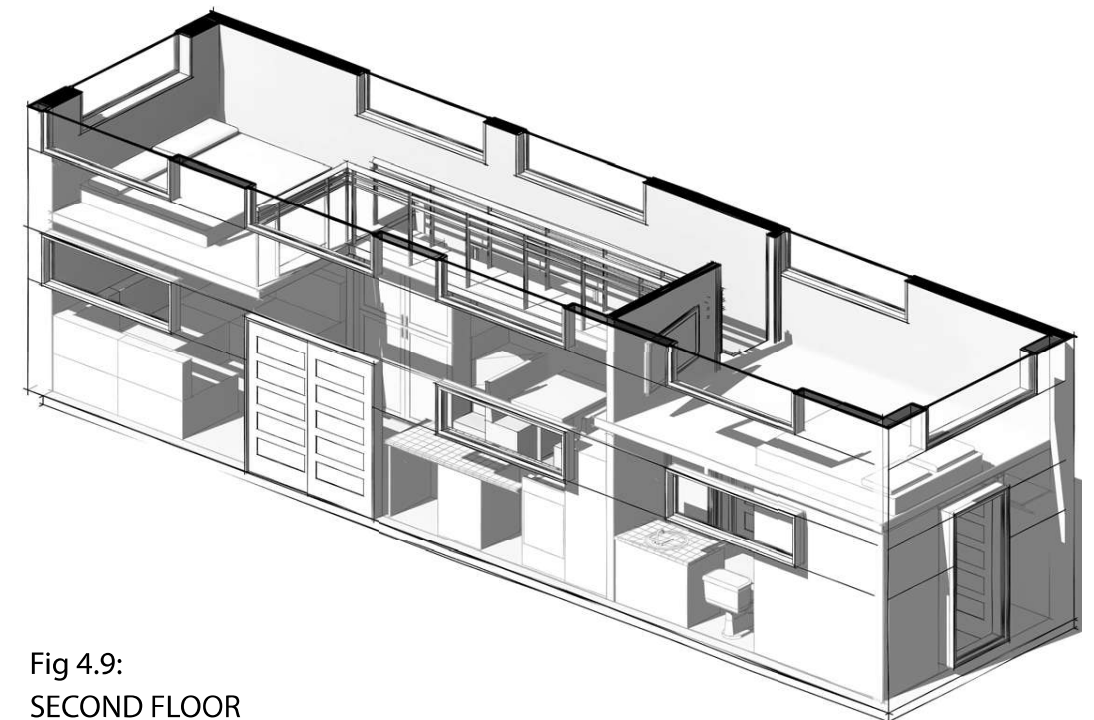
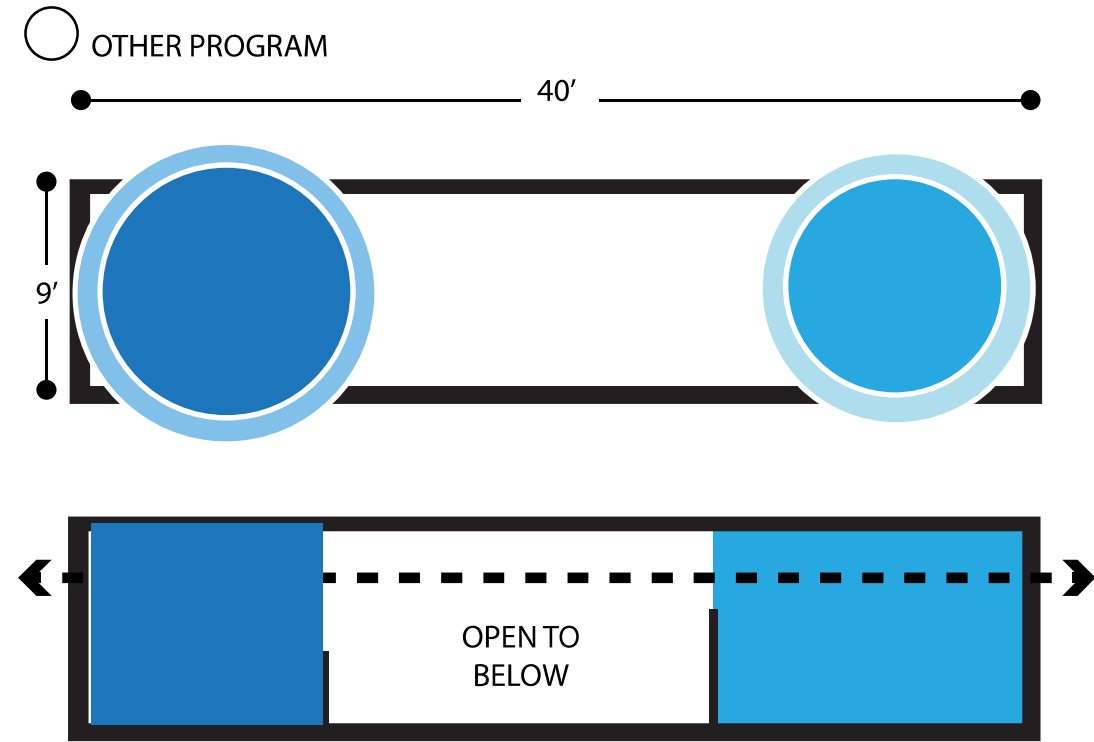


Fig 4.9:
SECOND FLOOR

GOOSENECK FLOOR PLANS

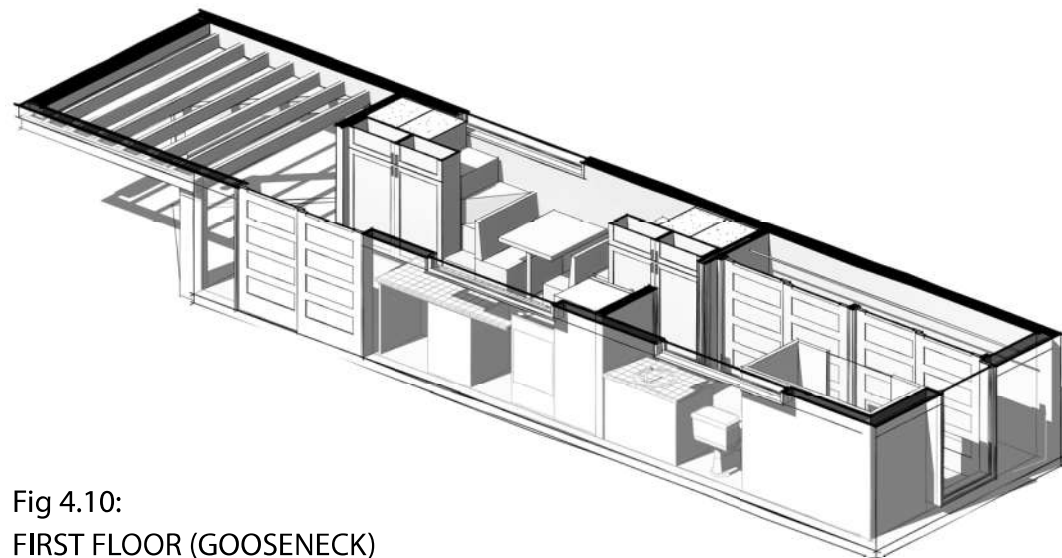
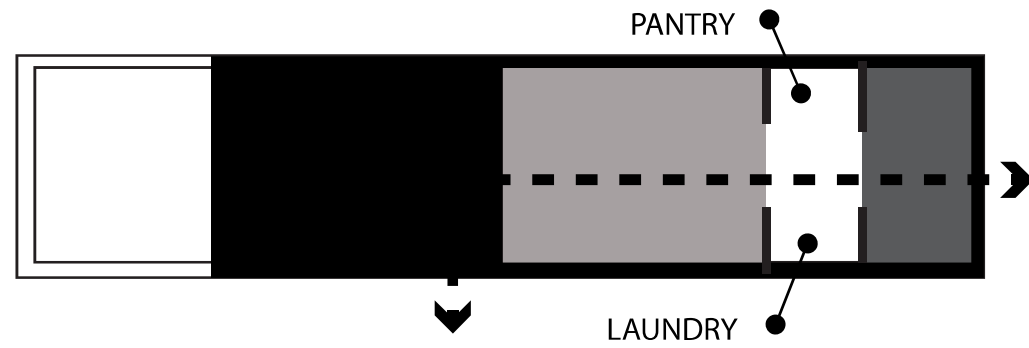
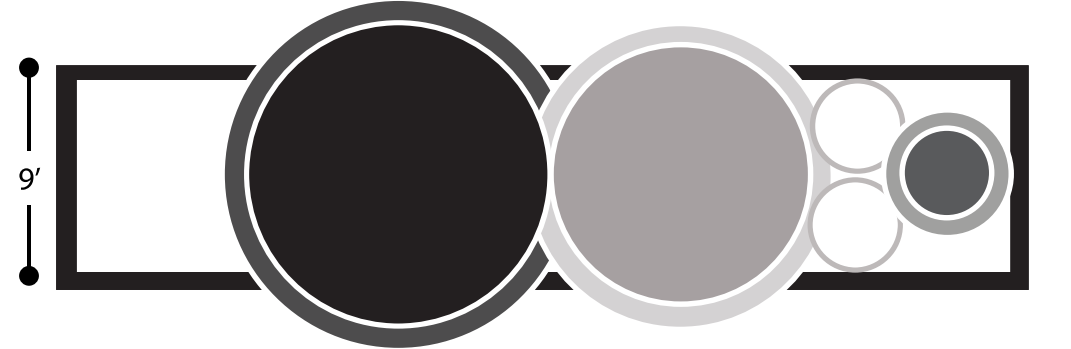


Fig 4.10:
FIRST FLOOR (GOOSENECK)

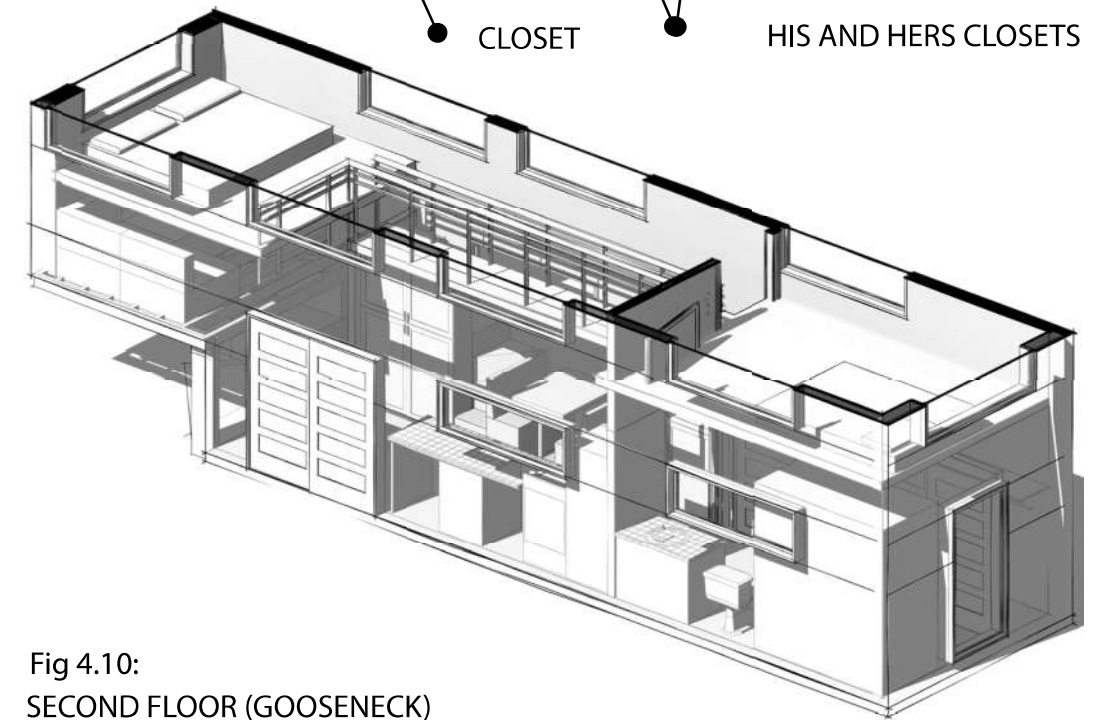
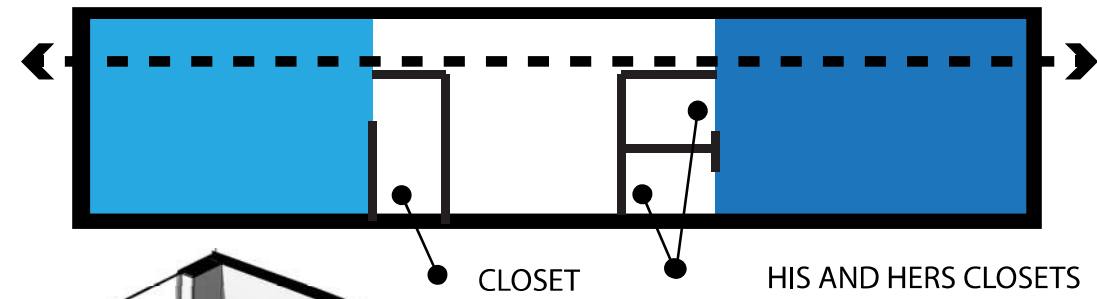
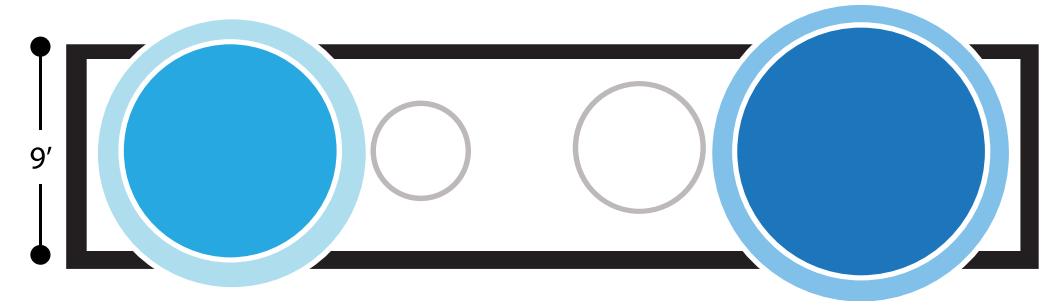
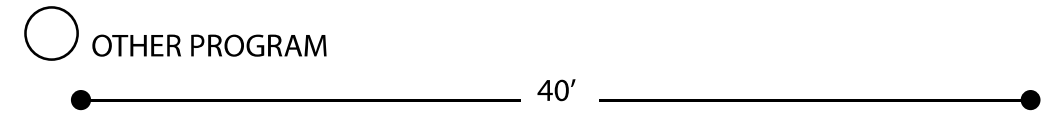
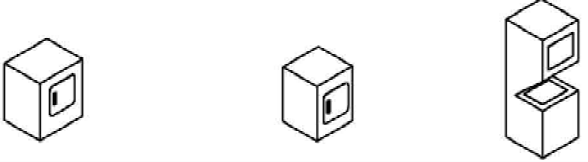
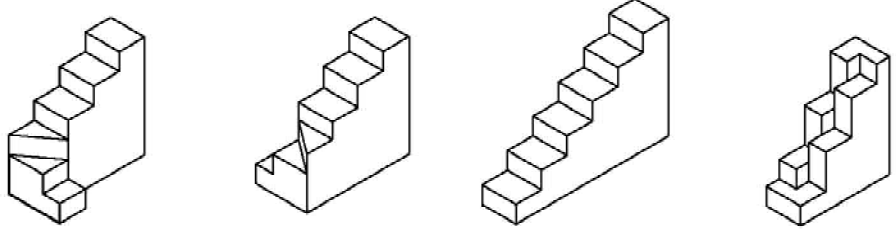


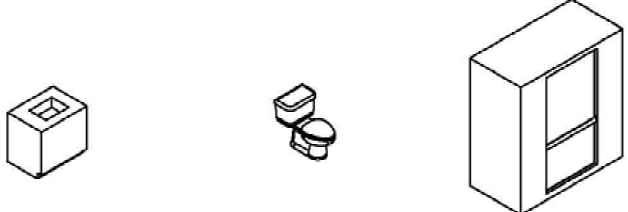
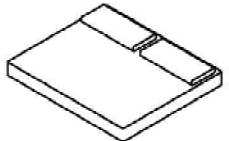
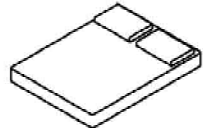


Fig 4.10:
SECOND FLOOR (GOOSENECK)

FLOOR PLAN ITERATIONS

<p>CHOOSE YOUR WASHER AND/OR DRYER</p>	
<p>CHOOSE A STAIR TYPE</p>	
<p>COUCH MODULES</p>	 <p>X6 X2</p>
<p>CHOOSE KITCHEN LAYOUT</p>	 <p>X8 X2</p>
<p>CHOOSE BATHROOM LAYOUT</p>	
<p>MASTER BEDROOM BED</p>	
<p>SECONDARY BEDROOM BED</p>	

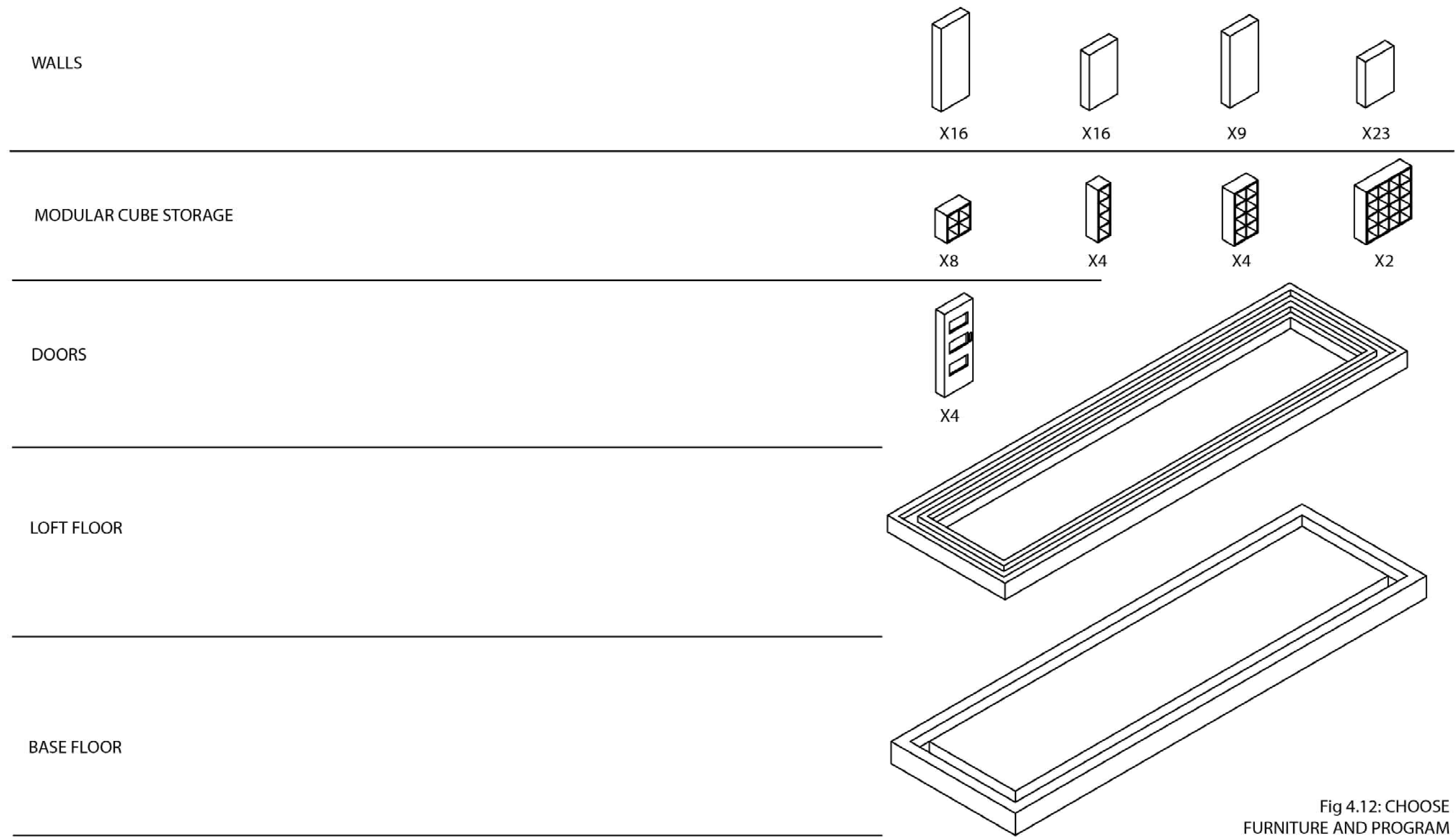
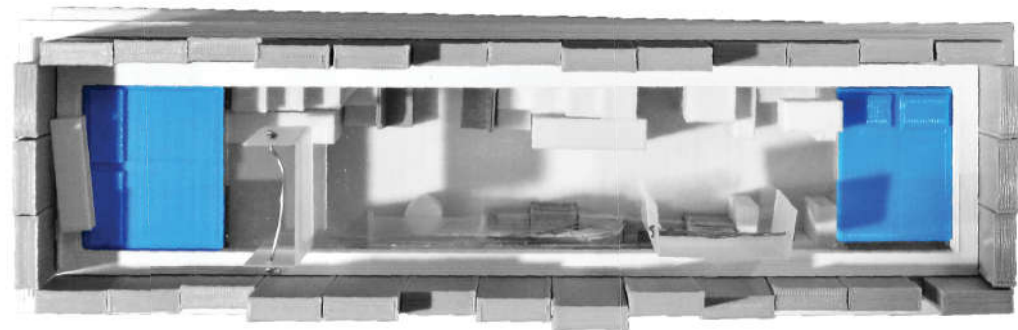
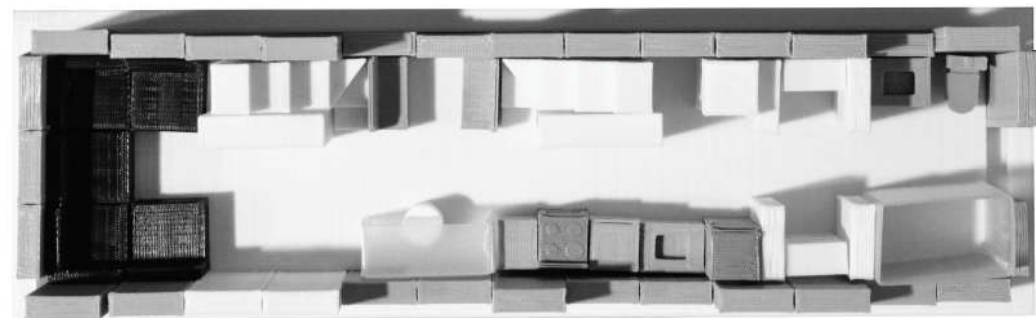


Fig 4.12: CHOOSE FURNITURE AND PROGRAM

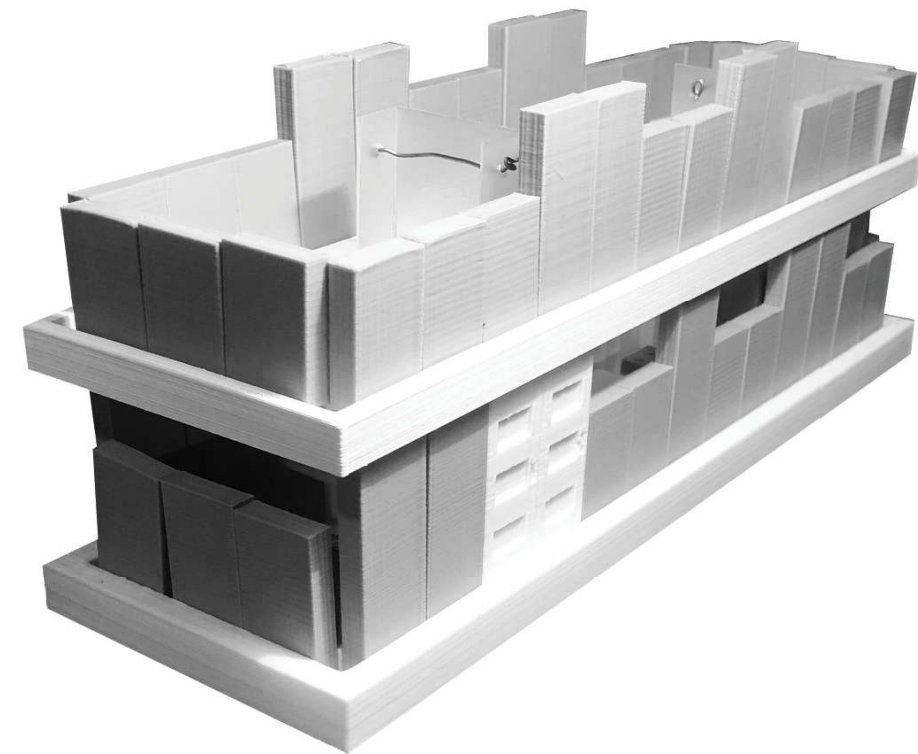
● BATHROOM ● ROOM ● KITCHEN ● LIVING ROOM ● MASTER BEDROOM ○ OTHER PROGRAM



SECOND FLOOR



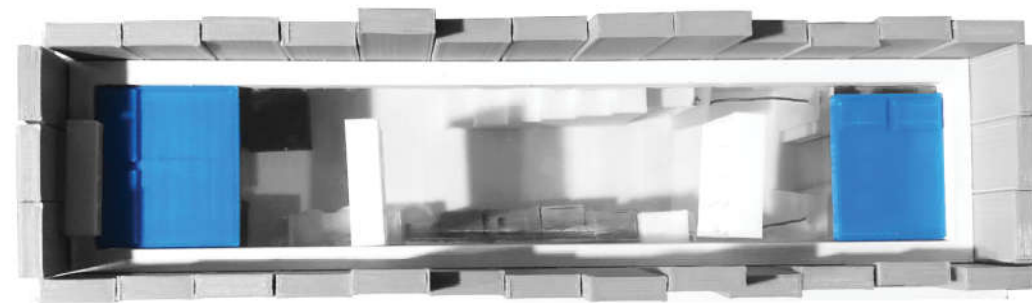
FIRST FLOOR



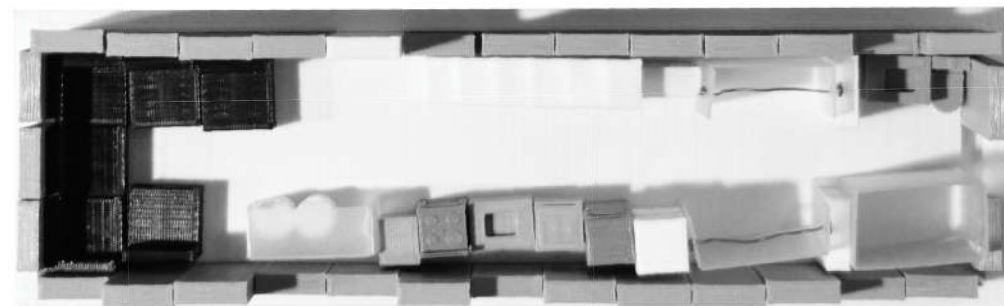
The first concept plan is based off Fig 4.8. The bedrooms are placed on the second floor with individual closets. On the first floor there is a kitchen with booth style seating in between two stair cases. Then there is a galley kitchen with a fold down office desk. The bathroom is separated by a pantry and laundry room.

Fig. 4.13: CONCEPT PLAN 1

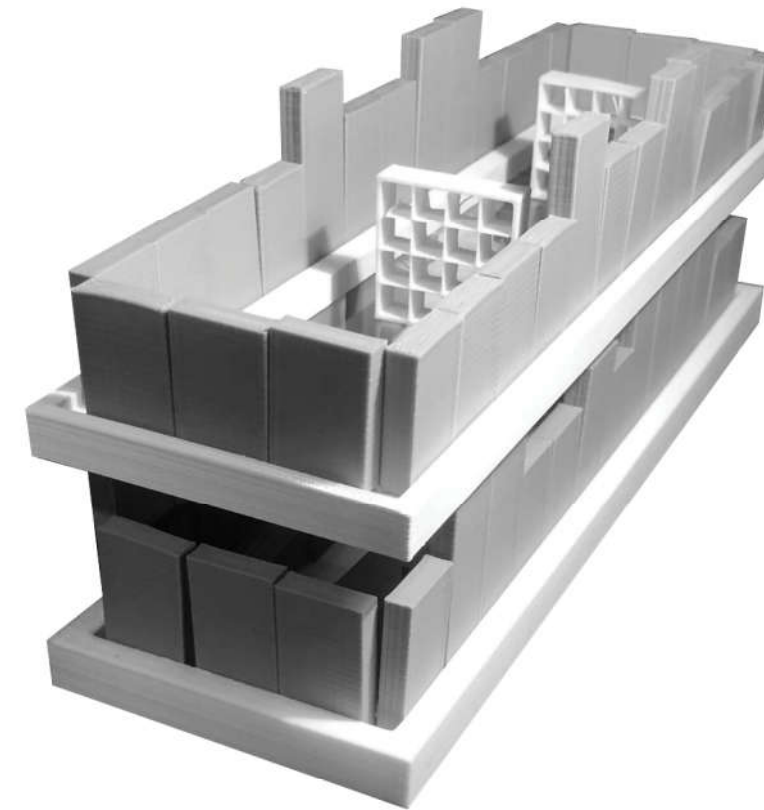
● BATHROOM ● ROOM ● KITCHEN ● LIVING ROOM ● MASTER BEDROOM ○ OTHER PROGRAM



SECOND FLOOR



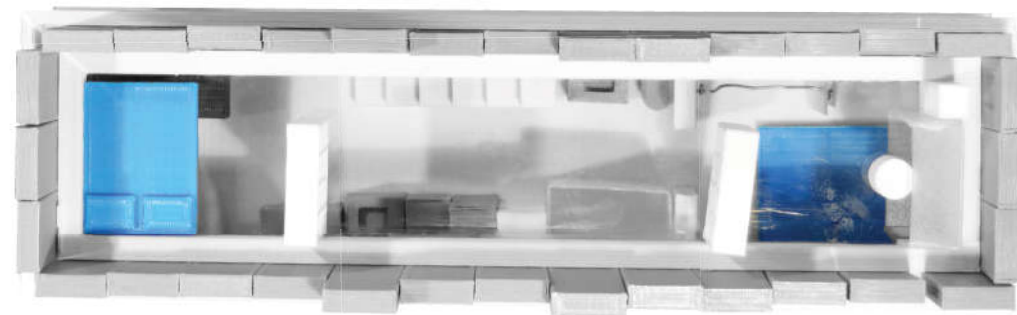
FIRST FLOOR



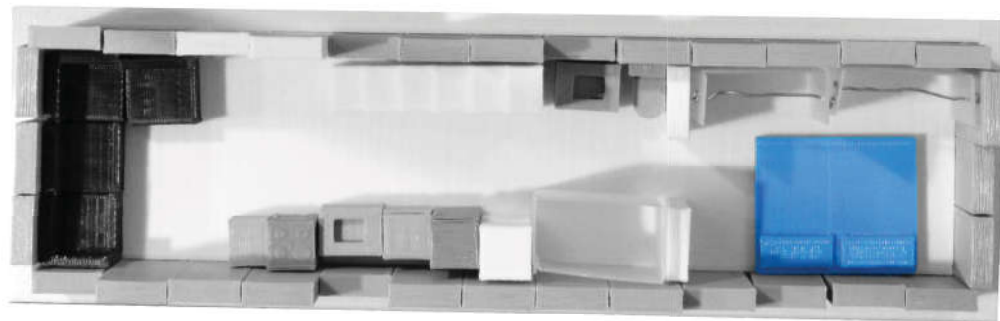
The second concept plan is based off Fig 4.5. The bedrooms are placed on the second floor with a direct connection. On the first floor there is a galley kitchen with a straight stair case. In the living room there is a fold down office desk. The bathroom is separated by a pantry, laundry room and two closets.

Fig. 4.14: CONCEPT PLAN 2

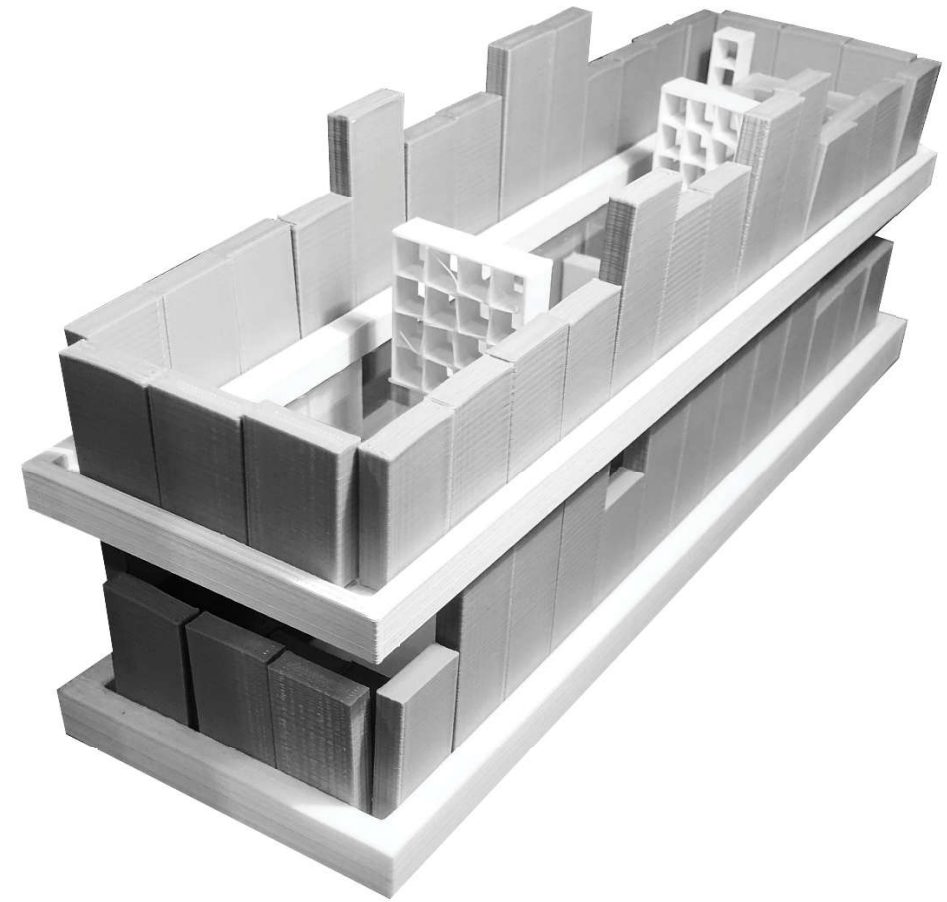
● BATHROOM ● ROOM ● KITCHEN ● LIVING ROOM ● MASTER BEDROOM ○ OTHER PROGRAM



SECOND FLOOR



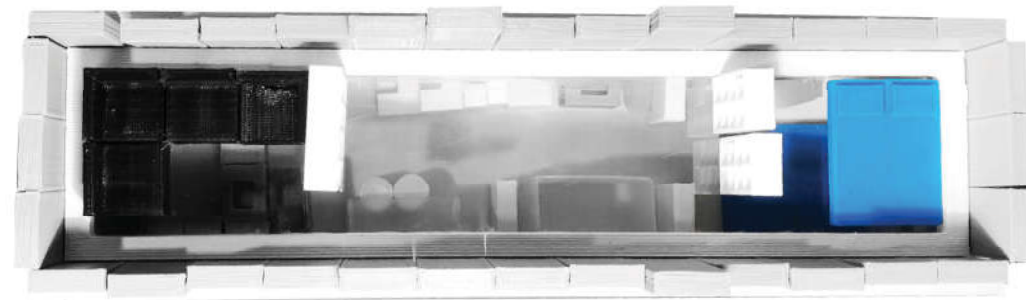
FIRST FLOOR



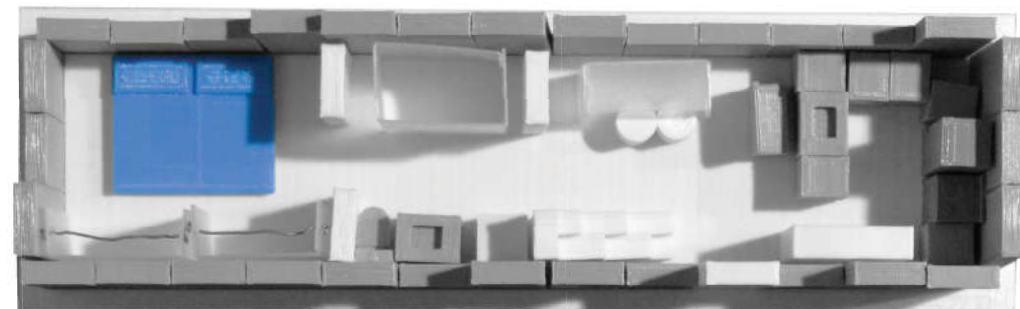
The third concept plan is based off Fig 4.4. There is a bedroom and an office that is placed on the second floor. The master bedroom is on the first floor on opposite sides of the living room. There is a galley kitchen with a straight stair and laundry incorporated into it. The bathroom separates the kitchen and the master bedroom.

Fig. 4.15: CONCEPT PLAN 3

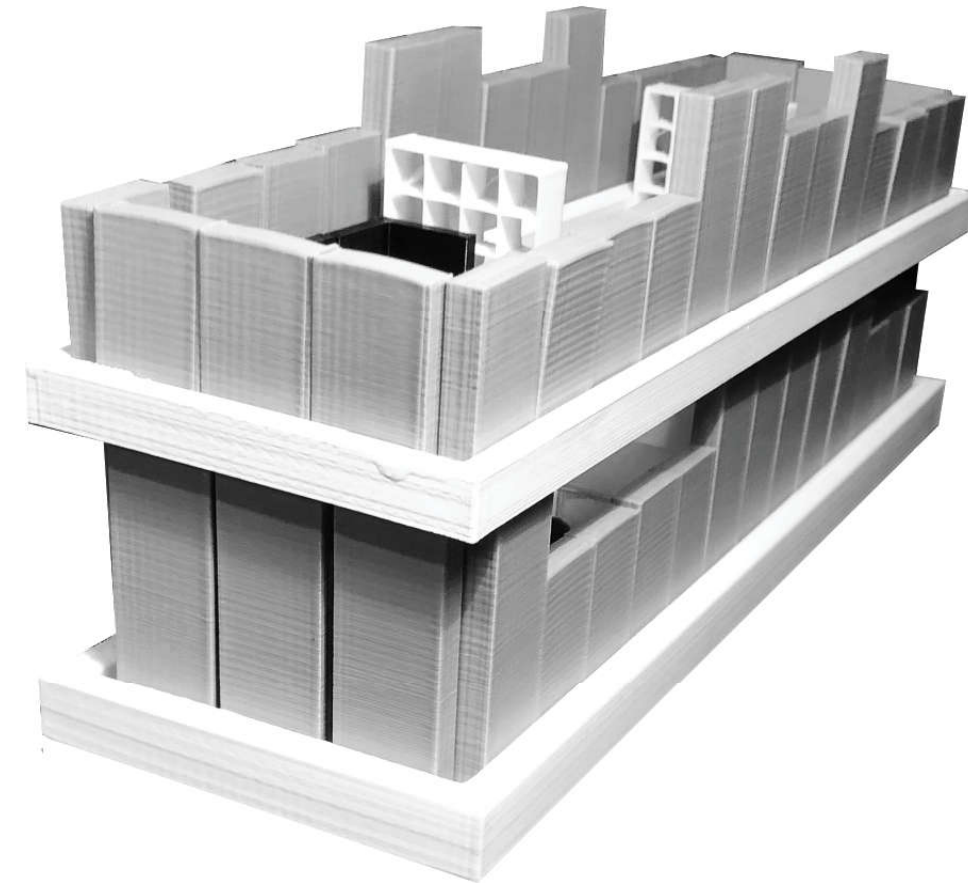
● BATHROOM ● ROOM ● KITCHEN ● LIVING ROOM ● MASTER BEDROOM ○ OTHER PROGRAM



SECOND FLOOR



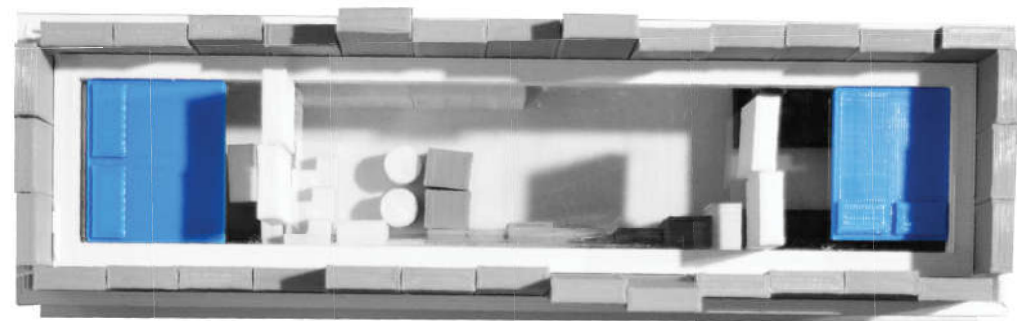
FIRST FLOOR



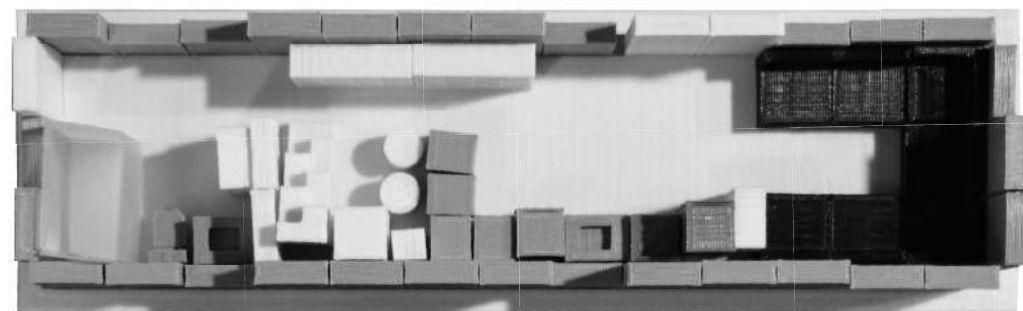
The fourth concept plan is based off Fig 4.6. There is a bedroom and the living room that is placed on the second floor. The master bedroom is on the first floor on the opposite side of the kitchen. There is a u-shaped kitchen with an alternating tread. The bathroom separates an office space and the master bedroom. The bathroom also incorporates the laundry space.

Fig. 4.16: CONCEPT PLAN 4

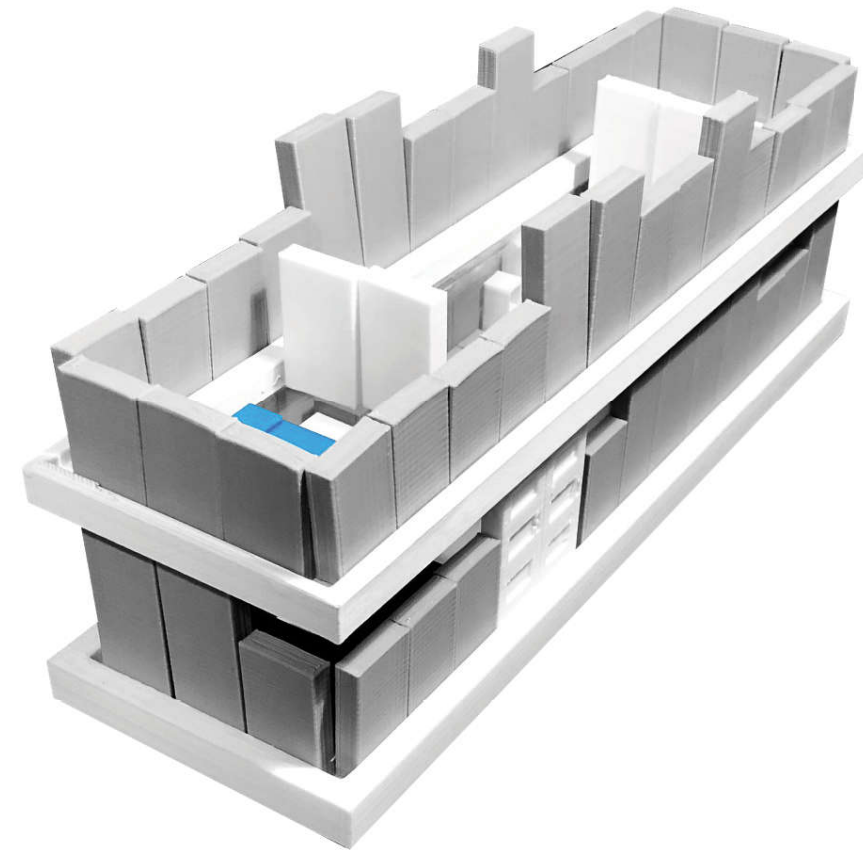
● BATHROOM ● ROOM ● KITCHEN ● LIVING ROOM ● MASTER BEDROOM ○ OTHER PROGRAM



SECOND FLOOR



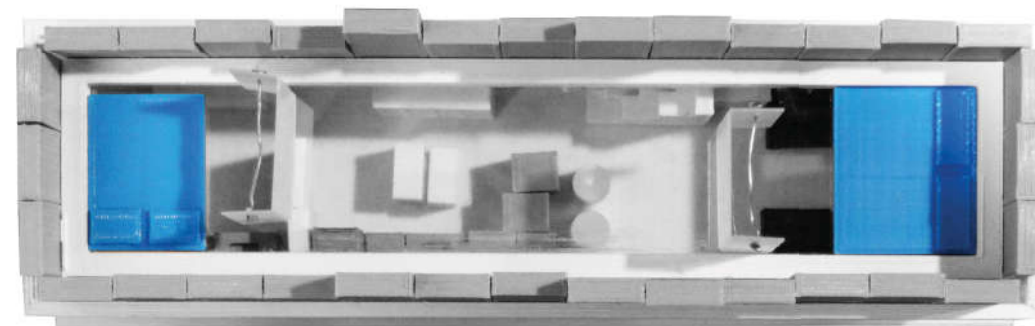
FIRST FLOOR



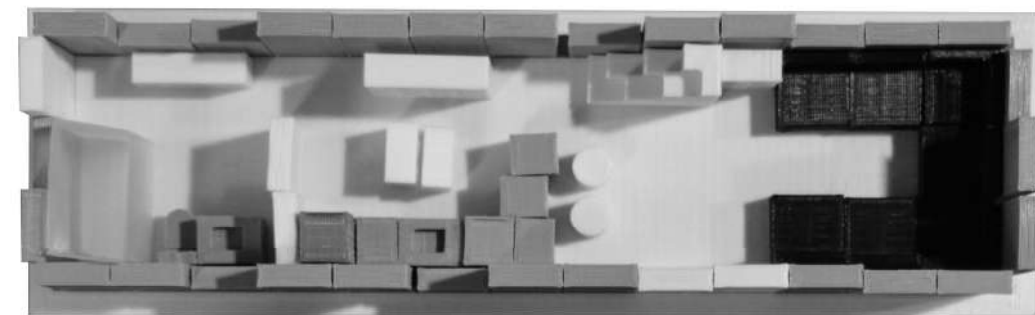
The fifth concept plan is based off Fig 4.3. There are two bedrooms on the second floor that overlook the kitchen. The first floor a bathroom with a second door. This door can be made into a separate mud room or bigger

Fig. 4.17: CONCEPT PLAN 5

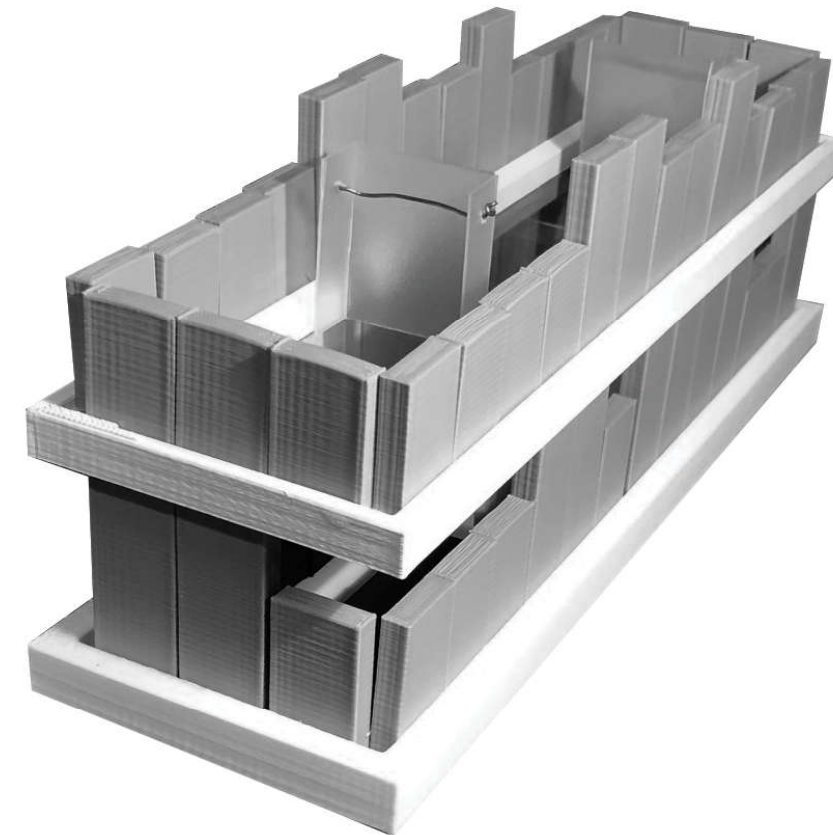
● BATHROOM ● ROOM ● KITCHEN ● LIVING ROOM ● MASTER BEDROOM ○ OTHER PROGRAM



SECOND FLOOR



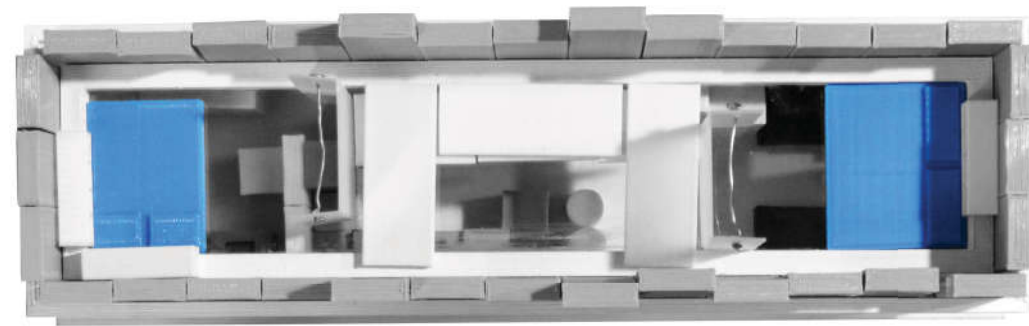
FIRST FLOOR



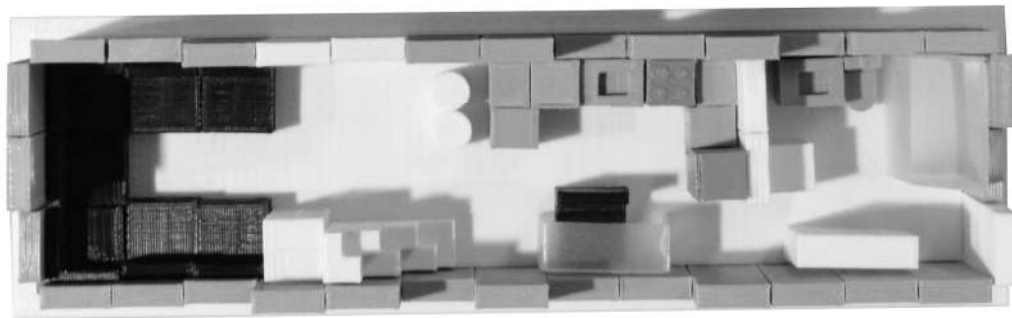
The sixth concept plan is based off Fig 4.2. There are two bedrooms with individual closets on the second floor that overlook the kitchen. The first floor has a bathroom with a second door. This door can be made into a separate mud room or bigger bathroom. There is an L-shaped kitchen (flipped from Fig 4.17), with a bar and laundry room incorporated. The stair type used is the alternating tread stair placed near the living room.

Fig. 4.18: CONCEPT PLAN 6

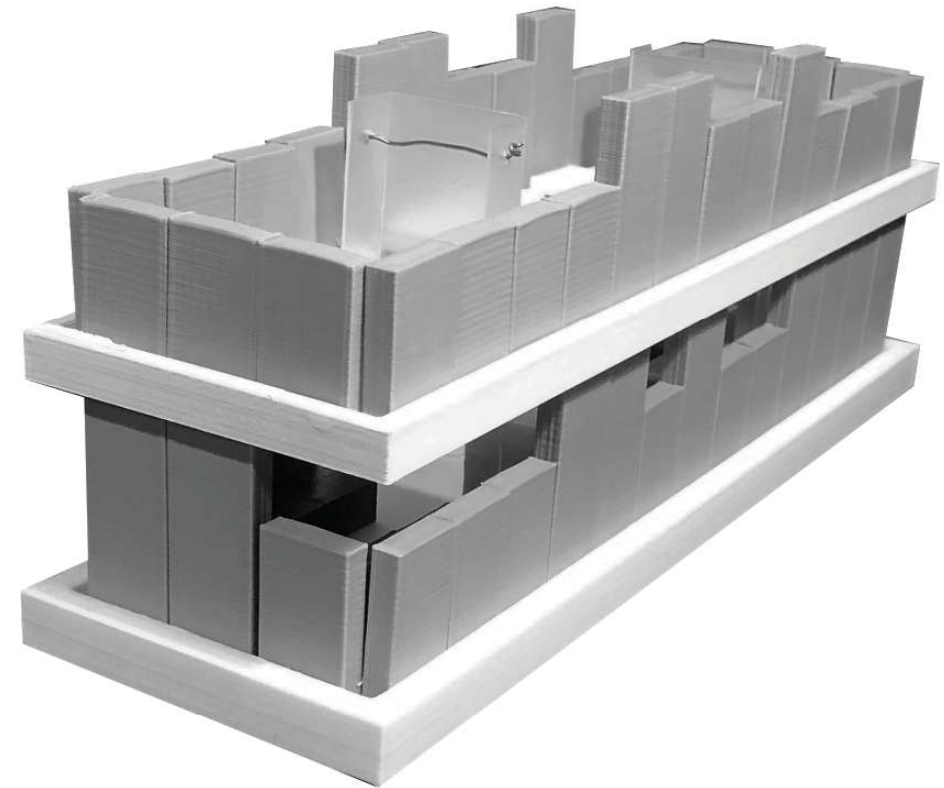
● BATHROOM ● ROOM ● KITCHEN ● LIVING ROOM ● MASTER BEDROOM ○ OTHER PROGRAM



SECOND FLOOR



FIRST FLOOR



The seventh concept plan is based off Fig 4.2 and Fig 4.18. There are differences between Fig 4.18 and Fig 4.19. They are the arrangement of the kitchen, the placement of the desk and the difference in the wall storage.

Fig. 4.19: CONCEPT PLAN 7

There are seven concept floor plan iterations in chapter 4. The first page illustrates the individual components that were needed to complete the iterations. There are the floors, walls, doors stairs and lastly the furniture. The concept plans are based off case studies from chapter 2. They are also from the program diagrams illustrated in the early part of this chapter.

FLOOR PLAN ITERATIONS CONCLUSION



FIVE

DESIGN EXPLORATION

Chapter 5 is all about the final design. This illustrates the process to build the tiny home. This is designed like a detail catalog, that anyone should be able to follow and build the tiny home. This chapter shows in detail, the products used for construction, and for aesthetics. At the end of the chapter the final designed will be revealed with renderings and models. As well as the cumulative cost, weight capacity, amps, BTUS and other crucial data.

5 | INVESTIGATIVE INFORMATION

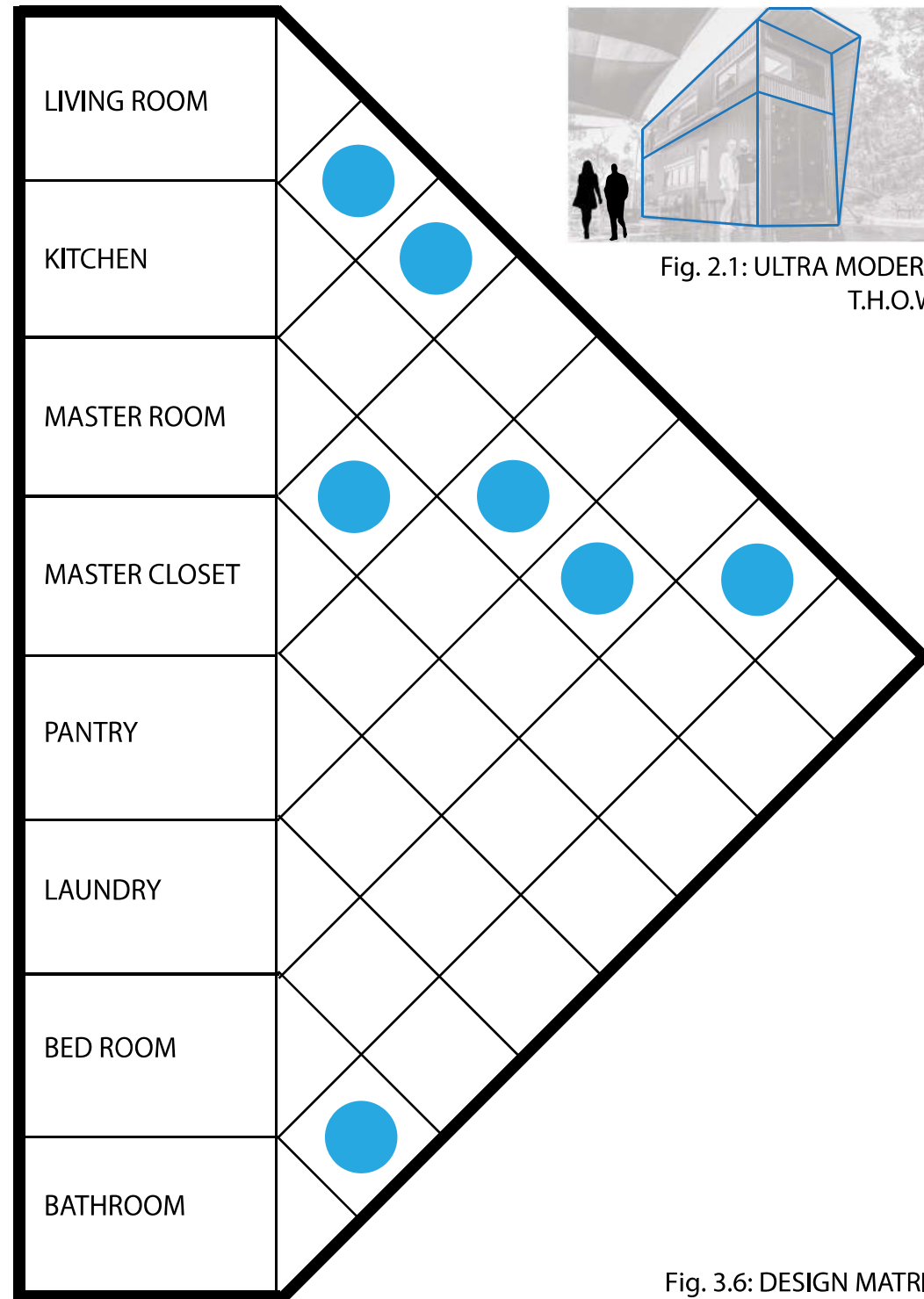
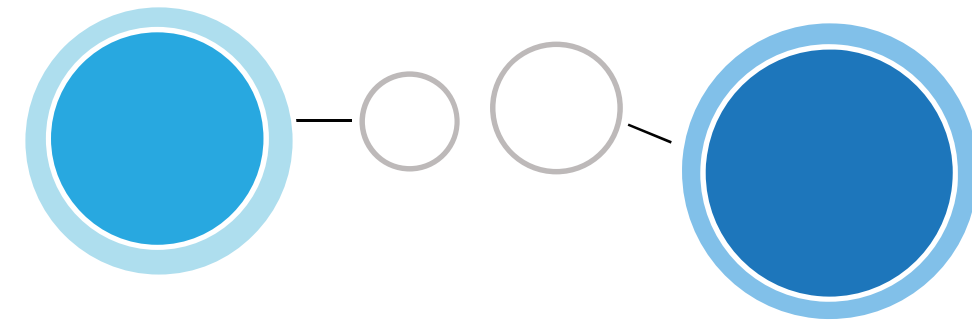
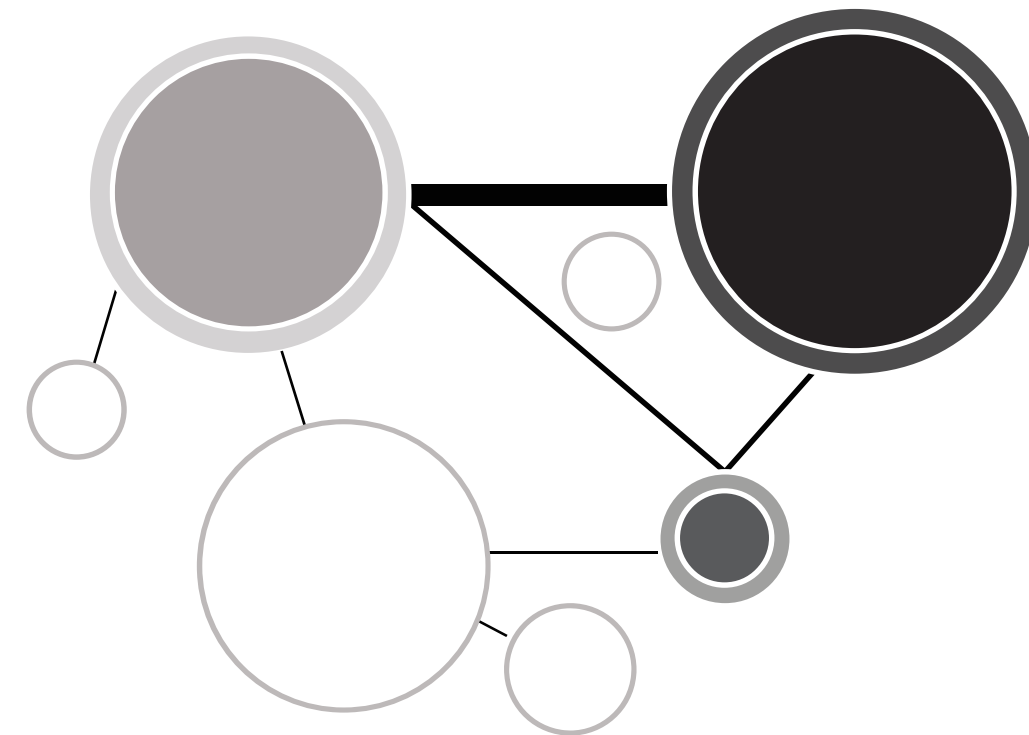


Fig. 2.1: ULTRA MODERN T.H.O.W.

Fig. 3.6: DESIGN MATRIX



SECOND FLOOR



FIRST FLOOR
Fig 4.2

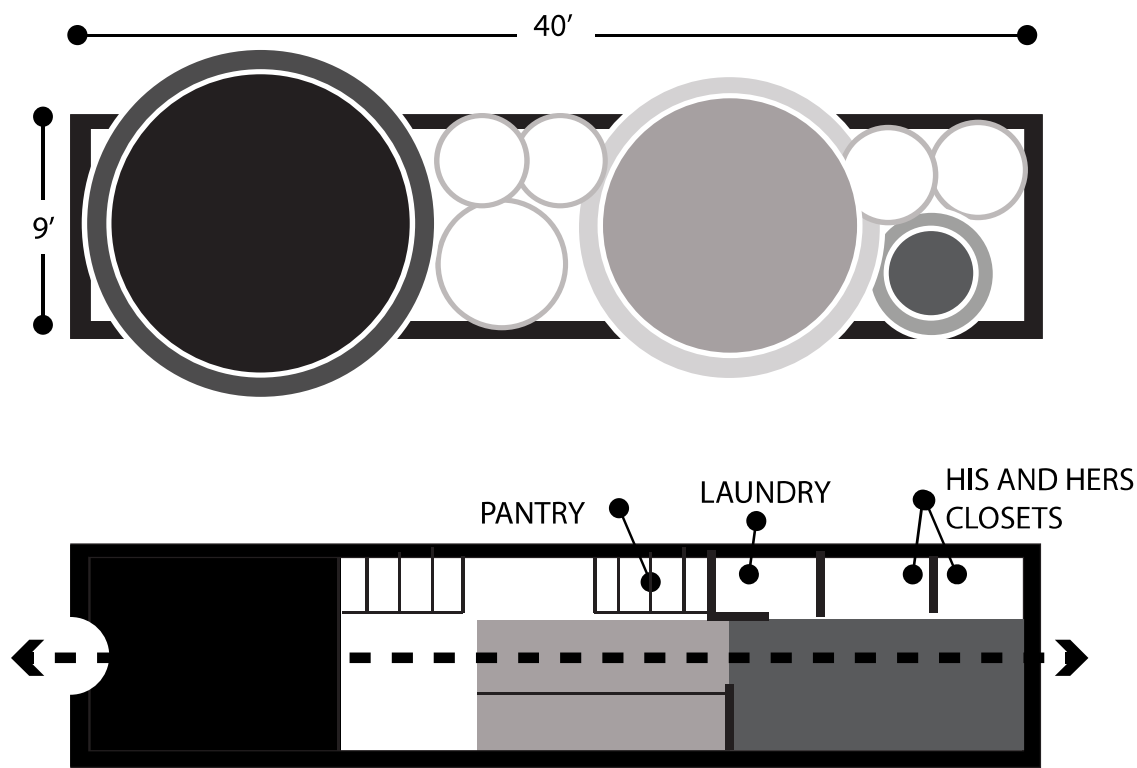


Fig 4.9: FIRST FLOOR

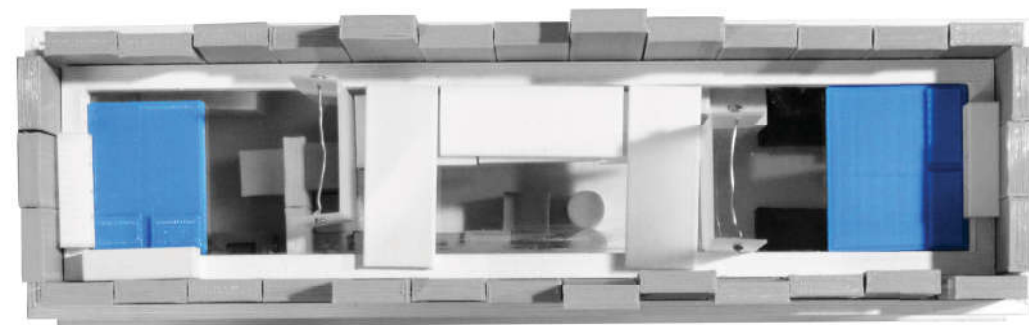


Fig 4.18: FIRST FLOOR

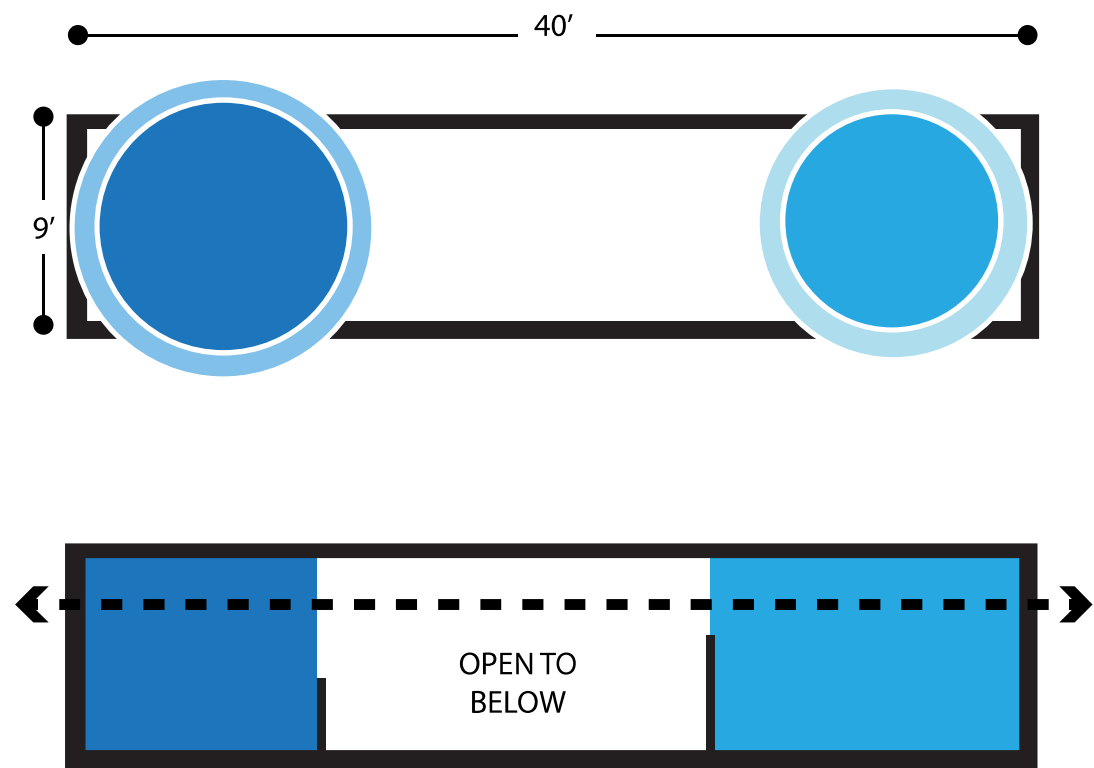


Fig 4.9: SECOND FLOOR

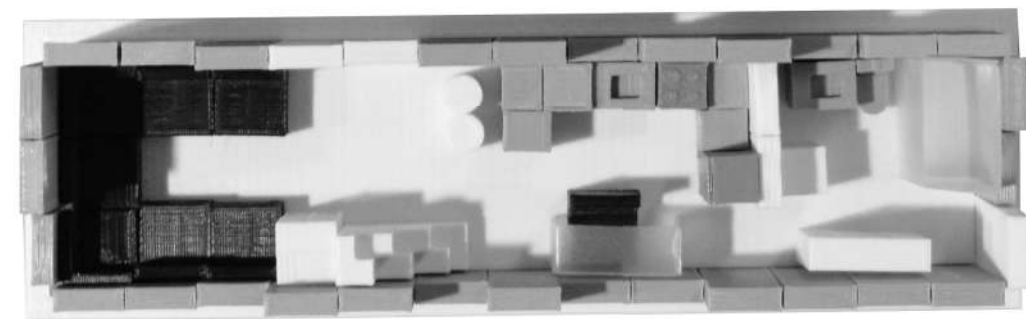


Fig 4.18: SECOND FLOOR

DETAILED PLANS



BLACK METAL



SHIPLAP WOOD



WOOD FLOOR



BLACK LEATHER



OCEAN BREEZE

Fig 5.1: MATERIALS THAT ARE USED THROUGHOUT THE HOUSE

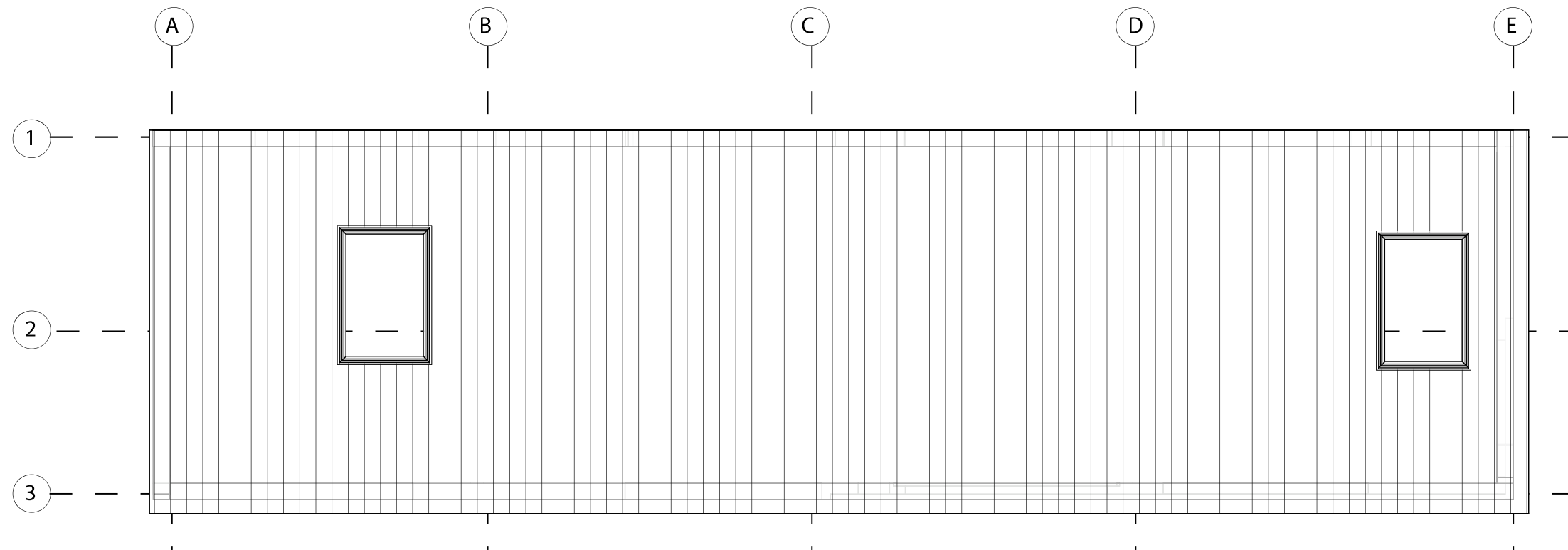


Fig 5.2: ROOF PLAN: SCALE 1/4" = 1'0"



BLACK METAL



WHITE METAL



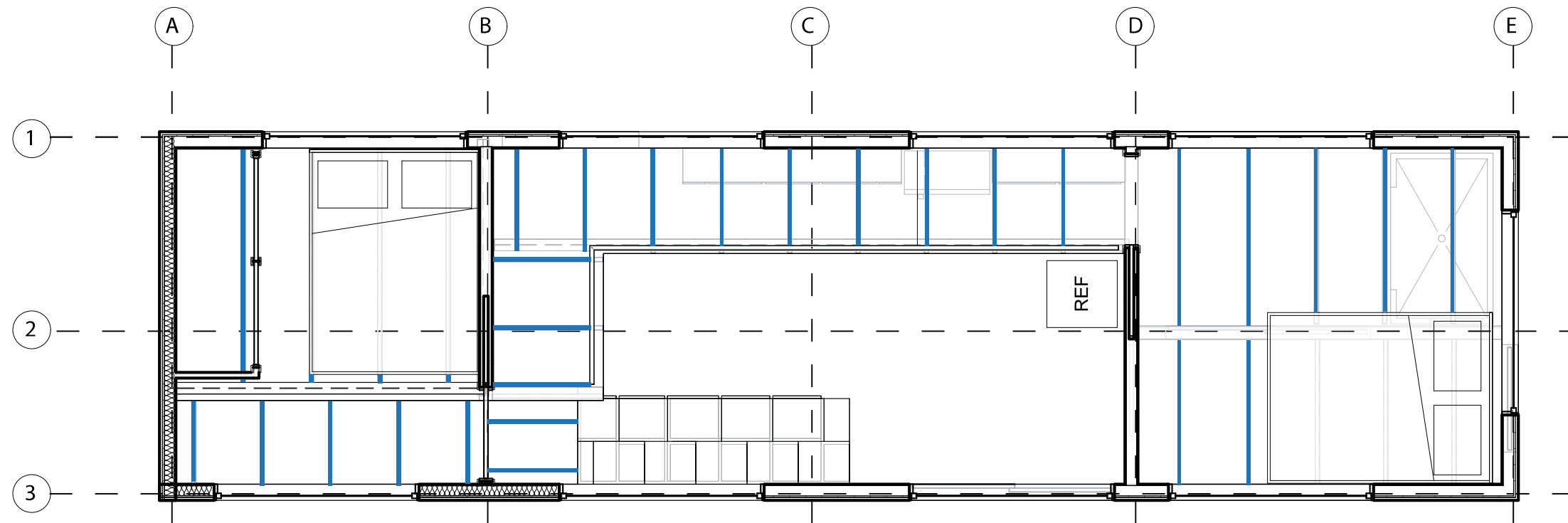
BATHROOM TILE



GREY PLASTIC



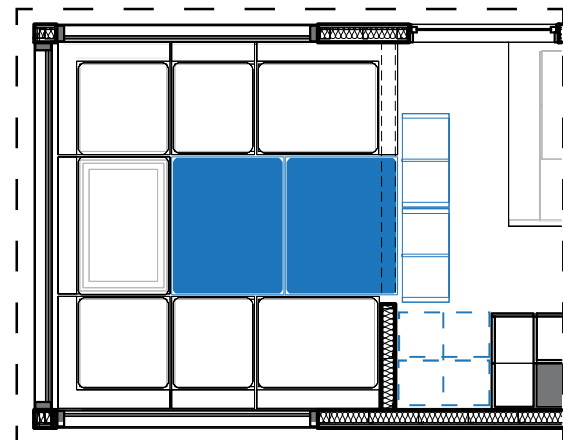
BLUE FABRIC



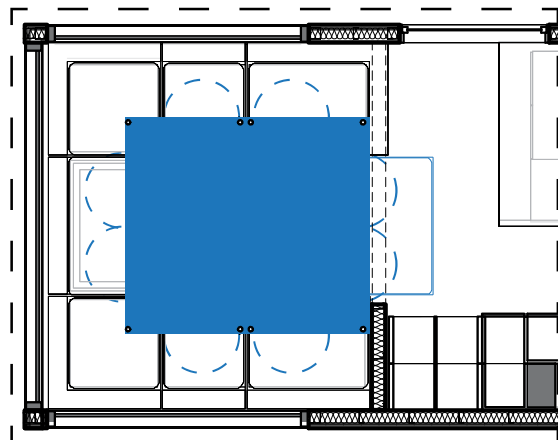
ALL SMALL BEAMS ARE C4X4.5
@ 16' ON CENTER

ALL LARGE BEAMS ARE W4X13

Fig 5.3: LOFT PLAN: SCALE 1/4" = 1'0"



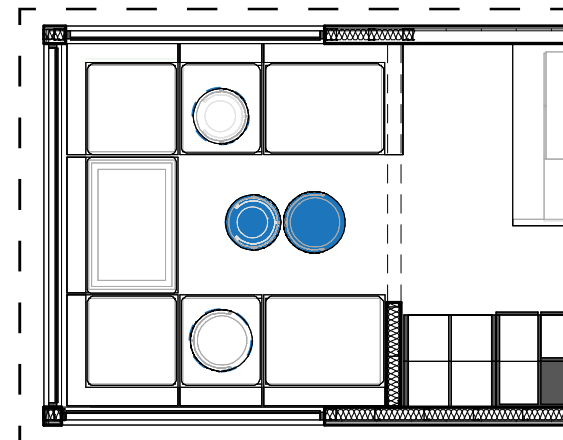
A. BED TRANSITION:
The bed transforms into a bed by using the ottomans that can be stored away in the couch compartments.



B. TABLE TRANSITION:
Table drops from the ceiling on cables, in 2 halves. This is so the table can be full size or half size.



C. COFFEE TABLE:
This is the 3 coffee tables and 2 stools arranged in the pattern of the 5 rooms on the poster.



D. COFFEE TABLE COLLAPSED:
This is the coffee table collapsed. this diagram shows the places that it can be stored away as well.

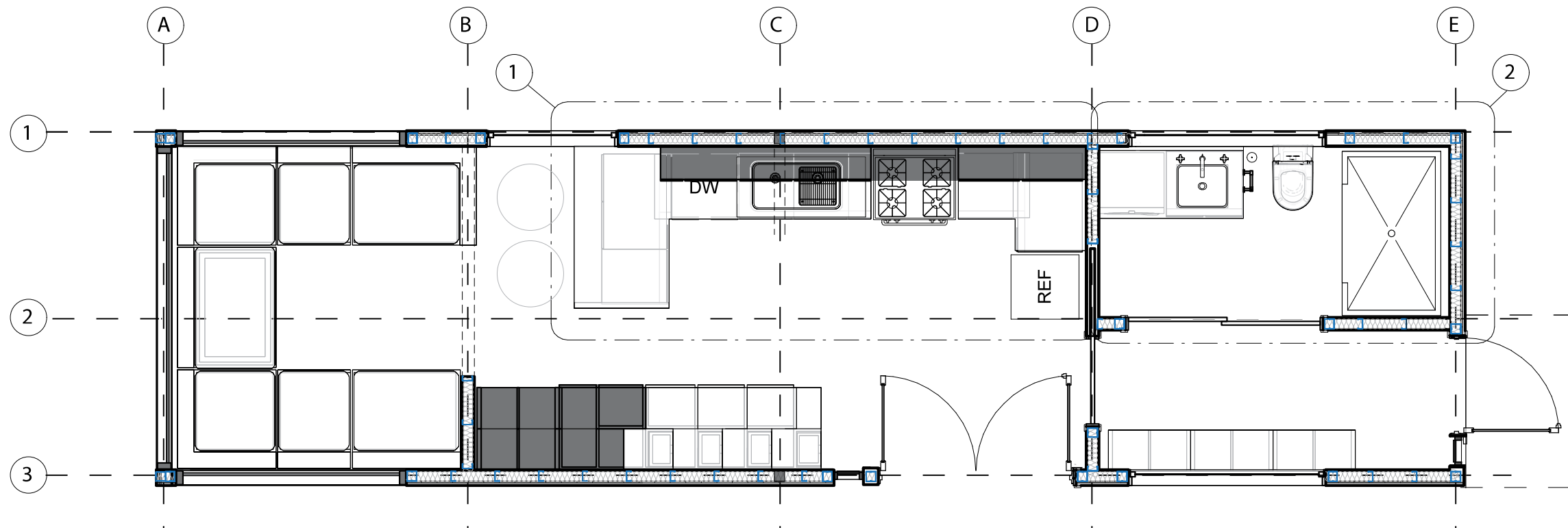
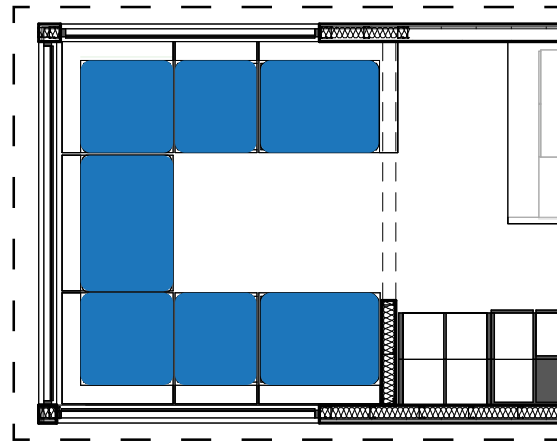
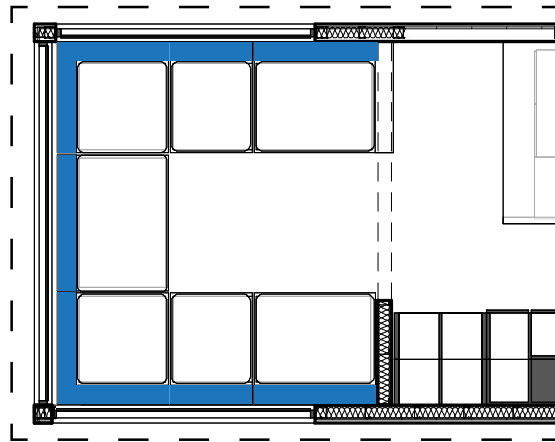


Fig 5.4: FIRST FLOOR PLAN: SCALE 1/4" = 1'0"



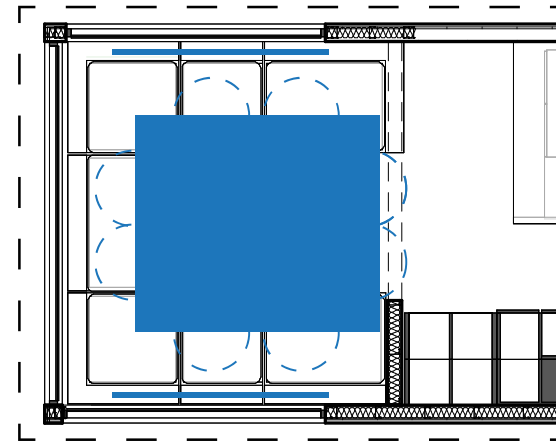
E. CUSTOM STORAGE

This is where custom storage would be for the stools, coffee table, dining table and other household storage. This also shows the cushions.



F. BACK SEAT STORAGE

Storage that can hold the cushions and other storage items.



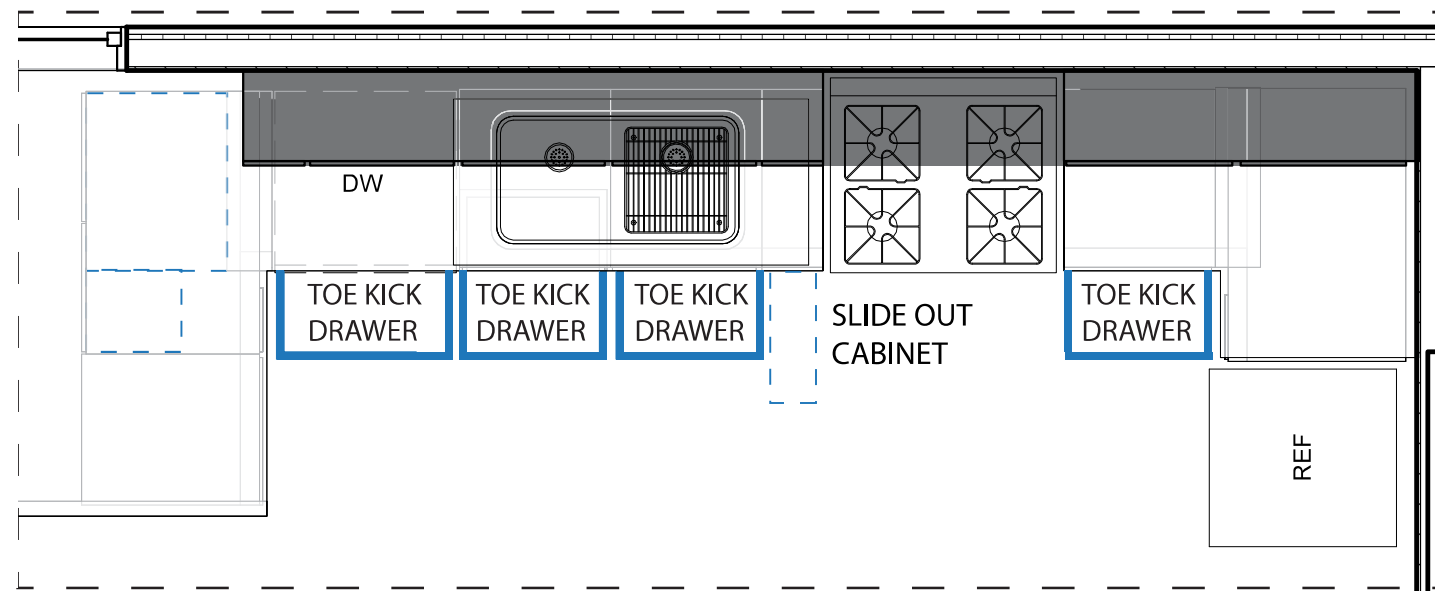
E. TABLE TRANSITION 2

The table would be broke into two sections and stored into the F. BACK SEAT STORAGE as demonstrated above. The table with is the same as the back seat height.



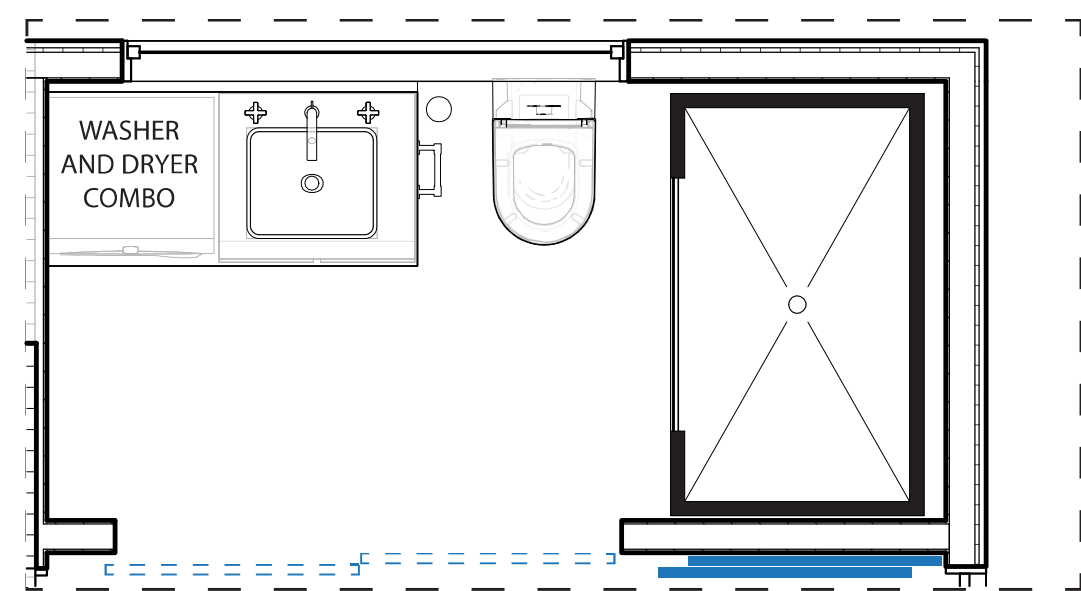
F. CUSTOMIZABLE SEATING

This shows that the seating can be arranged in different configurations, to adjust with what is happening with the space.



1. KITCHEN BLOW UP: SCALE 1/2" = 1'0"

Kitchen has pullout storage in the toe kicks. There is also storage in the bar on the side facing the living room. This is to use the corner space which is not accessible from the kitchen.



2. BATHROOM BLOW UP: SCALE 1/2" = 1'0"

Bathroom doors open, to create a larger wet room / bathroom. This can be used to clean dogs, or just to not feel so cramped when getting changed.

SECTIONS AND ELEVATIONS



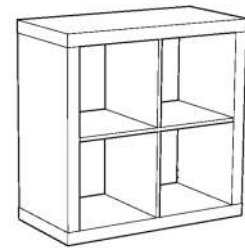
1 SOLAR PANELS

These are solar blinds that adjust with the sun path. They are placed around the house for all day sun.



2 ZIP SYSTEM

This zip system is used on the walls, floors and roof.



3 4 CUBE SHELF

These are 4 cube shelves from Ikea that are modular.



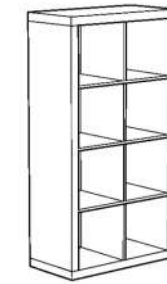
4 FRENCH DOOR

Black french doors with 5 panels of glass.



5 WATER HEATER

This electric tankless water heater takes place of a traditional water heater.



6 6 CUBE SHELF

These are 6 cube shelves from Ikea that are modular.



7 DISHWASHER

This dishwasher is energy star and a water saver.

Fig 5.5: PRODUCTS OF THE HOUSE

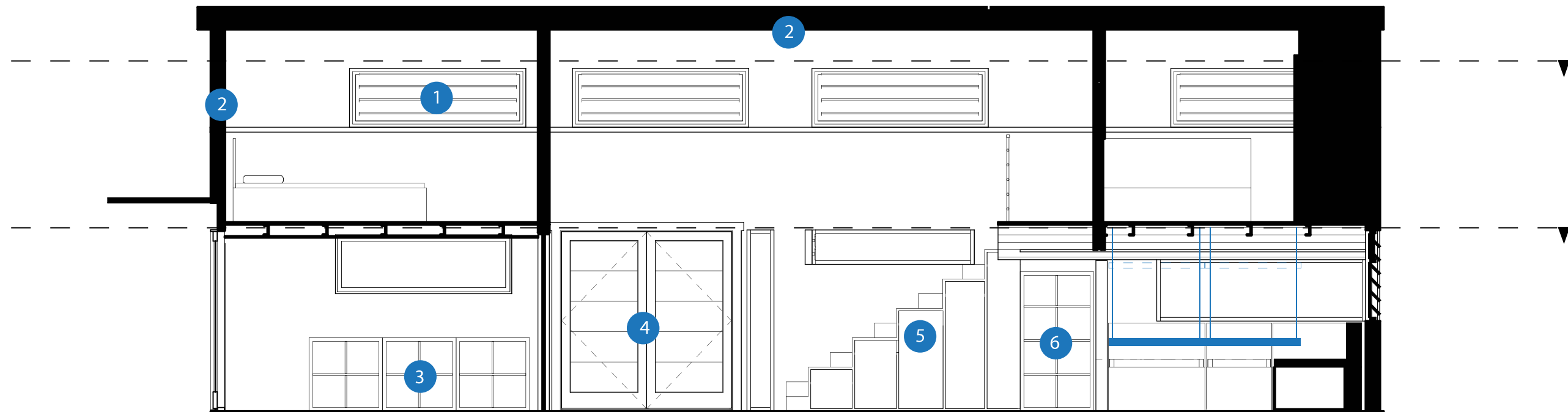


Fig 5.6: SECTION 1: SCALE 1/4" = 1'0"



8 TOUCHLESS FAUCET

This is a touchless faucet that does not need to be turned on by the handle. This faucet also saves water.



9 60/40 SINK

This sink is black metal and has a 60/40 split.



10 GAS OVEN

This is a gas oven that can also be used off the grid. This oven runs on propane.



11 MICROWAVE

This is a microwave that is placed over the oven to double as a vent.



12 SOLAR FRIDGE

This a fridge that runs on solar power. This is a great use for off the grid living and mobile living.



13 ALL IN ONE

This a machine that washes and dries clothes. It saves space and time.



14 SEPARATE TOILET

This toilet uses 12vDC or 120vAc. Does not require water or sewer services, but requires a vent pipe. Only has a solids bag to remove.

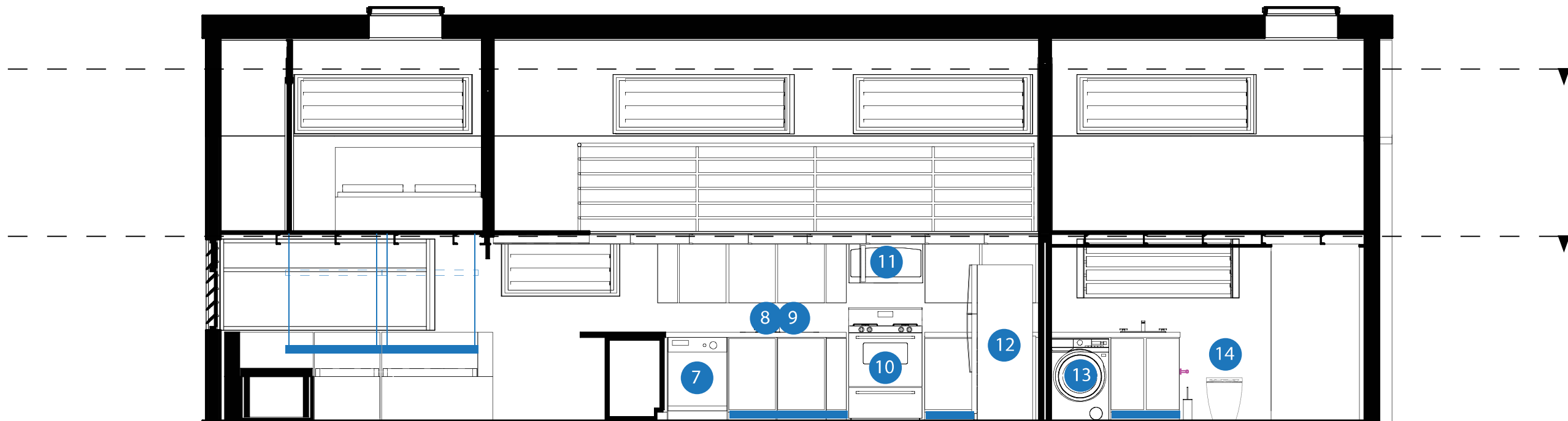
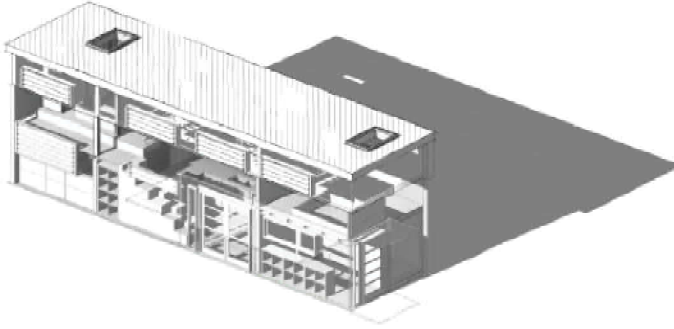


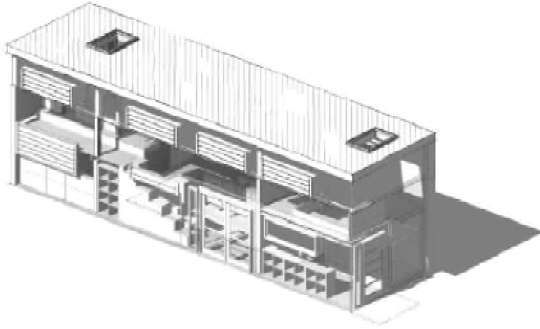
Fig 5.7: SECTION 2: SCALE 1/4" = 1'0"



A. SUMMER SOLSTICE



B. WINTER SOLSTICE



C. EQUINOX

Fig 5.8: FRONT LIGHT TRANSITION AROUND THE YEAR

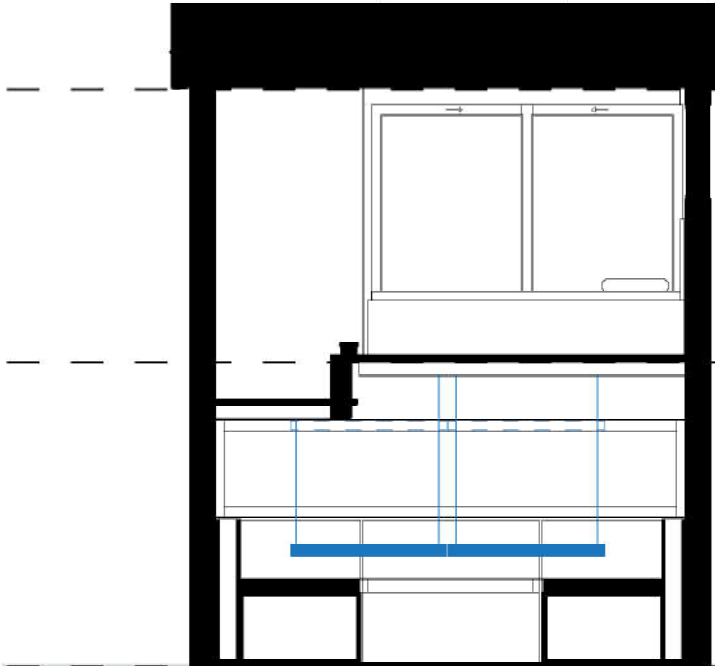


Fig 5.9: SECTION 3: SCALE 1/4" = 1'0"

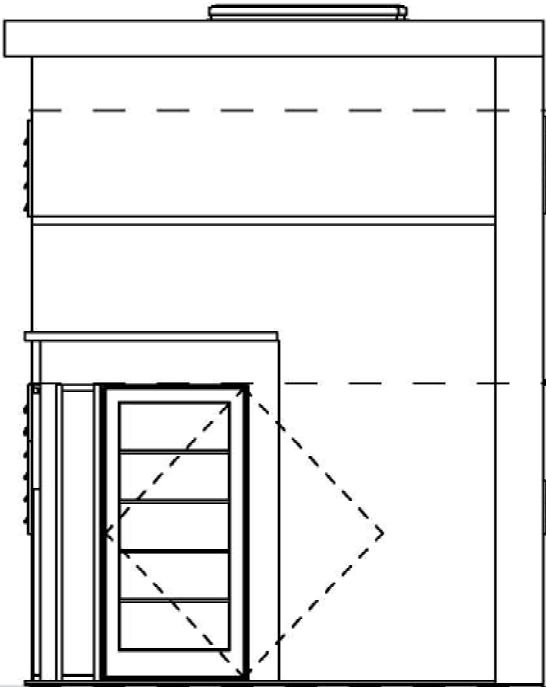


Fig 5.10: ELEVATION 1: SCALE 1/4" = 1'0"

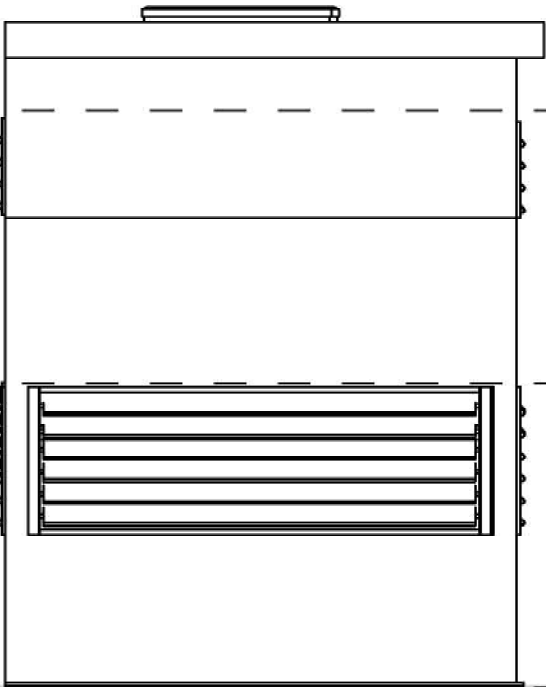


Fig 5.11: ELEVATION 2: SCALE 1/4" = 1'0"



Fig 5.12: FRONT LIGHT TRANSITION AROUND THE YEAR

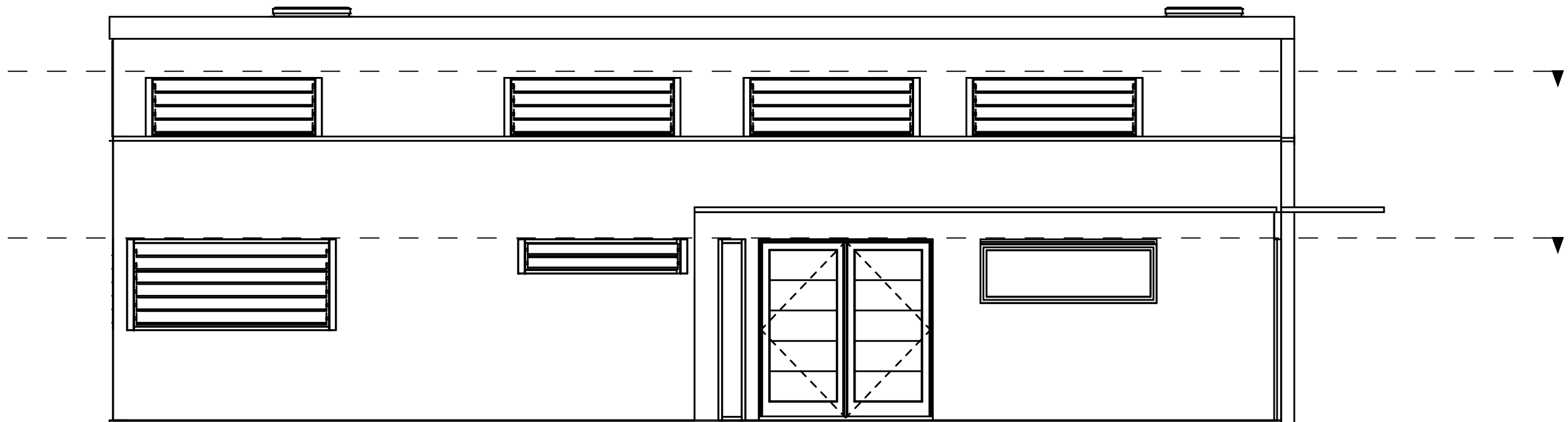


Fig 5.13: ELEVATION 3: SCALE 1/4" = 1'0"

LOOKING AT L.I.F.E.



Fig 5.12: HOME CLOSED - FRONT VIEW



Fig 5.13: HOME OPEN - FRONT VIEW



Fig 5.14: HOME CLOSED - SIDE VIEW



Fig 5.15: HOME OPEN - SIDE VIEW

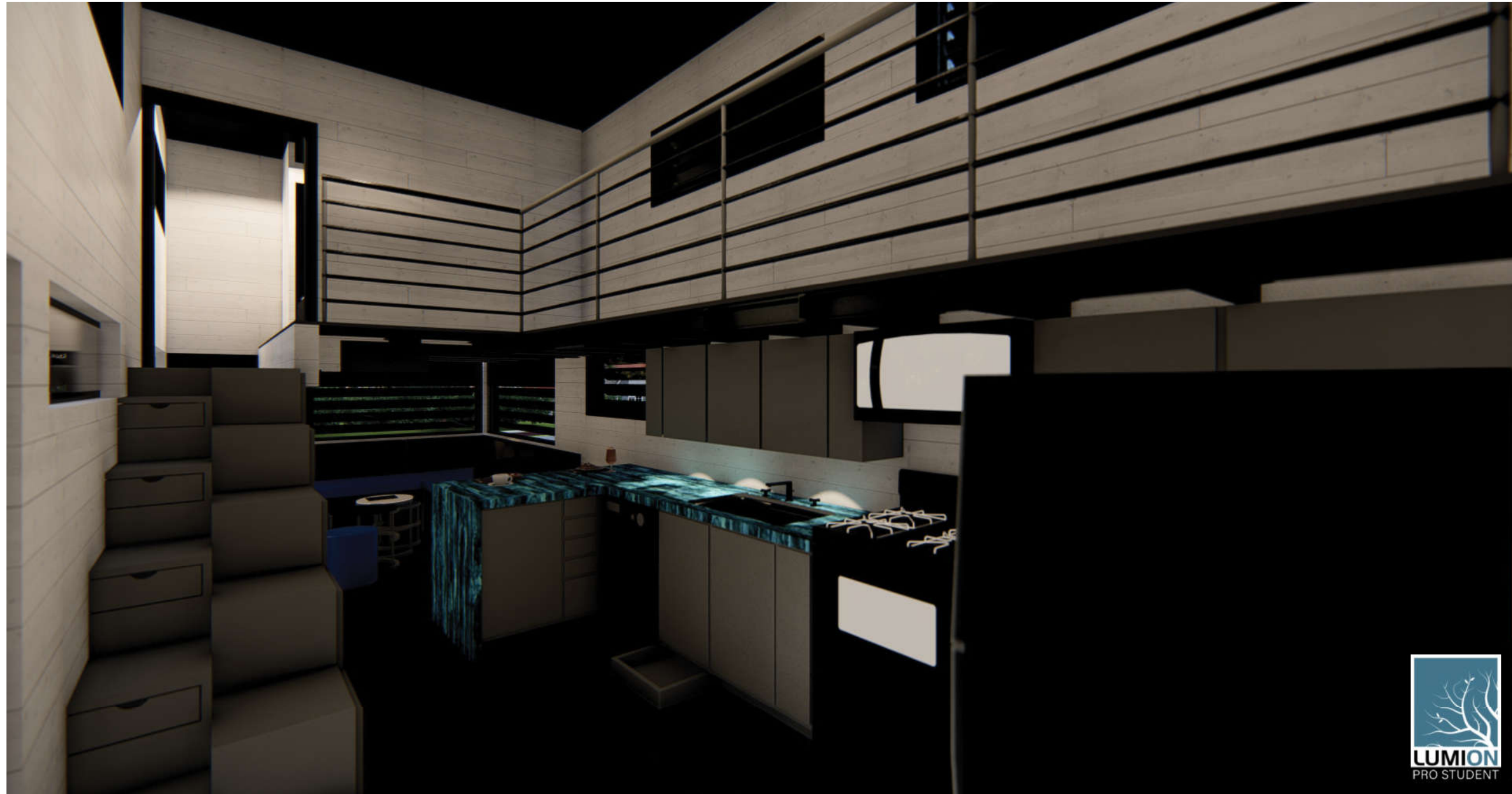


Fig 5.16: VIEW TOWARD MASTER BEDROOM



Fig 5.17: VIEW TOWARD KITCHEN AND BATHROOM



Fig 5.18: VIEW FROM LIVING SPACE



Fig 5.19: VIEW OF MUD ROOM



Fig 5.20: BATHROOM AND LAUNDRY



Fig 5.21: VIEW FROM INSIDE BATHROOM SHOWER



Fig 5.22: MASTER BEDROOM



Fig 5.23: SECOND BEDROOM



Fig 5.1: VIEW OUTSIDE THE TINY HOME



Fig 5.1: VIEW FROM INSIDE BATHROOM SHOWER



Fig 5.24: HOME BEING PLACED

This thesis project was designed with the intent of understanding the way that people live. The first aspect that I looked at was the five basic room types that every home is made of. Those are the living room, kitchen, bathroom, master bedroom and secondary bedroom. Before the design process could start, there must be a clear understanding of every spaces size and volume. I also spent time looking at transit restrictions, because I knew that it was supposed to be movable.

The renderings show the way in which the house transforms, based on its need. This home folds and collapses when it is being transported from its build site to its resting place. The home is the size of a large shipping container and is carried on a flat bed. When it needs to be moved off the flatbed, it is hoisted with a crane. This is shown in Fig 5.24.

L.I.F.E. CONCLUSION

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TRANSFORMING

L.I.F.E.