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Strabismal Existence

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[STRABISMAL_EXISTENCE]

Independent Project submitted to

Roger Williams University

School of Architecture, Art, and Historic Preservation

In fulfillment of the requirements of the
B. Arch Degree in Architecture

By
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Class of 2009

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...To Steven and Cindy Kay and my Parents your guidance and support taught me to believe in myself.

I would also like to thank Professors William McQueen, Hassan-Uddin Kahn, B.G. Shanklin, Julia Bernert, Robert Dermody, Mete Turan, Kelly Leitner, and Deborah Aschheim for your time, conversations, input, and advice throughout the thesis process.

Abstract

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The Intention of my thesis is to bring to light the emerging housing systems for people who have become discontent with our current social system. Conflict impedes our progress as a species due to the criss-crossing points of view we are presented with in society hence the title of my thesis. Strabismus is a condition of distorted vision where both eyes are not allowed to focus on the same thing at the same time. When we apply this condition as a description of our society we can see the underlying conflict and the forces at work which keep us divided as a society or a society of individuals. It is my idea that through an alternative living strategy people would be able to individually make their own decision as to how we live collectively as a society. These things are observed through trends and patterns that eventually effect the masses as a whole and cause a change or shift in thinking. Here is where I believe that architecture becomes the tool or the vehicle. I believe it is the way that people have dealt with these changes throughout our history because it is the way humans adapt. So in general this project will be about different forms of adaptation to achieve different goals in different situations.



Volume zero

Before or after, the beginning does not matter when you do not exist. Existence is the key to history. History is the proof that something has existed and without it there is no record. Louis Kahn once said

“The person of old had the same brilliance of mind that we assume we have now.”

Intelligence is not a factor of time. Time is merely the place where we exist. A coordinate or position where we were located in a place where we existed. If we did not exist we were not there but we know we are here because we are conscious of it. Albert Einstien does not exist anymore. Iassac Newton does not exist anymore. Frank Lloyd Wright does not exist anymore. But their work does continues to live on because of history.

[STRABISMAL_EXISTENCE]



Manifesto

In my own opinion Time is the most important aspect of architecture. Time is a measure that has multiple uses. There is the time that tells us where we are. There is the time that tells us how long it took us to do something or get somewhere. There is the time that measures how long something will last. Time is the measurement of our existence and I believe that architecture is one of the few ways that we are able to control time.

There are three main effects of time that come to mind when thinking of architecture's relationship. The first would be how it effects the spaces we create. This is the time it takes to move through space and get to a destination. This movement can be controlled to create an event that has the potential to transform the effect of a space. The second main effect of time would be the time it takes to design and build something. In essence this is the time it takes to create what we are producing. Where we leave off or how far we can get is a result of how we manage our time or the total amount of time we have. The third aspect of time would be timelessness. How long the structure will last and remain useful is another important factor of time that needs careful consideration because it is how architects in time end up being evaluated.

Einstein's Theory of Relativity proved that everything is relative. We could manipulate our resources in the third dimension with a question to the possibility of the fourth. Theo van Doesburg was enamored by Einstein's Theory of Relativity. He believed that architects had missed an untapped resource in architecture with time and possessed a great opportunity by utilizing the fourth dimensions aspect in architecture. In his manifesto Principles of the Neo-Plastic Art Van Doesburg states,"Architecture takes into account not only space but the magnitude of time."

Early in my architecture education a professor asked my class to diagram a sequence of space. I was confused as to how to do this. Perplexed I thought that the graphics of the presentation should somehow guide the person viewing the project through the space but now I understand that this was an opportunity to think about the experience and effect of those spaces as you move through them.

All architecture has this possibility of molding a person's existence. It becomes the expression of how a society works through individual expressions that give the greater whole meaning. Once the architect understands this place and how we are creating a sense of place we can help confirm ones existence.

Introduction

Introduction

Being in a place that you cannot control is frustrating. The idea of being out of control or not having your hand on the steering wheel can cause anxiety, depression, and other mental or physical ailments. Society can be a symbol of this place where no one is really in control. We are drones supported by the masses. How can we escape?

This is an issue of freedom, an issue that is discussed by philosophers during the enlightenment. A new modern system was to be developed that would give liberty or somehow establish a social equality. Economic systems like socialism, capitalism, communism, and fascism were developed to control the masses and establish a system of living for the greater whole. In this they offered the hope of self-reliance, independence, or freedom when in reality these belief systems caused an illusion. Once the masses become aware of their injustice war breaks out and revolutions occur on epic scales.

Today we assume to be more civilized or less violent but we are in a state of passivity. Many will not rise because of their pacification. Some do but they are often viewed as losing touch with reality. We are part of a larger machine of existence and most choose to do one of three things:



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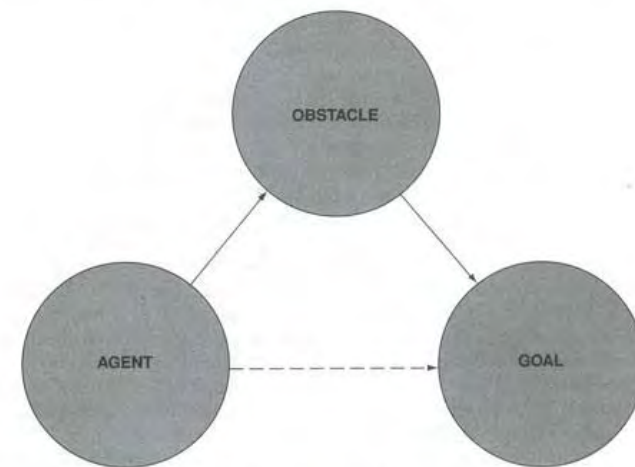


1. The first would be to work with the machine of existence and try to gain justice through the system trying to overcome the hurdles that are thrown their way.
2. Some would resort to violence and assert their view vowing to overthrow whoever tried to stop them.
3. The third option feels helpless and goes along with the system. Plays by the rules and only breaks them when they cannot be caught. They just dwell with the passivity of their society. Some are connected the others are disconnected.

In the above mentioned machine of existence each of the three parts of stasis are in some way trying to ease some sort of human suffering. (Even in the case of the second that is looking out for their own good) This ease of human suffering in my view is freedom. It is a sort of independence that is achieved by an agent to get to a goal. Society today with all of our technology has found a way to pacify the natural tendencies of the masses to a degree with video games, television, books, and computers to name a few. Instant gratification is just around the corner as long as you can afford it. Eventually most get trapped and that great trap is debt. We will hold your dreams for ransom Mr. and Mrs. Machine and you will spend and work making us richer. In exchange you get the illusion you are comfortable and free until you become delinquent.

Our economy dictates this passivity and illusion of freedom. We can become slaves to what we own in the form of debt caused by instant gratification. Sometimes I feel that the most critical time is when a person turns 18 and becomes of age. I would love to propose a bill to the United States congress that no credit card advertisement could be mailed to an adult until the age of 21. Part of this bill would be that it was mandatory for Banks to educate all high school students about the American Economy for all four years just to level out the playing

As with democracy, so too with freedom. Different ideologies conceive of freedom in different ways. "Freedom" means something quite different for liberals from what it means for fascists, for example. We can see this more clearly by thinking of freedom (or liberty) as a triadic or three-sided relation among an *agent*, a *goal*, and any *obstacle* standing between the agent and the goal that he, she, or they seek to achieve. We represent this relationship in the following diagram.



The Triadic Model of Freedom



field a little. They want us to be consumers so why not teach us how to consume consciously. This is the first obstacle for many to not become caught in this trap or at least have a plan for getting out of it. We all have this dream of self-actualization at this age where we will be able to pay back these debts when we graduate from school and get a super job but many even after graduating from college never see this day. They become the prey for the few who do. The ones who end up having the opportunity to invest some sort of capital instead of paying it back to someone else at a premium.

How do we become free from this Machine? Is it possible? In society today we are being robbed from every level and the machine makes it almost impossible. They think you will always be able to find a place to get more but everyday I see many who can not and end up relying on the government. Police and military are too strong for an individual to beat this system. They are only there to protect you until you become delinquent. So the ones who are in the second category are often held accountable and disposed of. That is why there is no great, war no revolution, no violence that can liberates us. That is not necessarily a bad thing and why I believe violence is not the only answer.

So what kind of weapons do we have? In this case I feel that architecture can become a weapon

of liberation. It can be a way of freeing us from the Machine of Existence to rely upon ourselves within it. A way of changing how we live, a way of coexisting that could have the potential of reforming part of our social structure. In Idea or theory it is a way to design by example. A way to free us from our interconnected existence to meet the demands of others who invest in consumer culture to feed us more of what we don't need to facilitate their need.

At the end of all of this you should be reminded that I myself am still a part of this machine trying to find my way out.



Project Statement: The Weapon

The main part of my proposal is an alternative system of living. This weapon is a way for someone to exist with next to nothing. The idea comes from observing the homeless. By definition the Homeless are persons who lack permanent housing. I have been an advocate for the homeless and in talking to many of them they do not want help. They are OK with who they are and the way they live. When I speak with someone who is "homeless" I never offer them help. When I do it is always indirectly. Most that I have spoken to feel that they are living independent of society. These are the delinquents. They are the ones who have been rejected by the machine and receive help out of pity by some. I admire them because they hold their own. Most have been disillusioned by drugs or alcohol that pacify them from human suffering. How they survive is amazing and understanding their disconnection to reveal it in an architectural light could be a premise for developing this system of living.

My inspiration or what sparked these observations came from two scenarios. The first is Corbusier. When his wife died he appeared to develop a state of disillusionment or depression. In this state he retreated to his wife's tomb a site on the cliffs on

the Mediterranean Sea in France. A few hundred yards away Corbu set up a primitive hut where he lived out the rest of his days. This disillusionment and disconnection with his society fascinated me. He developed a way of living in the twilight of his life that even in the midst of his stardom offered him isolation or independence and sustainability a place that allowed him to work on his art and live efficiently.

The second scenario that inspired me was my friend Riley. Riley graduated from high school the same year as me but from a different school. His family was fairly wealthy but he was this punk rocker type that rejected the form of society that he came from. Riley had a very different upbringing from myself and he was considered a genius to degree. When we turned 18 I went off to college and Riley worked at a restaurant. Occasionally we would meet up and have conversations about what we were up to. I was in architecture school and Riley became a drifter going “homeless” for months at a time sleeping in any type of shelter he could find just for fun. One time he slept in a tower on the Mount Hope Bridge. At 19 he began jumping on freight trains and eventually made his way across country to Oregon. His stories on survival are what peaked my interest into the homeless. I was always jealous of his freedom and will.

In these two examples I found the basis for my thesis. How can we simplify our life using different ways of thinking about our social behavior and modern architecture.



Le Corbsier's Cabanon



My Old Friend Riley



Architectural Intentions.

Individual needs

The intention of architectural expression is to illustrate the individual characteristics of this user type. For example the type that believes energy independence can be achieved by going off the grid and becoming self sufficient for energy using an alternative form of renewable energy. They are not doing it necessarily for the environment but for their own independence from infrastructure. A way of being able to continue the use of computers and tools without having a central supplier of electricity. This is an example of the individualistic effort in architecture. This is the desire for someone to have a part or expression in their built environment.

According to John Habraken mass housing strips people of the ability to demarcate their own territory. In this sense the same could be said for people who are in the previous example. That they are trying to express their own self reliance and ability by becoming independent of infrastructure. In the theme of a prefabricated kit of parts it could be possible for the user to select their dwelling from a assortment of parts that express the individuals needs and values. By creating a system or architecture to support this individuality and allow it to be moved easily an alternative system of architectural expression can take place. Although the parts are similar different configurations can create new meanings of function and identity for the user

Mobility

We take for granted the speed our wheels give us. It is remarkable how we obliterate space and time with our beautiful devices of exodus. Where would you be without the car? I am sure you commute everyday. The commute wears on us and is stressful. If the commute is uncomfortable it can lead to a violent attitude. Which is why so many Americans take pride in a vehicle. People customize their vehicles with things like stereos, televisions and satellite radio to make the commute bearable or modify the vehicle to be faster or more efficient. Some take it a step further and ornament their vehicle so it becomes an expression of who they are as an individual. I am sure that is why so many Americans would love to work at home. Myself personally would love to work at home. My personal dream would be to live across from my work, no long commutes, mass transit, just crossing the street. That would be my own qualifier if I was going to work somewhere. If they moved the office I would move with it. Imagine being a customer service representative with a mortgage. One day your company outsourced your job. Would you move to another country? Maybe, but many people would



[STRABISMAL_EXISTENCE]



not be cool with moving to another state never mind another country. Although there are some of us in fact millions of us who do. The so-called freedom of the open road is here and we are not stopping until something better comes along. Gas prices soar and our monthly car payments skyrocket while we burnout our Goodyear tires and release harmful carbons to the atmosphere. Our evolution has been geared to always be able to move, faster, further, and for longer. It is the mass exodus from our generic capsulated world.

Mobility is another theme central to my thesis. The ability to take it with you and survive with or without an infrastructure. Having the ability to be where you want to be extended periods of time instead of having to adjust to a completely new type of housing can change our effects of how mobile we could become. For example, what if the only thing that was different about your bedroom was that when you looked out the window it was Boston one year and the next year it was Tokyo? Everything else ; the bed, the walls, your closet all stayed the same. This coupled with the ability to demarcate our home and keep it with us, would change our perception of

where we live or why we live there!
Economic Efficiently and Timelessness

To start a small business you must pay rent. Pay rent at your studio, pay rent at your apartment, pay rent to your parents, and be a parent to a child if you have one. How do we consolidate? Cut off the office or the home. Will it help us save money? Will it help us be more productive? Everything we purchase we buy to make us to a degree more productive. Our iPods, our Laptop, Mercedes Benzes, and coffee all make us to some point more productive. What is going to be a better ride? The Mercedes with all the amenities or a Nissan Sentra that is 14 years old. Spending so much for that comfort but it is relatively inexpensive compared to our living arrangements. By cutting out the living cost we could be more efficient with our spending to consolidate cost. Why can't I buy a descent shelter that lasts me the rest of my life for the price of a small compact car. Or better yet for the price of a new Mercedes Benze. The house does not move. It could potentially last forever under the right circumstances. What if we had portable housing that could expand form



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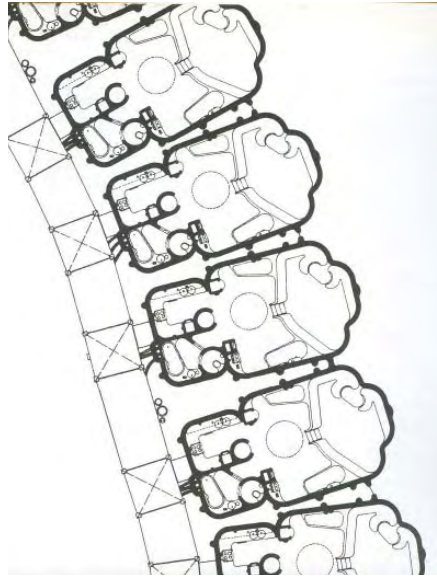
larger spaces when we need them or shrink when we don't? Housing that could be dumped directly outside from where we work or go to school. Rem Koolhaas in his essay on the Generic City states that "housing is not a problem people live either legally in a flat, or illegally in a flat in a crust of improvised shacks." When looking at nomadic housing or shelter built by people with little or no money around the world we see that there is not that much that is needed to survive it is the needs we have to accommodate that facilitate our housing. If we can streamline this and cut the living cost down to divert efforts to other things we may be able to make more enjoyable use of our time without having the pressure of keeping a roof above our head.

Design Proposal

My story of my thesis is going to be about a group of artists who cut living costs through efficient living. A portable housing unit that can take up space anywhere like a hotel room. If your job moves you can move with it just like your music library on your iPod when you come to work. Not only does your music library move with you but also your living condition the place you do your work. A house that is built around the same portable theory of the iPod that is sleek, seemingly functional with slight hint of luxury, a decent size space that allows for your daily functions that is not necessarily directly attached to the earth. A thing that can exist anywhere and when combined with others provide more luxurious amenities.

My inspiration came from Le Corbusier's cabana, a minimal structure with just enough space for himself. What a retirement, waking up every morning to open the door of your little cabana only to see the horizon of the Mediterranean Sea. All you have to do for the rest of your days is eat, paint, and go swimming. It would be a beautiful thing.





My Idea is to take the idea of the capsule aesthetic and create a system of living for a group of people trying to start a business or even better to get started on life. A way of getting back control from the banks that rule our lives. The spaces would be designer structures that could be moved like portable storage from site to site. Instead of calling a mover to move your stuff from one house to another we call the capsule unit company to move our dwelling. Each space can be interconnected to create new versions of the space. Our dwellings take a similar role a vehicle and potentially shorten our commute. When spaces are interconnected they can form a double or triple unit. Say two single people fall in love. Their units can be connected to one another to make a more comfortable living space. When things become uncomfortable between the lovers they can immediately split up by making a phone call. No more searching for an apartment because your girlfriend kicked you out. No more eviction notices from your landlord. No more searching for an apartment because your job left town. Your home becomes less complicated. Plus you should be able

to save money because you own the space. To have the potential to actually pay it off in a short period of time and add onto it when it is necessary. The bank can not take it away from you for lack of payment. Like our cars the capsules will become expressions of ourselves and symbols of who we are in society like our clothes or the color of your ipod nano. This would be beneficial to artists especially those that are leaving school to get a head start on their work. It would make transitional housing obsolete and allow a new freedom that can give people the ability to move faster and stronger in society.

My project

The hypothetical situation is this: A group of Artists in Fall River find an industrial site that is close to a new pedestrian gateway to the city that is linked to a newly formed artist district. Can these capsule units form a strategy that creates a low cost habitat while increasing personal productivity? In essence this is a camp. Not a refugee camp, not a place to park a Winnebago but a support structure for this system of capsulated living. The key would be to simulate the



[STRABISMAL_EXISTENCE]



accommodations of standard living in a way that is similar to traditional living strategies. These spaces would have the ability to survive on their own but gain more access to space and accommodations by connecting or being used in unison with similar or other types of structures. Inherent in their design will be a standardization of connections that allow these living units to attach to one another either horizontally or vertically. Individual expression will be key to the design, so a variety of modules will have to be designed with the possibility that beyond the scope of this project hundreds of variations could be created. The same structure could be applied anywhere in an individual manner or collectively. The siting could be a parking lot, the forest, the top of an urban building, an alleyway, or even floated on a raft. In any case when living an inter-transit lifestyle your personalized structure can move with you.

Site

Primitive living to elaborate living; originally I looked into providing housing for the homeless. The intention was to develop a dialogue between

the homeless and a community of artists and manufacturers in Fall River. This dialogue would create work for the homeless and a form of cheap labor for the artists and manufacturers in the area of the site. After talking with tenants and artists who work at a mill on the site each said that this dialogue would not take place. Rather they would like to hire labor from slightly more developed class of people more in relation to there own. In essence they would like to be the ones living in the structure to reduce their operation cost and become more productive. One idea came from a conversation that they might start out by installing this unit for living within their studio space until a zone on the exterior could be established for this type of living in relationship to where they work.

The site is located in a cluster of mills in Fall River Massachusetts located at Latitude 41°43'34.94"N Longitude 71° 8'34.55"W. This area is an industrial area known in the textile manufacturing days of Fall River as Mechanicsville. The site is separated from the Taunton river by the Route 79 express way that connects to Boston on the western side of



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the site. The eastern side of the site is flanked by North Main street which is part of the old King's Highway that connects all the towns and cities from Boston to Newport, Rhode Island. In this complex of existing structures there is an existing variety of program from Artists Lofts, warehouse flooring, to Luxury apartments. My Idea is to research this area and develop a master plan to reconfigure some of the zoning in this area. Within this area there is an undeveloped site where the support structure for the capsulated living spaces could be centrally located in accordance with the mill structures. Artists living within the capsule units would be within 600 feet of their work environment. Without having a high cost of living over their head more capital could be invested in their business. If the business grows and moves, their individual living support structure can move with it temporarily or permanently. For how-ever long they need to stay.

My goal is to provide all the amenities of the Generic City. A hedonistic community based around the individuals needs. That does not trap them in the underpinnings in the machine of existence. By tread-

ing the ground lightly we could not only improve the environment but also improve upon our freedom. Unlike a hotel where, we can go, we can leave, but we cannot take it with us. With this system we can and like our vehicles modify it or purchase it in a way that already accommodates our individual needs.



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Site

Site Views



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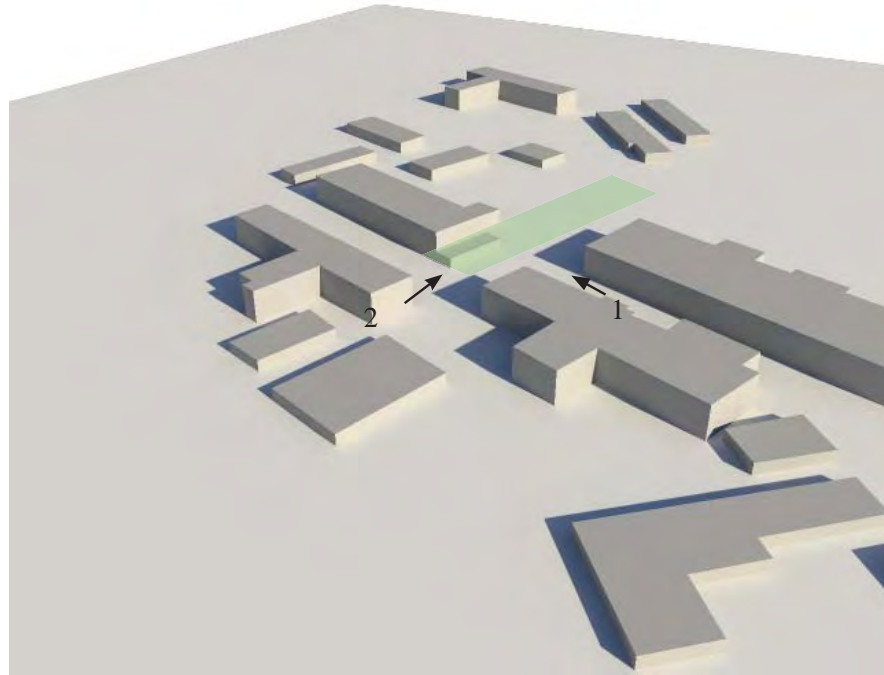
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Site Views

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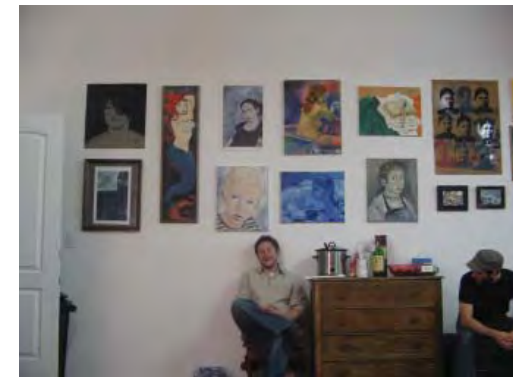


View1

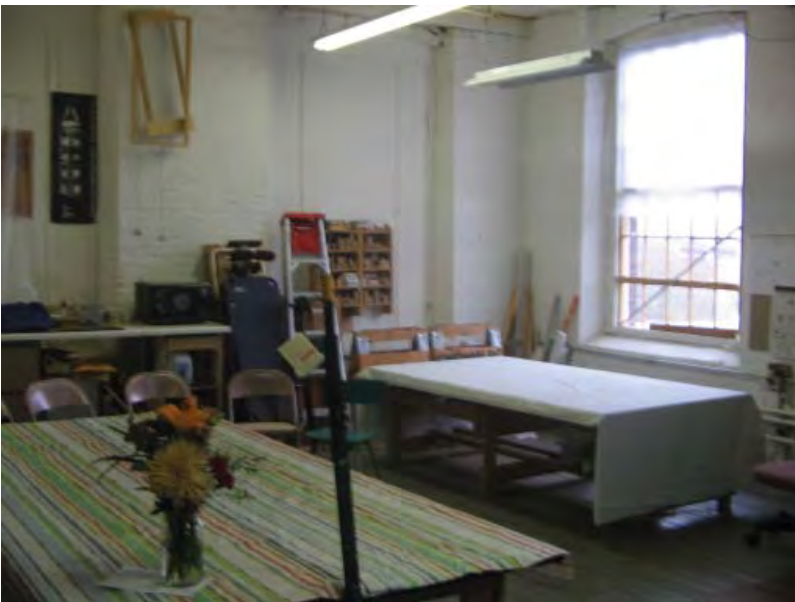
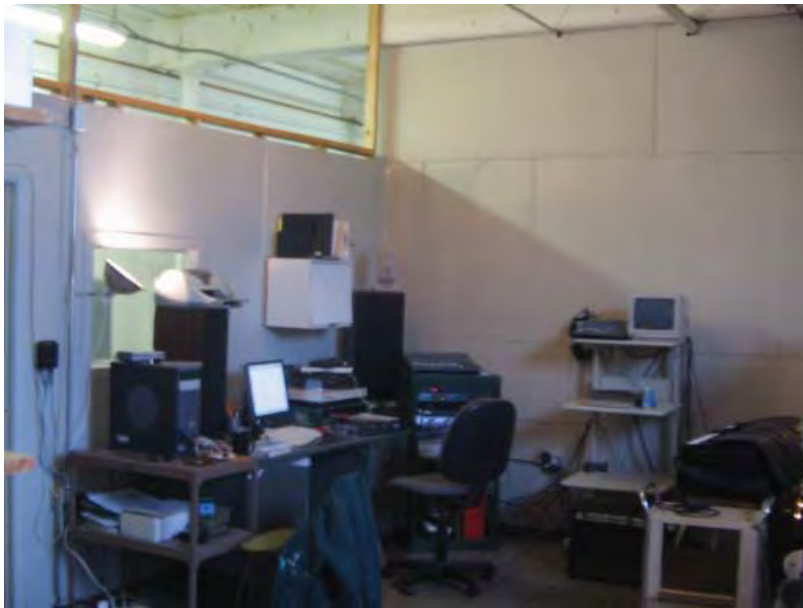


View2

Images from Border City Mills Open Studio



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The Border City Mills open studio allowed me to talk to some of the artists in the area around my site and get input on my thesis project. I was able to speak with many of them and get to experience where and how they do their work. These are some images from my visit.

Fall River is a city in Bristol County, Massachusetts, in the United States. It is located about 46 miles (74 km) south of Boston, 16 miles (26 km) south-east of Providence, Rhode Island and 12 miles (19 km) west of New Bedford. The city's population was 91,938 during the 2000 census, making it the eighth largest city in the state. This Area is known as the south coast of Massachusetts.

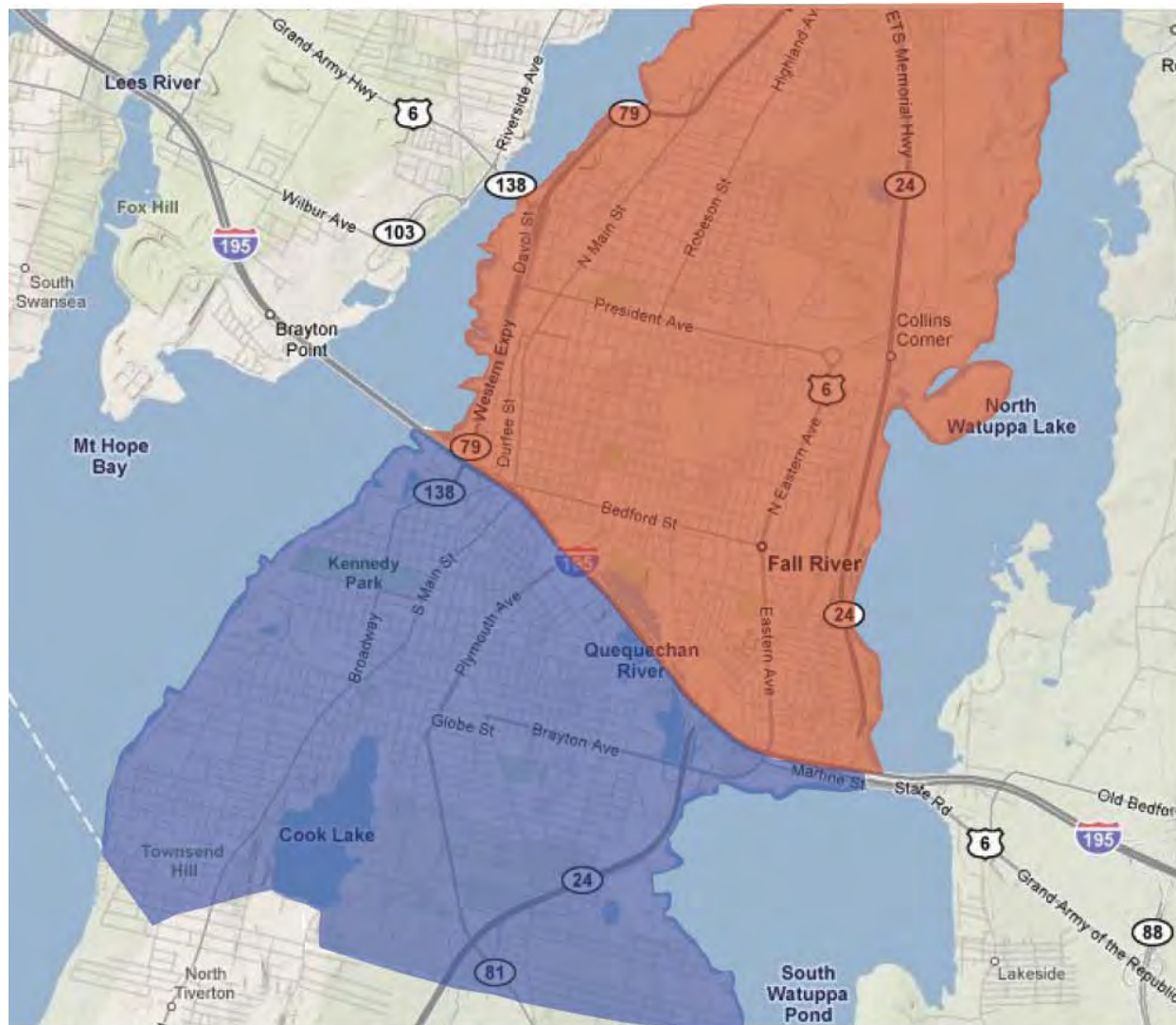


[Established] 1803
 [Settled] 1670
 [Population] 90,905 (2007 est.)
 [Site Area] 60,000 sq ft
 [City Area] 38.2 Sq miles
 [Population Density] 2379.7 per sq mile



[STRABISMAL_EXISTENCE]

A map of the Fall River area in Massachusetts. The town of Fall River is circled in red. Other towns circled in black include Providence, Rehoboth, Dighton, Berkley, Freetown, Swansea, Somerset, North, Watuppa Lake, Bristol, Tiverton, Westport, New Bedford, and Dartmouth. Major roads like I-95, I-495, and I-140 are shown. Water bodies include Narragansett Bay, Taunton River, and various ponds.



■ North End

■ South End

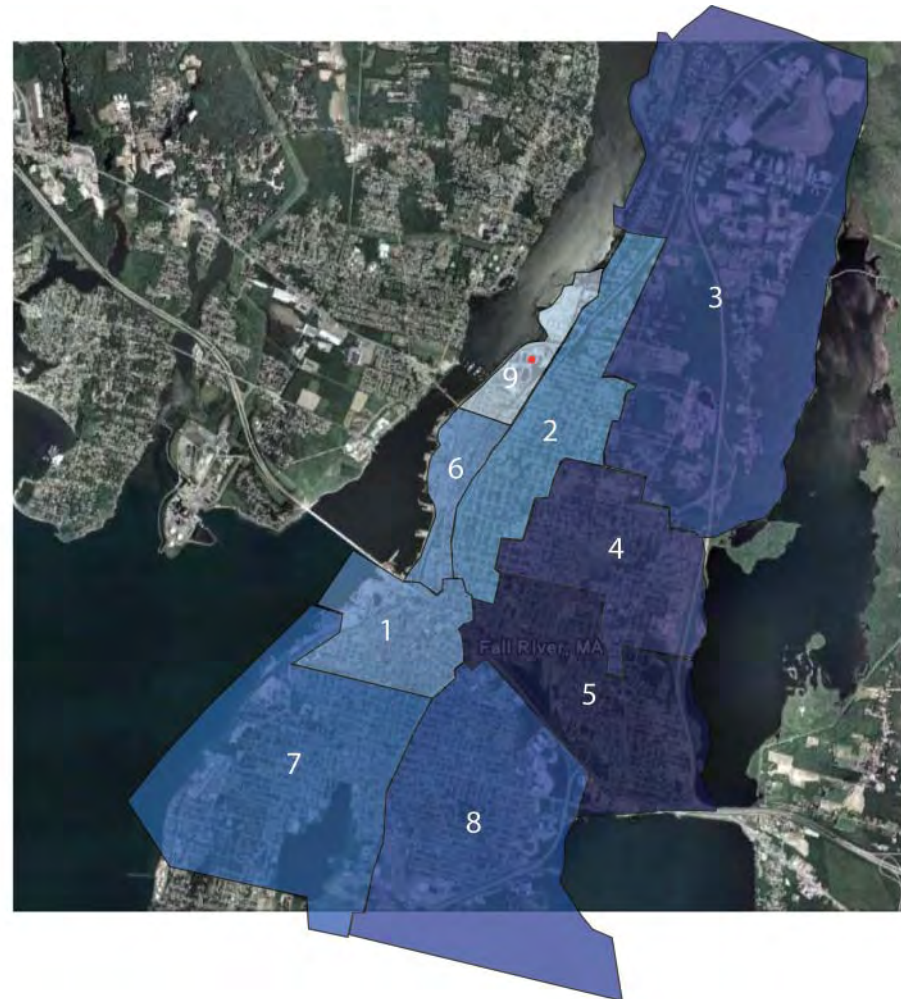
Fall River Neighborhoods are grouped into two different districts.

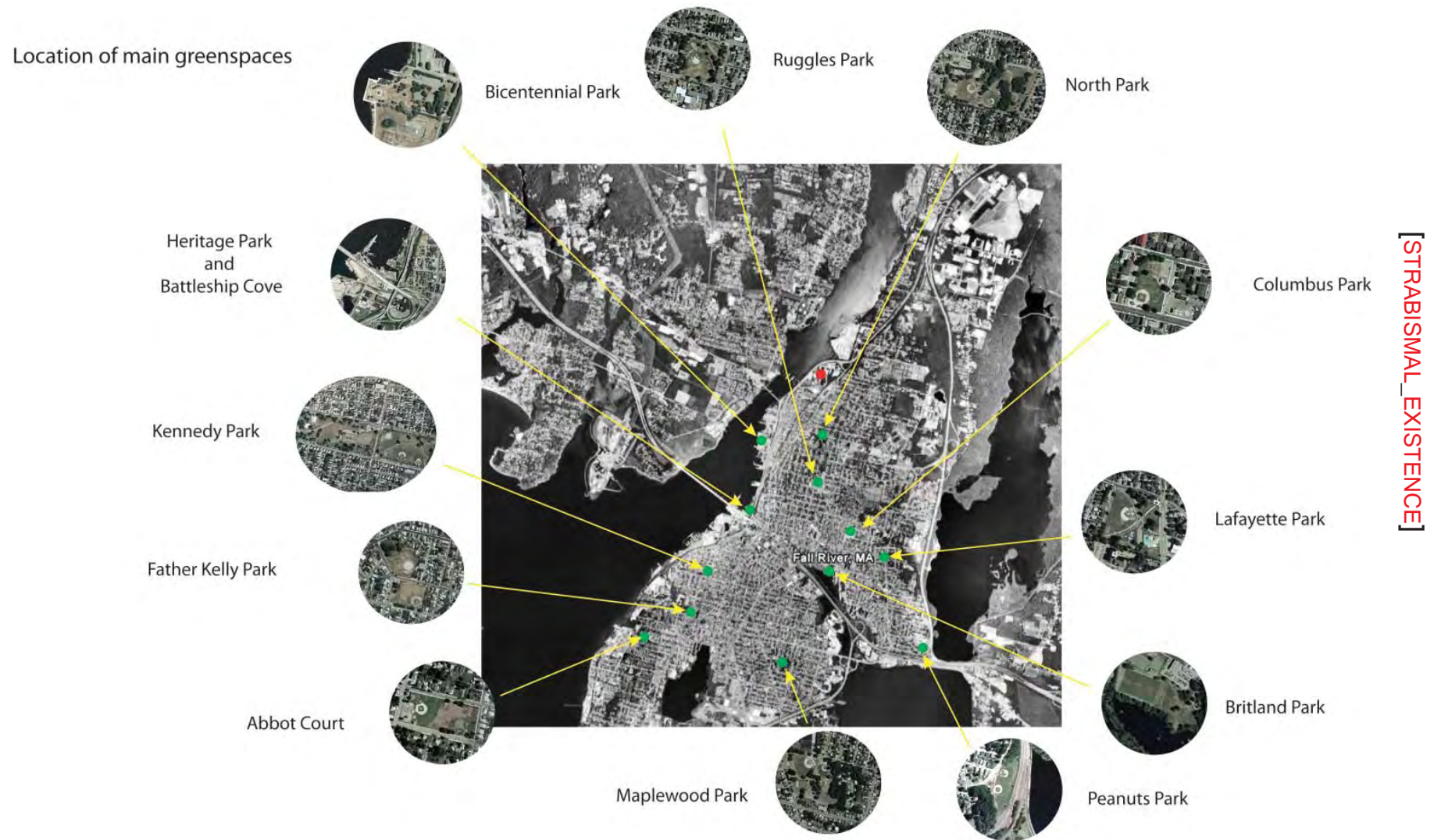
The North and the south end. This separation of the city is created by interstate 195 when it passes through the city. Odd number interstate highways usually are cut through the center of cities. Interstate 195 connects Providence with Cape Cod. The Highway Mimics the original North south Barrier of the city which was the Quequechan river. A large portion of the river was burried to make way for the new highway while some parts are visible today from the highway. Highway Routes 79 and 24 that connect to Boston also mimic the natural barriers of the city on the east and west side those being the Watuppa Reservoirs and the Taunton River.

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-  1. Downtown
_Broadway
_Corky Row
_City Center
-  2. Historic Highlands
-  3. Steep Brook (North End)
-  4. Oak Grove
-  5. Flint Village
-  6. Fall River Station
-  7. Globe Village
-  8. Maplewood
-  9. Mechanicsville (Bowenville)





Fall River has always been an independent community striving to provide and sustain for its citizens. Fall River has their own Power Plant, Waste Water Treatment, Water Reservoir, and Landfill giving its own provisions for waste management and a basic supply of resources.

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Brayton Point Power Plant



Fall River Water Treatment Plant



Fall River Landfill



Lafayette Reservoir





**Restore the
Quequechan River
and Free the Falls:**
Fall River reclaims its lost
river as a neighborhood
amenity and regional
attraction

In 2002 Goody Clancy Architects were hired to hold a charrette with the people of Fall River to help draw up a masterplan for revitalizing Fall River. The citizens came up with a plan for unearthing the Quequechan river that was buried to make way for Interstate 195. The Idea sparked a great deal of interest and a group of citizens pulled together their resources to make this project happen. The idea is to create a river bikepath that connects pedestrians to the Fall River water front and the waterfall that once gave Fall River its name. The bike path works with the New Brightman Street Bridge and connects the town of Somerset with Fall River at a node that connects right near the site of the Artist community in Mechanicsville.





Original Drawing of bike path plan

- New Pedestrian Bike Path
- Artist Community Site



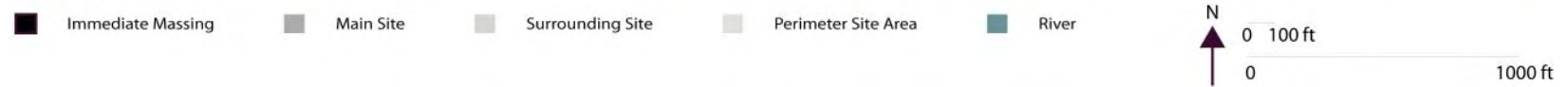
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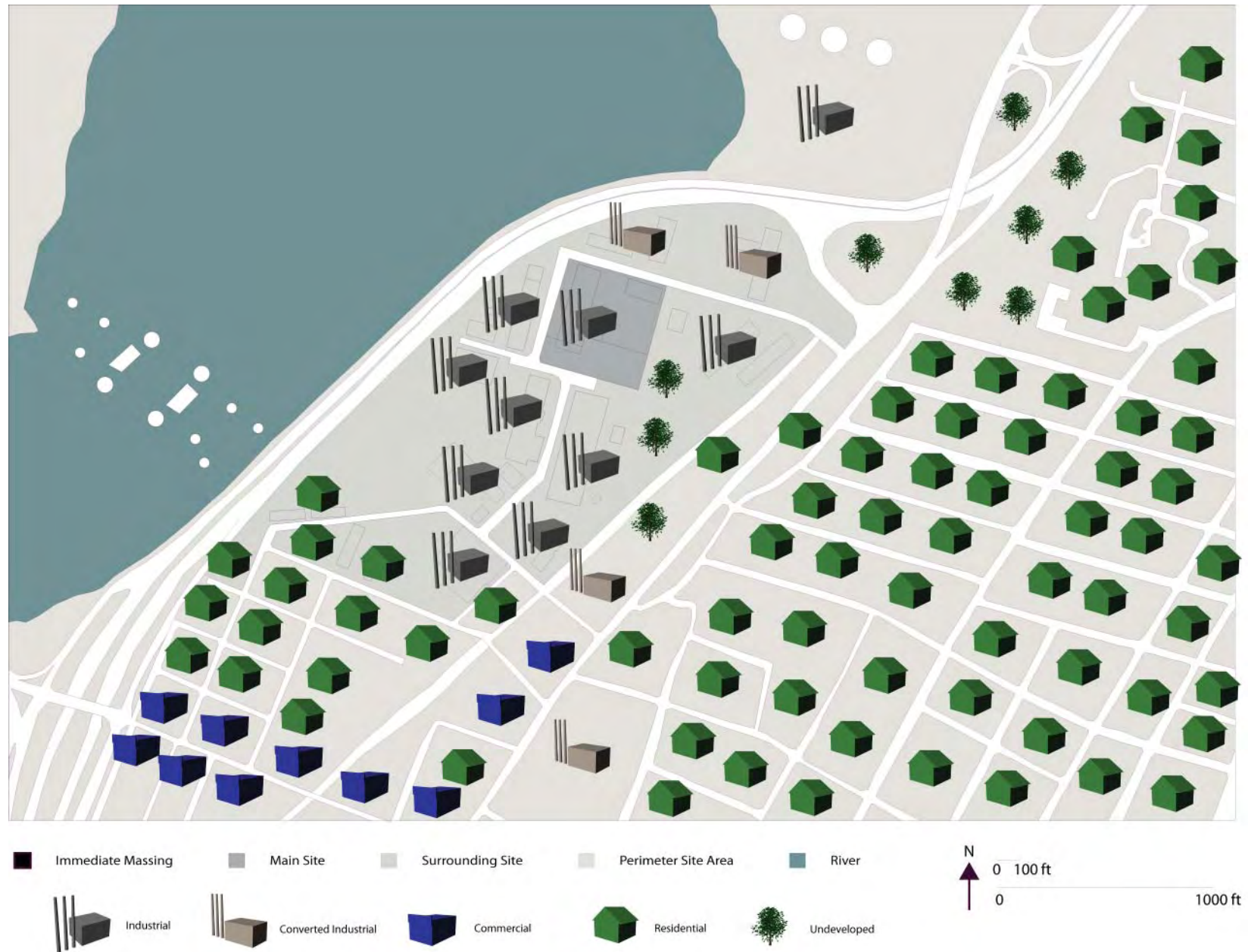
The New Brightman Street Bridge will touch down near the artist community site. With the new bike path connecting to the bridge new pedestrian traffic will be introduced to the Mechanicsville area of Fall River and offer a much needed direct connection to the community.

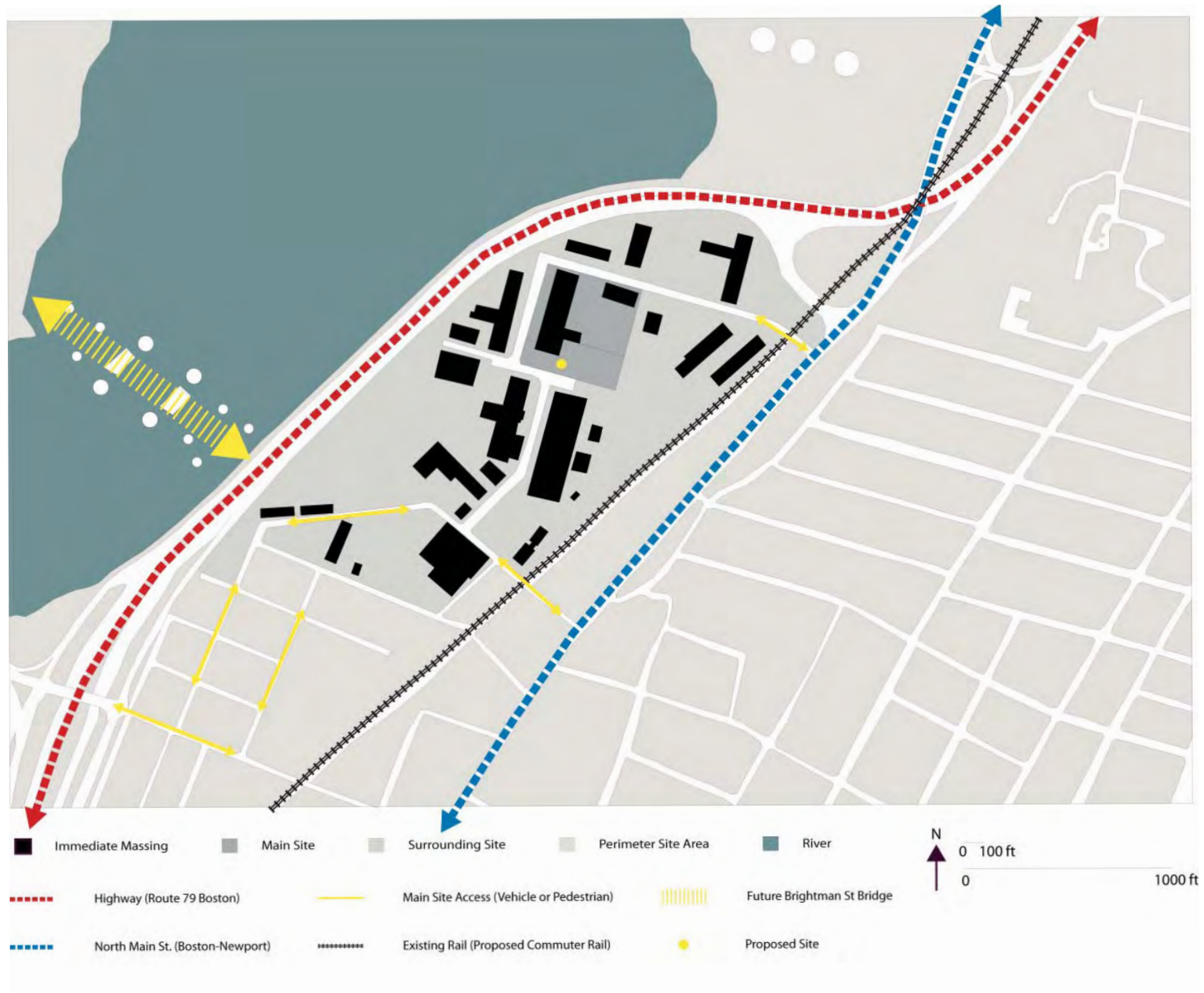


A New commuter rail connecting to Boston is also planned. It will also be close by to the Artist Community providing an Inter-modal transit hub. The commuter rail tracks border the east site of the Artist Community site.

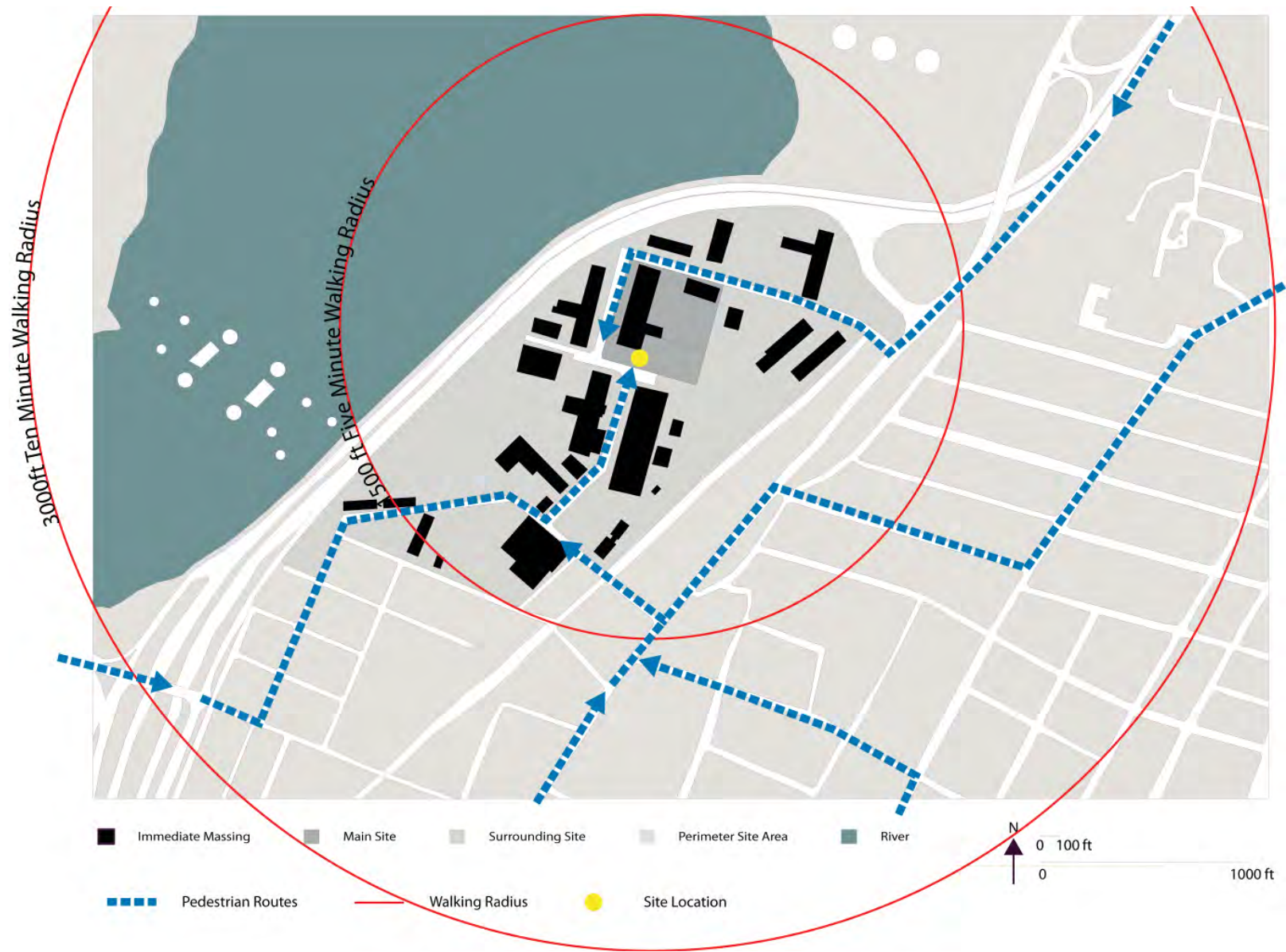


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[STRABISMAL_EXISTENCE]





Current USGS Topo Map



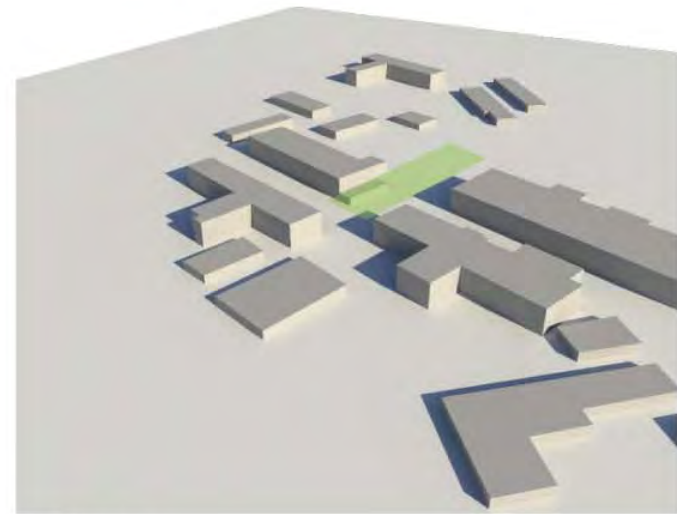
USGS Topo Map from 1941 Before Route 79 was constructed

The site for the Nomadic Artist Community is located in Mechanicsville at the base of a very steep hill. The hill is populated with a high density of residences that get a great view of the waterfront. The base of the hill is marked by North Main Street which is the main spine of circulation through north and south Fall River. Main Street is part of the Kings Highway that was commissioned by the British during colonial times. The road served as the major access route from Boston to Newport Rhode Island until the highways were built. The hill rises 65 meters above the site in Mechanicsville where it levels out and provides a flat site for the Artist Community.





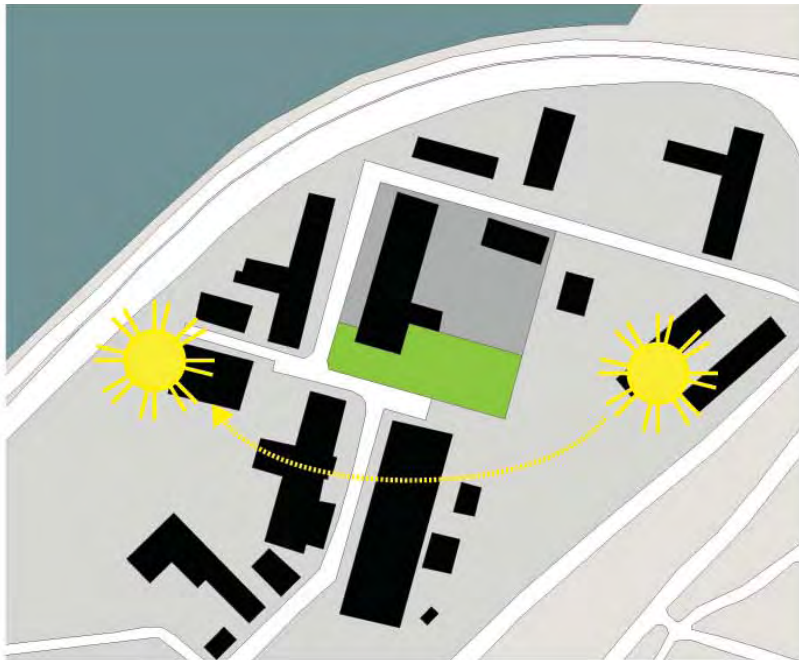
Site Relationships



Site Massing



Figure Ground Massing



Path of Sun

One of the reasons for choosing the site in this area was to be able to experiment with the different effects of good solar exposure. Good Sun exposure will allow for experimenting with different types of passive and solar strategies. On the right is a series of diagrams illustrating shadows at different times using the computer massing model of the site.



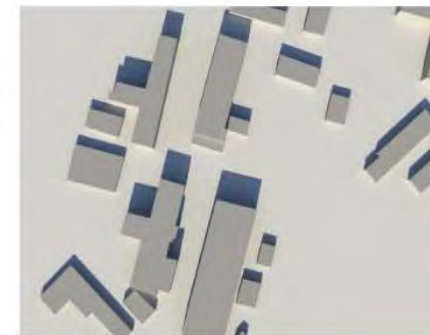
March 21, 2009 2pm



June 21, 2009 2pm



October 21, 2009 2pm



December 21, 2009 2pm

[STRABISMAL_EXISTENCE]

Seasonal Winds

[STRABISMAL_EXISTENCE]



Winter Winds



Spring Winds

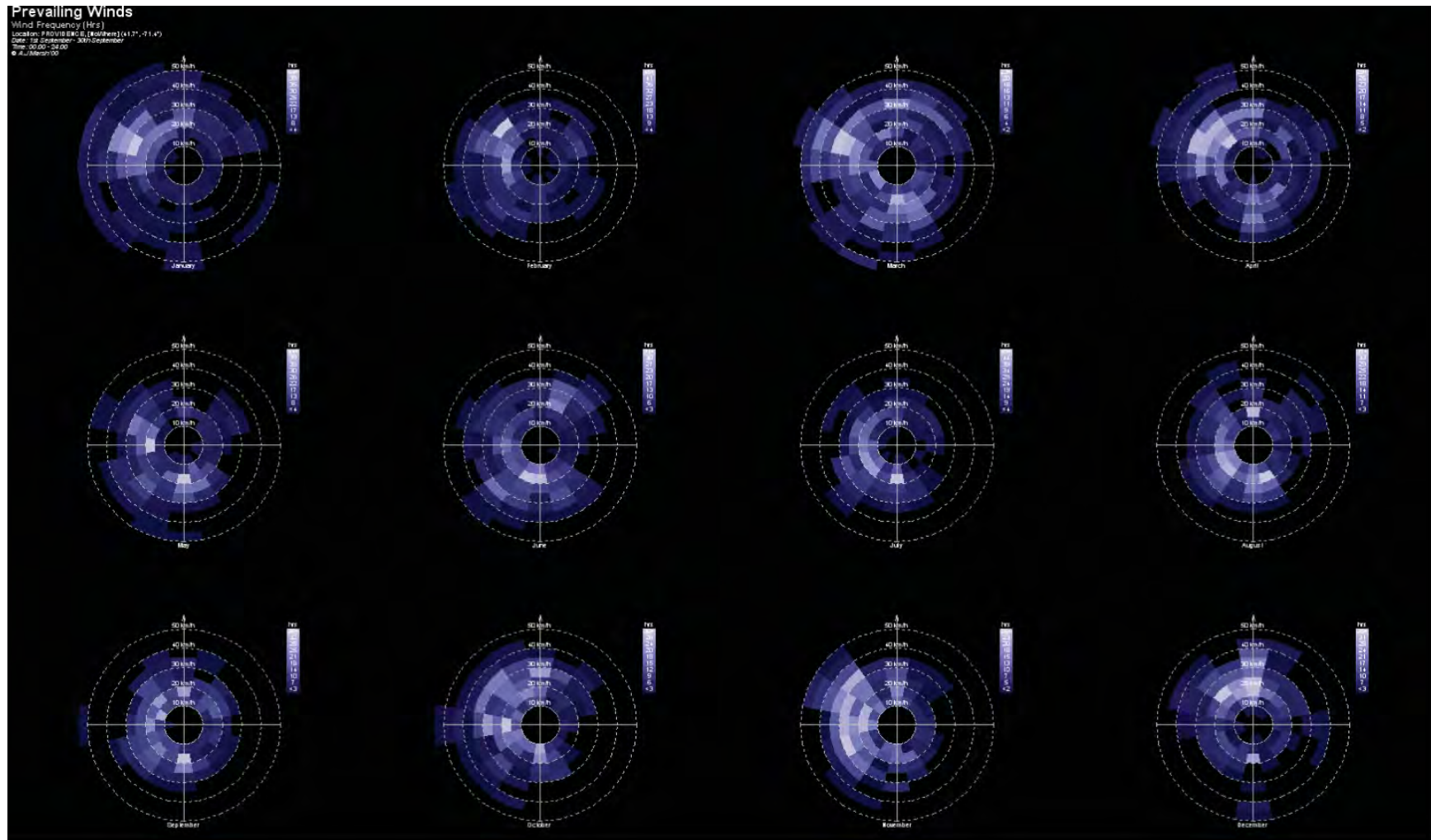


Summer Winds



Fall Winds

Prevailing Winds



[STRABISMAL_EXISTENCE]

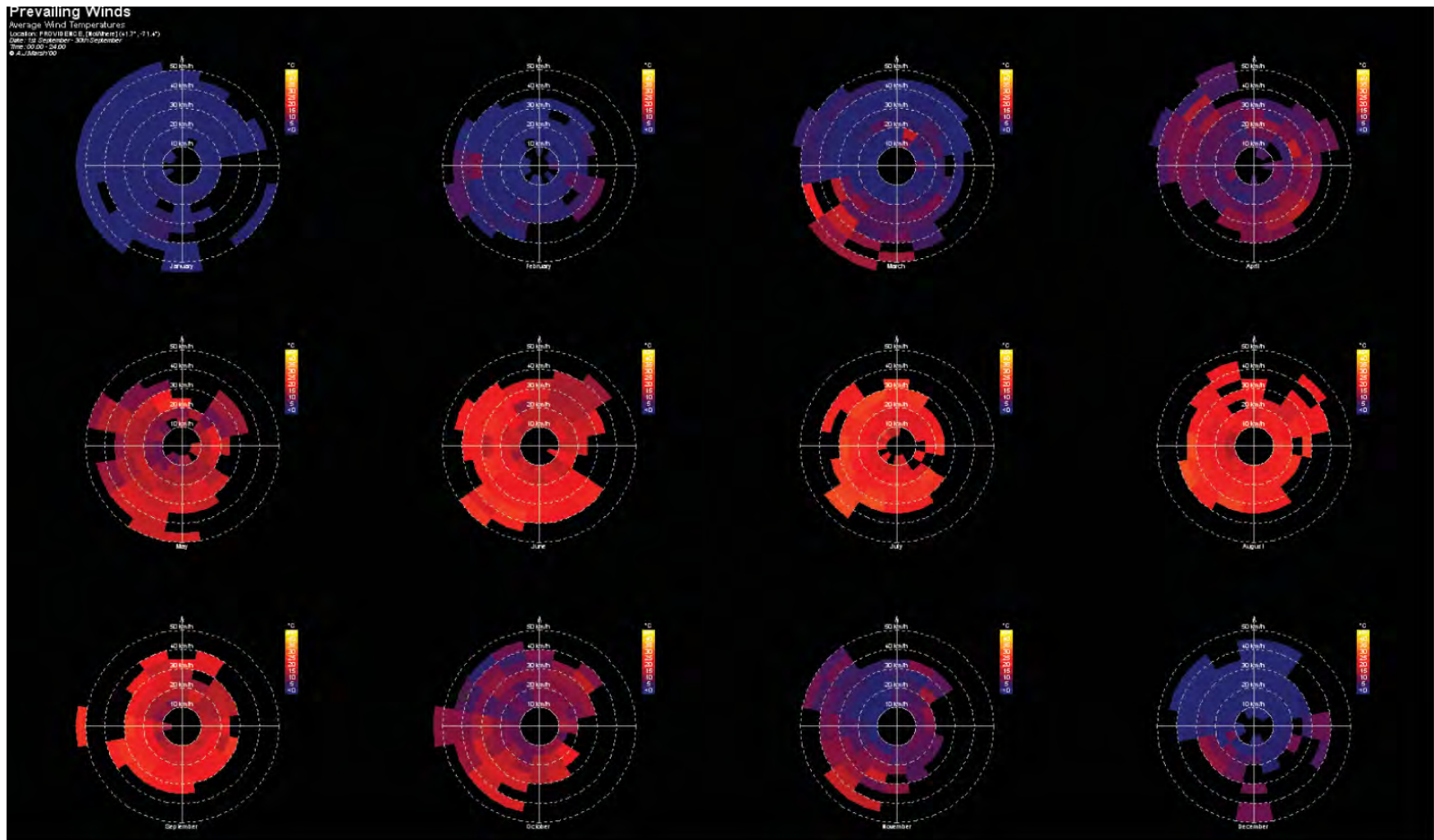
[52]

Average Monthly Precipitation

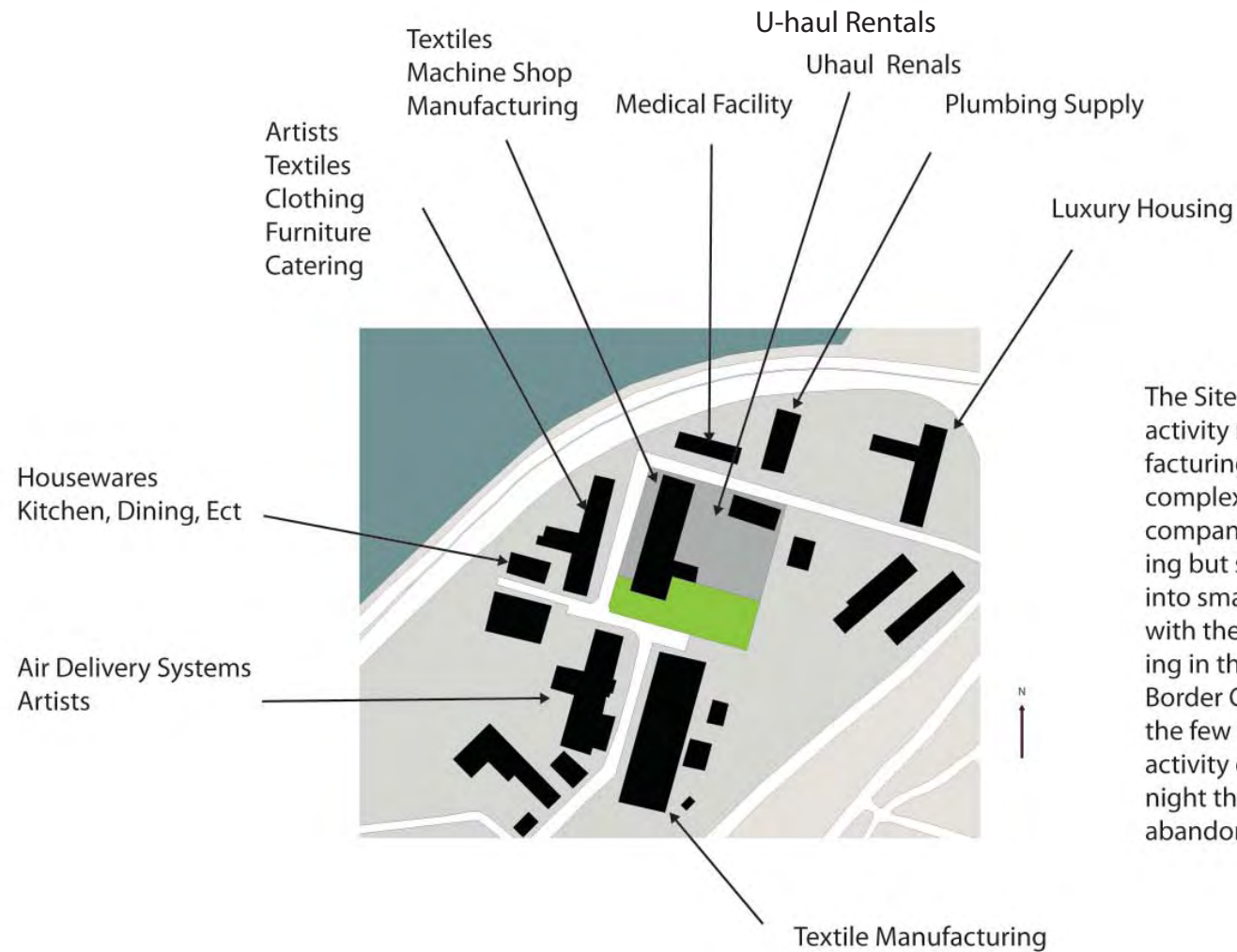
[STRABISMAL_EXISTENCE]



Average Monthly Temperatures



[STRABISMAL_EXISTENCE]



The Site has a diverse set of activity ranging from light manufacturing to artist lofts. The mill complex was once owned by one company for textile manufacturing but since has been divided into smaller pieces of real estate with the decline of manufacturing in the United States. The Border City Mill complex is one of the few that are still buzzing with activity during the day but at night the area is pretty much abandoned.

Program

[USER TYPOLOGY]

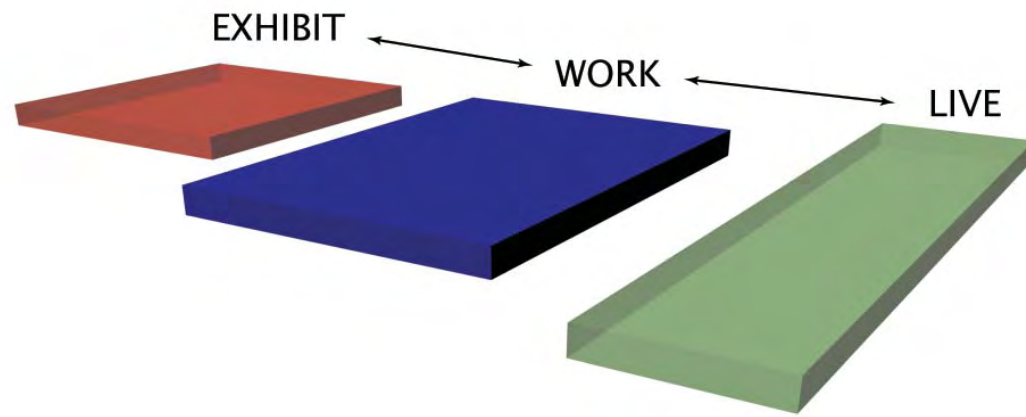
[STRABISMAL_EXISTENCE]



Art can be the expression of the individual or a collective group. In the situation of this collective artist community I do not want it to be closed off to one specific form of art because I believe that collectively each discipline listed is more powerful as a whole. Each can contribute in some way to one another providing for an enriching body of support much like the infrastructure created by the architecture of this community. Each artist is given the freedom to work as an individual or take part in an artist community like this one and the Mobile Living Unit allows for this flexibility.

Initial Parti Relationship

The main parti of the artist community is a three part program that creates a strabismal type of existence combining living and working with a place to hold events and exhibitions. The parti helps create an efficient workflow for artists who are just starting their craft or struggling to get the resources together to produce work. The communal living situation will allow for a community of support. This coupled with the opportunity for becoming mobile and independent will create a desirable situation for this type of artist.

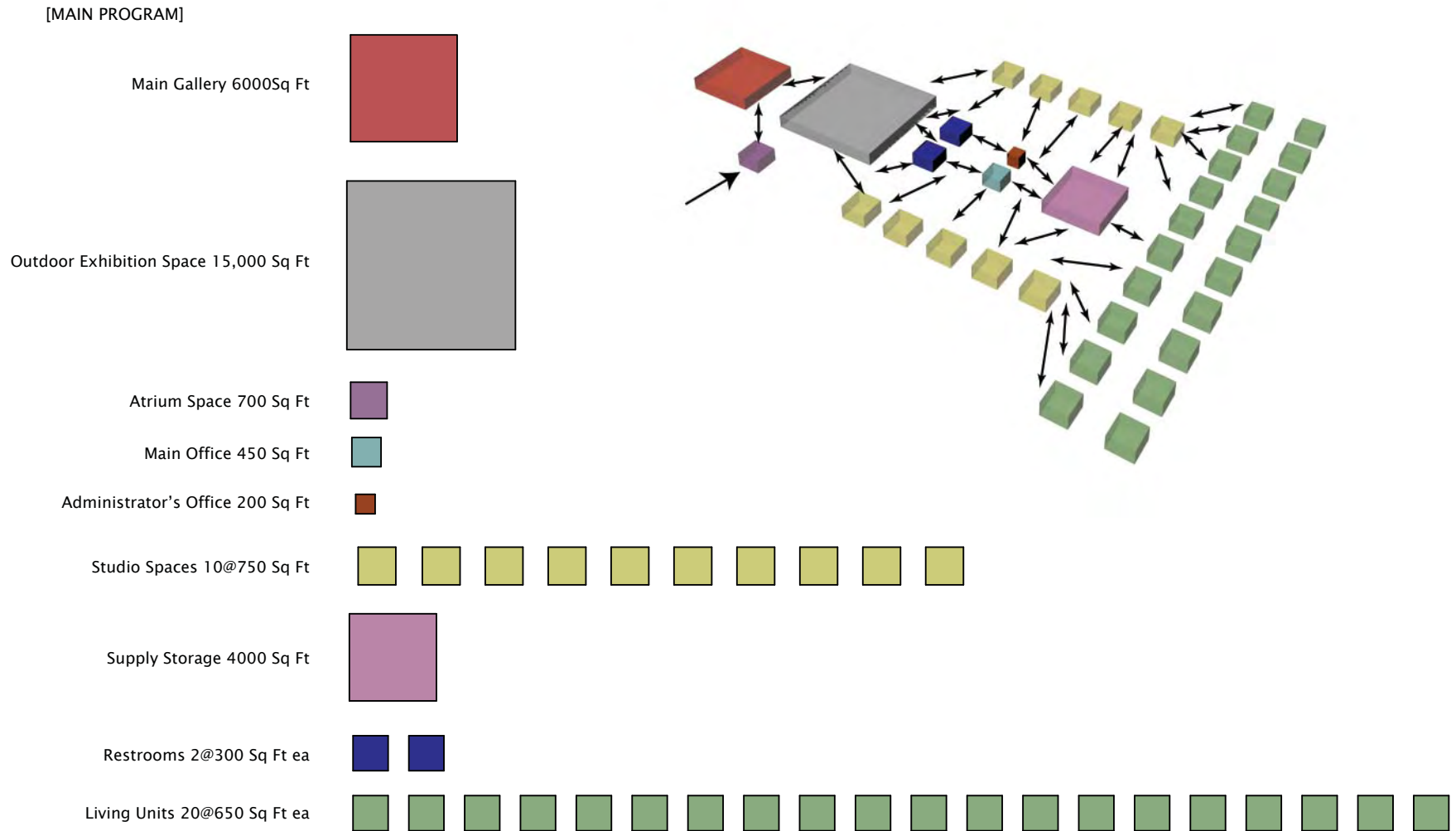


[STRABISMAL_EXISTENCE]

Program Relationship

[STRABISMAL_EXISTENCE]

The three part parti of exhibit, work, and live is broken up into nine parts. Each part's relationship is portrayed in the following diagram according to volume and scale. The directional arrow shows the relationship of parts illustrating how the community comes together to provide an efficient communication of spaces .



Main Program



MLM Housing Units 54 @ 80 sq ft.

The housing units are the most integral part to defining the strabismal existence of the capsular civilization. These units will be designed to support a mobile form of living with the opportunity to work with the support structure of the community or independently with a variety of accessories to be used as mobile housing unit. The MLM (Moble Living Module) will provide the basic needs for survival and accomidate an ability to live in extreme living conditions from a mountainous dessert to the rooftop of an urban dwelling. Illustrating their survival independently and collectively on my chosen site will be the overall objective of my thesis design. Each unit will be designed with the minimum space for an individual to provide an area for living and working.

[STRABISMAL_EXISTENCE]

Studio Module



The Studio Modules are designed to allow for Artists to work with two or three at a time. Different Studios will be defined according to the different user types as specified earlier. Each studio will be outfitted according to function whether it is for digital media or welding and will be capable of being outfitted accordingly for each function. The Support Structure will have a semipermanent nature while possessing the ability to be disassembled and reassembled wherever they are needed. Each studio module can be outfitted with a self contained Water collection and treatment system and can be combined with Solar and wind energy collection systems to provide energy. These systems service the MLM housing Units that are plugged into the side.

Outdoor Exhibition Space 15,000 sq ft.



[STRABISMAL_EXISTENCE]

The Outdoor Exhibition space is a large outdoor area located next to the main entrance of the public gallery. This space can be used for event parking along with public displays and gatherings. Vendor tents can be setup and large scale art installations can take place along with other types of events. Next to the space is a trellis that is made up of a large solar pv array that can power the studios and the normal functions of the mill. The trellis shades a public picnic area that can service the artists living at the mill and public events in the outdoor exhibition area.

Main Entry

[STRABISMAL_EXISTENCE]



A nice size atrium space to greet visitors to the community would be needed to signify a point of presence and entry. This is achieved through a composition created by the support structure. It is all connected by a demountable ETFE structure that connects all the studio modules to the mill. The ETFE is a light weight material that is attached to a frame and is inflated. This material can span large areas and acts as a skylight that illuminates circulation paths and allows light to filter into the main gallery.

Reception Area and Main Offices



[STRABISMAL_EXISTENCE]

The Reception area is the public entry to the galleries from the main entrance. It has a reception desk to greet gallery patrons and provide information. Also the main administration offices are located behind the reception desk along with the public restrooms.

Main Gallery 6000sq ft.

[STRABISMAL_EXISTENCE]



The main gallery is the hub of the support structure . The gallery is part of the southern end of the existing mill structure and connects to the demountable studios and living units. It is the place where the artists will be able to display their work and hold public events. This volume is what becomes the blank canvas of expression for the artists. This space is a permanent facility that allows for flexibility for different types of events to take place while allowing the artists to take their living units with them. It also adapts an old building with a new function of use.

Special Exhibition Gallery



The Special Exhibition Gallery is located on the second floor of the mill structure. It is smaller in size than the main gallery but can provide a more intimate setting for a special event. This gallery is located next to the Cafe on the second floor and could act as secondary space that can be rented out while allowing regular events to take place in the main gallery.

[STRABISMAL_EXISTENCE]

Cafe Space

[STRABISMAL_EXISTENCE]



The Cafe space gives the patron of the gallery a place to get refreshments and acts as a banquet space where catered events can be held. Adjacent to this space is a full size kitchen and snack bar that are connected to an administration office for the Cafe space. This space is also connected by the ETFE Circulation space so that the artists have direct access to the Cafe.

Assembly Space



The Assembly space is located in the third floor of the existing mill structure. This is a large space with views of the Taunton River that can entertain live performances, lectures or video presentations. It can accommodate about 50 people and has been updated with egress systems.

[STRABISMAL_EXISTENCE]

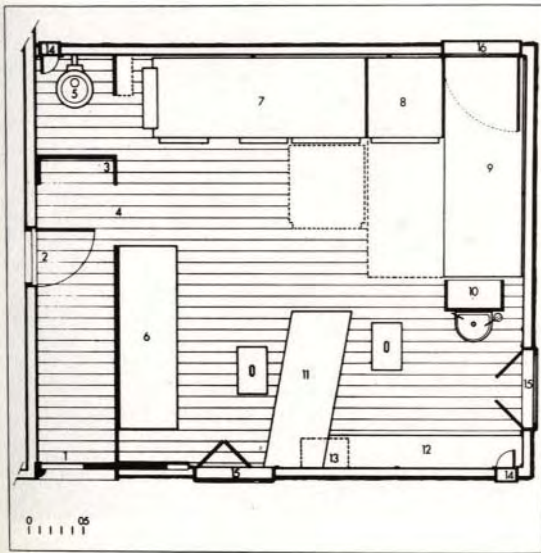
Precedents

Precedent Le Corbusier's Cabanon.

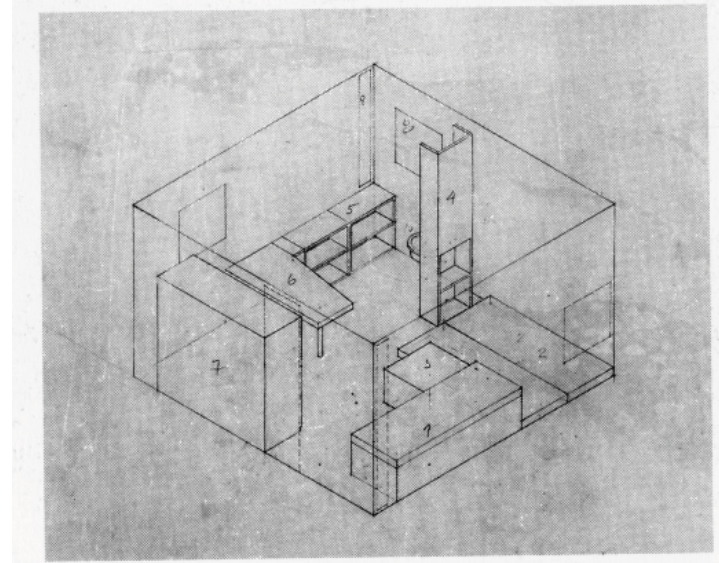
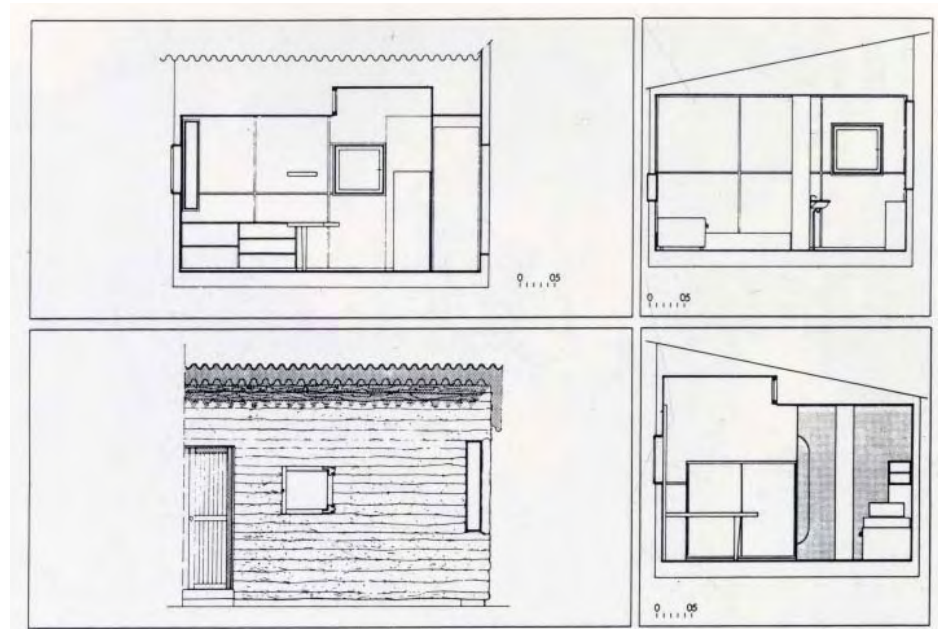
Le Corbusier's design for his Cabanon is what inspired my thinking about compact living. Immediately I saw its potential for use as a basic living unit. Corbusier designed it to sleep two people in separate beds and allow for enough room to allow for work and activities. The 16 sq meter space is one room divided into a part of three zones that most small basic housing units contain. A space for resting, space for daily routine living activities, and a space to do work. These are the basic programmatic concepts that I want to exist within each living unit along with the collective support structure as well. This building was also connected to an existing structure and was the only dwelling that Corbusier ever designed for himself.



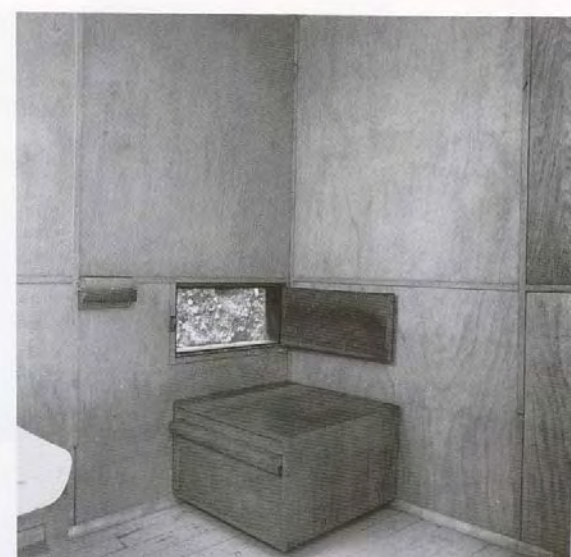
[STRABISMAL_EXISTENCE]



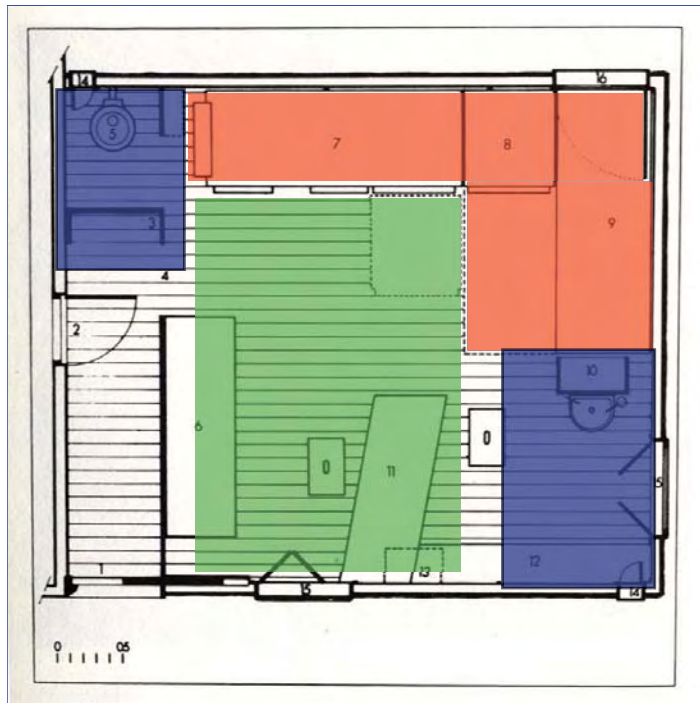
The plan of Le Corbusier's cabanon: (1) entry from outside; (2) entry from the inn "L'Etoile de Mer"; (3) closet; (4) access to living space; (5) toilet; (6) wardrobe; (7) bed; (8) low table; (9) bed; (10) plumbing stack; (11) table; (12) low shelves; (13) high shelf; (14) vertical opening for ventilation; (15) window; (16) window. All needs provided for, almost all functions built in: this was his ideal "palace." Courtesy *Parenthèses*. Drawing by Bruno Chiambretto.



Photographs of the cabanon's interior show the different zones for work, living, and rest. The photos also show the compartmentalized spaces and how the furnishing is integrated.



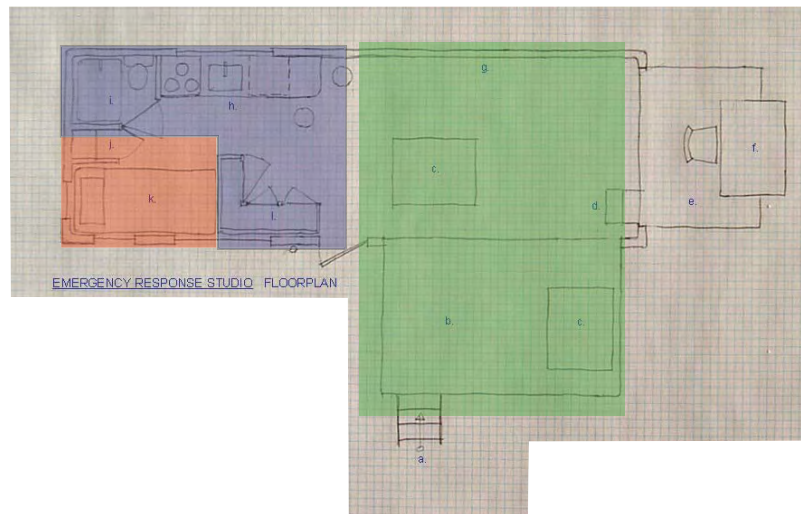
[STRABISMAL_EXISTENCE]



3 Basic Zones

- Resting
- Living
- Working

As we can see by comparison the parti shows up consistently in designs with similar functions. By using this as a basic parti for the living units I should be able to cross this parti with multiple building systems to develop mutations of the parti.



Precedent Emergency Response Studio by Paul Villensky

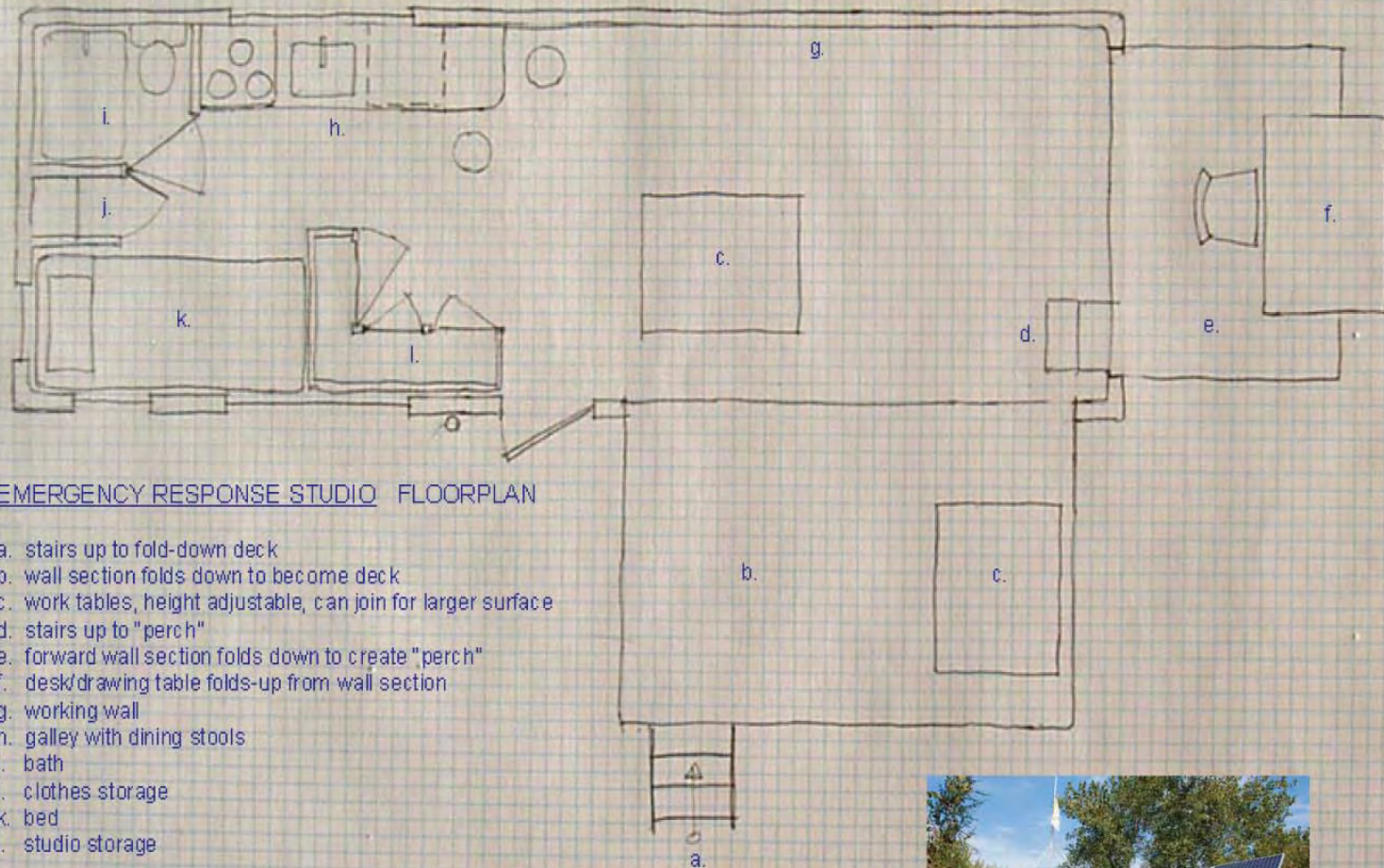


[STRABISMAL_EXISTENCE]

Paul Villinsky's design for the Project 1 Emergency Response Studio is a great example of the mobility combined with individual sustainable aspects I will explore with my thesis. The Emergency response studio was designed to be a mobile studio that would allow for an artist to respond to a natural disaster and still have a studio to produce work.



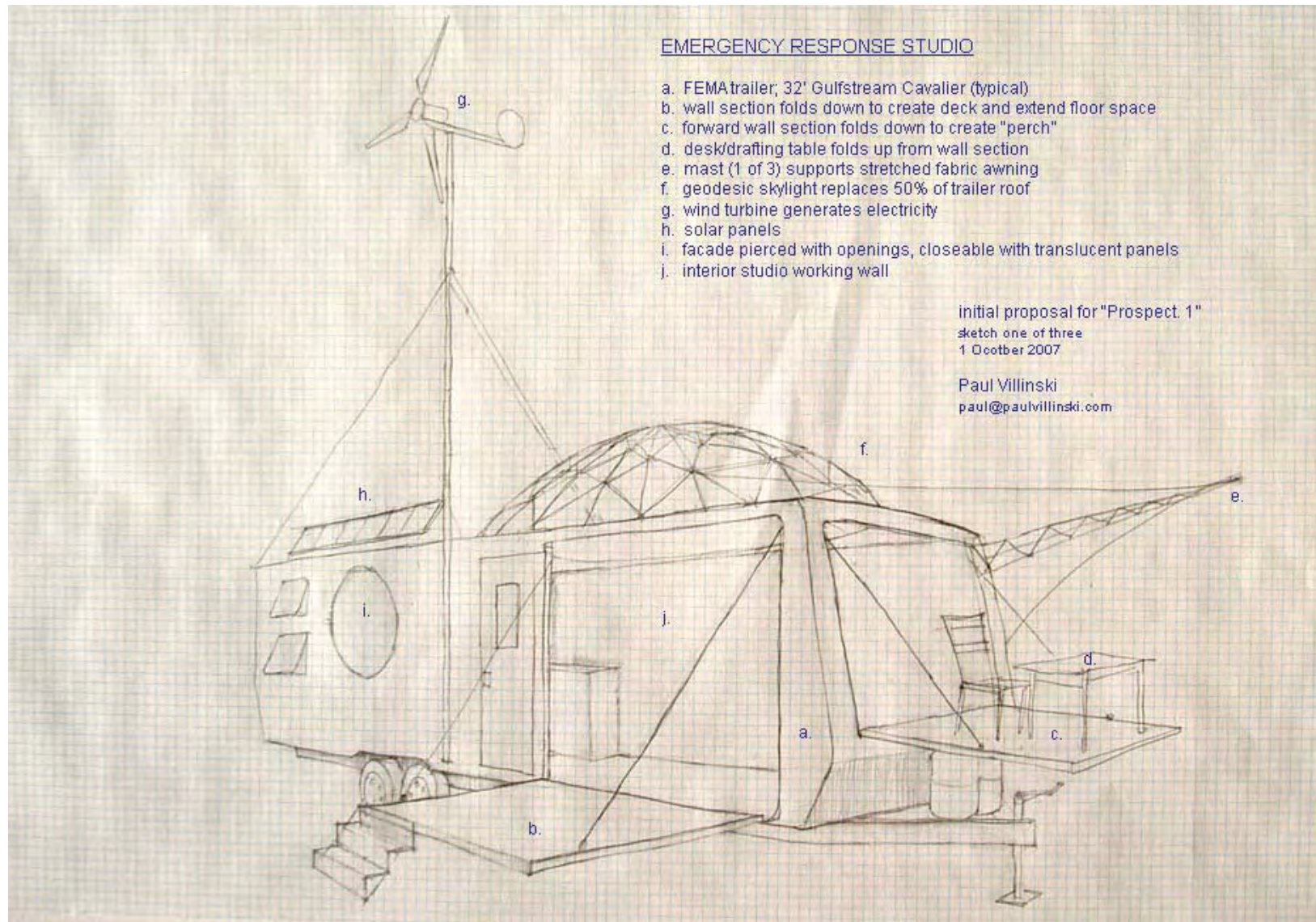
The studio has a versatile passive and active solar strategy to daylight the studio and living spaces while also providing 9kw of power. The structure is created from an old mobile FEMA trailer and has been modified to allow for natural ventilation and also 10 kw of wind power. Some of the energy aspects of this project will be considered in figuring out the basic need for energy in the mobile living units. According to analysis of Villinsky's design an average of 9 kw is needed for his structure with minimal amenities. By comparison my design may need more depending on climate between 14 and 18 kw. Other strategies he demonstrates to consider are the lighting and the expansion of space.



initial proposal
 sketch two of three
 1 October 2007

Paul Villinski
 paul@paulvillinski.com
 917 837 6193





Precedent Project Frog by MK Think Studio



[STRABISMAL_EXISTENCE]

Project Frog is a prefabricated modular building system that I discovered at the USGBC Greenbuild Conference this year. Buildings are created using a versatile number of prefabricated interchangeable parts that can be constructed in a matter of days. All Project Frog buildings come LEED certified Gold directly “out of the box“. The systems are used as permanent and temporary structures in all types of configurations. I feel this is a good example of how my support structure could take shape.

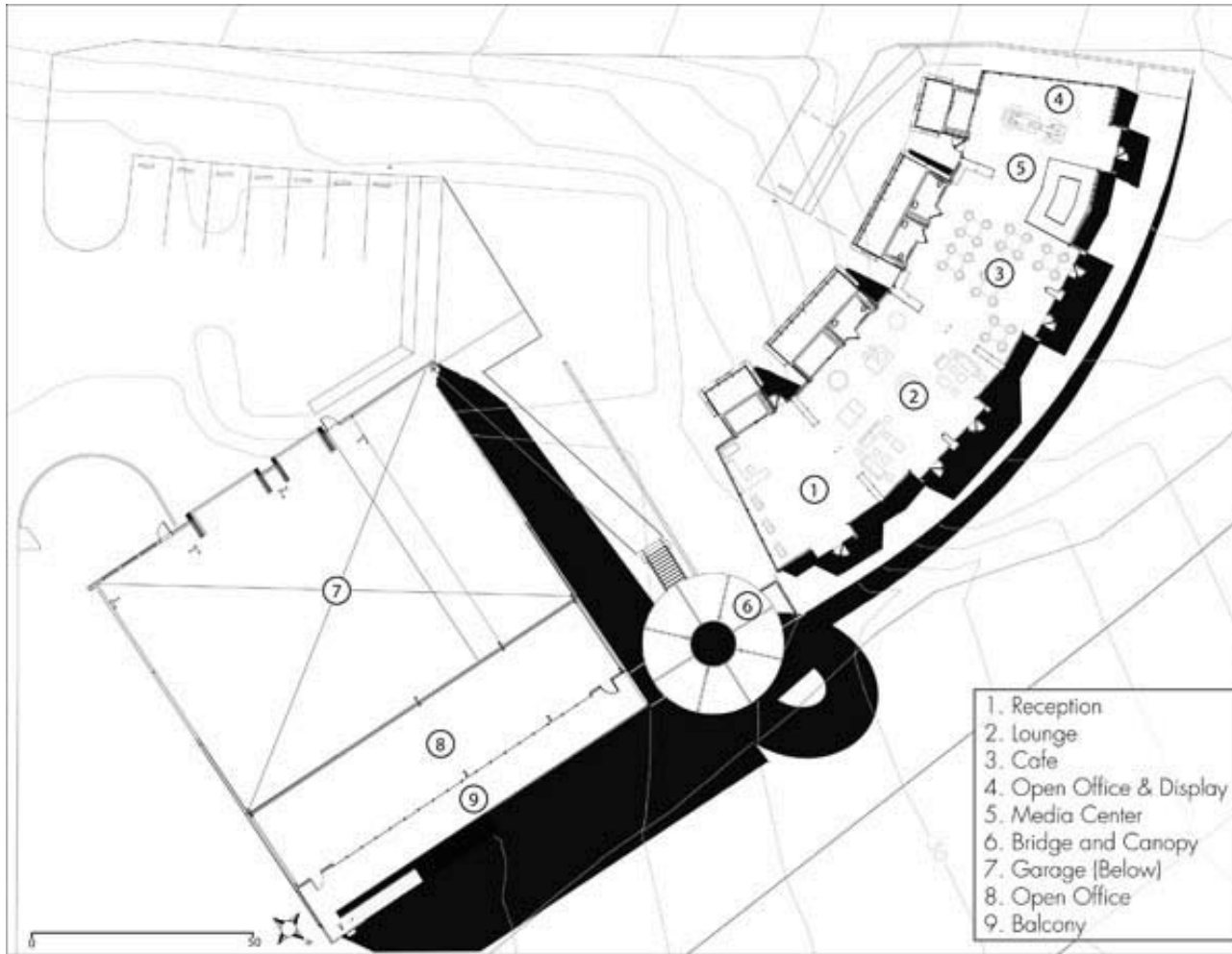
Audi Demo Pavilion

[STRABISMAL_EXISTENCE]



This is my main precedent for the project frog building type. This is the Audi demo Pavillion in Germany. It shows how a flexible kit of parts can create an aesthetically pleasing functional exhibition space with a prefabricated kit of parts for mechanical and structural systems.

Plan of Audi Demo Facility



The plan of the Audi facility shows how versatile a prefabricated structure system can be and how the spaces in the facility are similar in proportion to the proposal for the artist community.

[STRABISMAL_EXISTENCE]

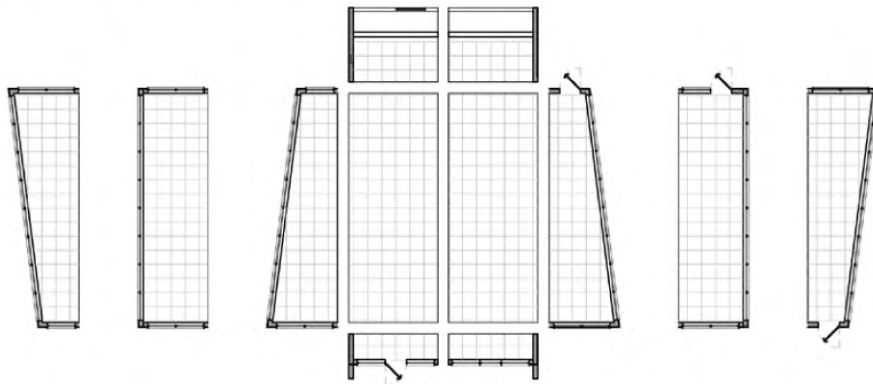
Project FROG Buildings at work

[STRABISMAL_EXISTENCE]

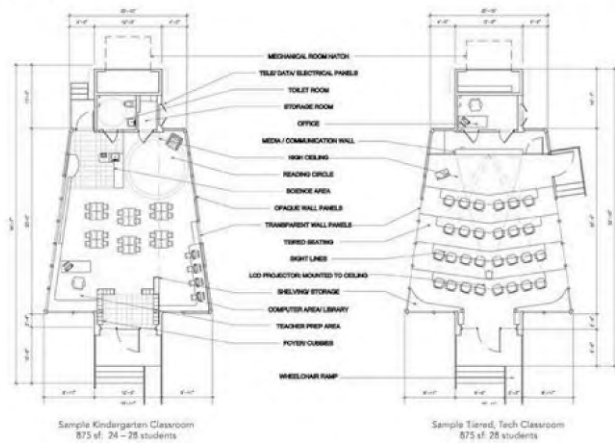


These are some examples of the Project FROG system at work. These images illustrate the use of Daylighting Strategies and Greenroof technology at work along with a variety of different material uses.

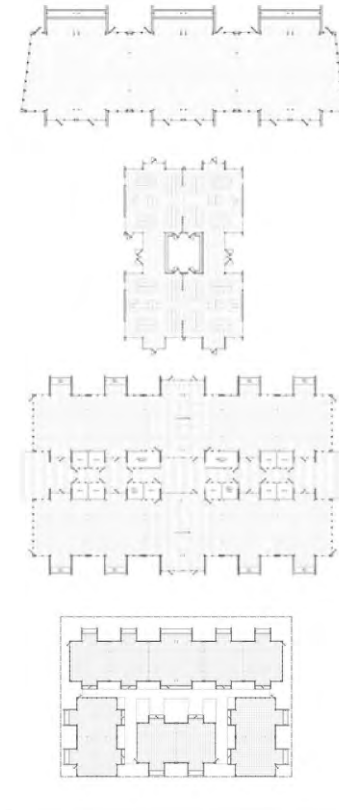
Basic Kit of Components



Typical Floor Plan

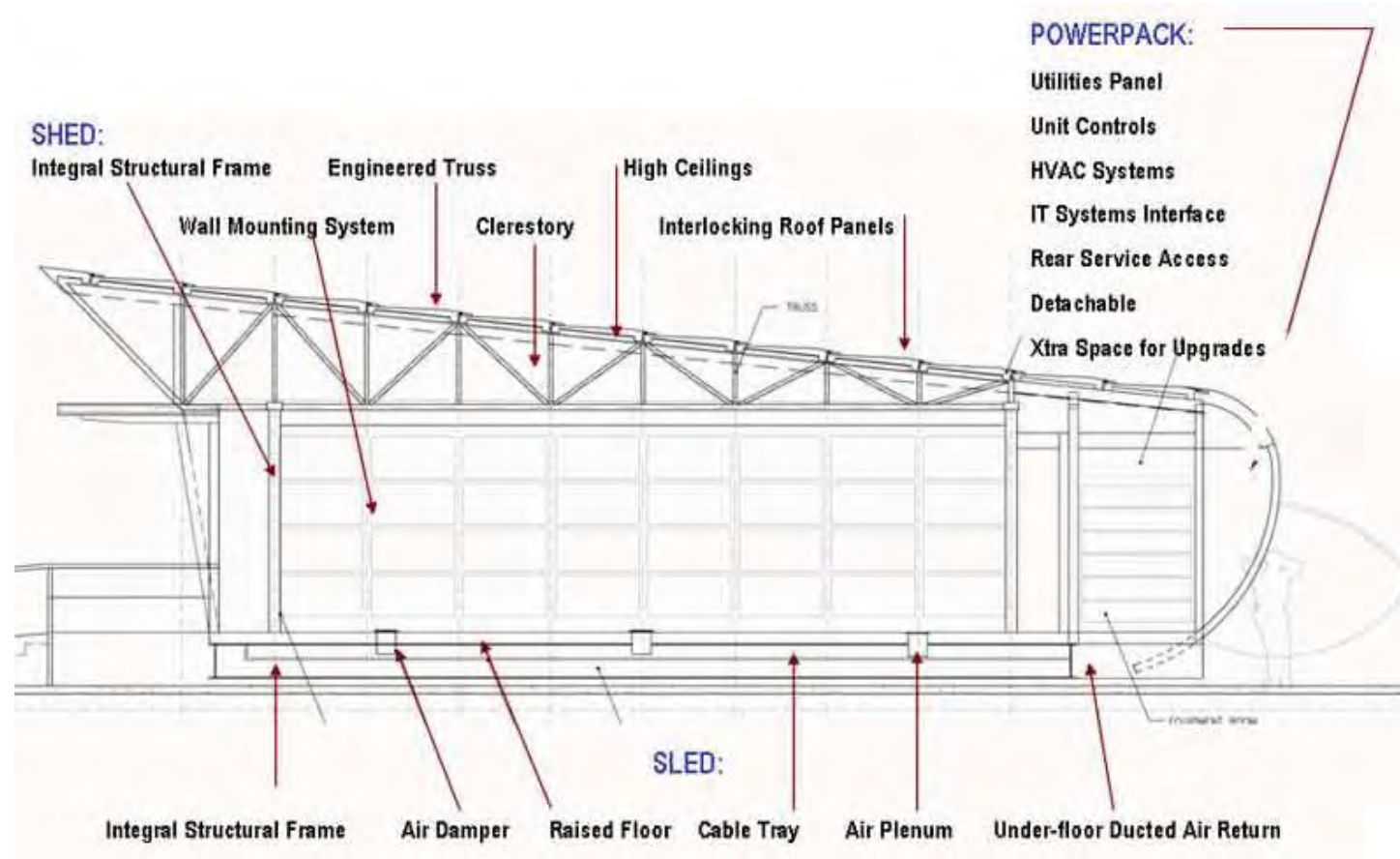


Configuration Types



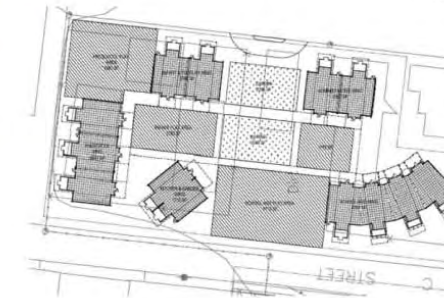
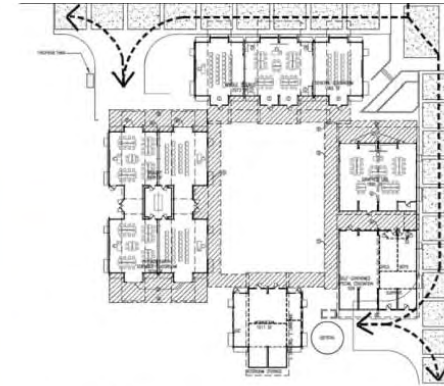
Project FROG's kit of parts is divided twelve basic parts that are derivatives of five basic parts. Spaces are configured off a typical floorplan and then are configured and modified to the program of the users needs.

[STRABISMAL_EXISTENCE]



This is a basic section through a typical Project FROG unit. It illustrates how structural systems and mechanical systems are composed to create a neat module. This section also illustrated the basic roof and flooring components.

Typical design uses.



[STRABISMAL_EXISTENCE]

In the end different options are listed in this matrix that provide a comprehensive list of materials and finishes.

Product Options	Option A	Option B	Option C
CONFIGURATION (per building)			
Pavilion	3,500 sf min	custom	custom
Spines	3 High Bay	custom	custom
Wings	Low Bay: turtle	Low Bay: turtle or dragonfly	High Bay, or Low Bay turtle or dragonfly
Porch	yes	optional	optional
Powerpack	yes	optional	optional
WALL			
Panel Types	10% wall glazing max	4 interchangeable options	custom
Layout	fixed	multiple	custom
FOUNDATION			
Slab	by others	option	option
Grade Beams	by others	option	option
STRUCTURAL FRAME			
System	frog 2.0	frog 2.0	frog 2.0
Powder-Coat Finish	white	4 color options	unlimited color options
ROOF TYPES			
Cool Roof	yes	yes	yes
Living Roof	ready - not supplied	yes	yes
PVs	ready - not supplied	ready - not supplied	yes
HVAC SYSTEM			
HVAC SYSTEM	forced air	under floor air displacement	under floor air displacement
Radiant Floor	no	option	option
Raised Floor (Tate or equiv)	no	yes	yes
Cool Slab	no	option	option
Ground Source Heat Pump	no	option	option
Other Options	no	no	yes
ELECTRICAL SYSTEM			
Wall Panel, Double Duplex	yes to code	yes to need	yes to need
Under Floor System w/In-Floor Data Box	no	yes to need	yes to need
Plug and Play Wall System	no	yes	yes
Plug and Play Ceiling System	no	yes	yes
EXTERIOR			
Windows	2' x 4'	2', 4', 6', 8' x 4'; fixed or operable	any size up to 8' x 8'; fixed or operable
Window Operable Ratio (floor to wall area)	4%	up to 30%	custom
Doors	solid core composite	glass or solid	any size up to 16'w x 8'h
Cladding	FSC panel	FSC or other options	custom
Siding	synthetic stucco	custom galvalume or equivalent	custom
Window Trim	painted composite: white	painted wood: custom colors	extruded metal
Soffit	mesh screen	FSC panel: 3 stain options	FSC panel: 3 stain options
Trim Package	basic	enhanced	custom
Sunshades	no	yes	yes
LIGHTING			
Fixtures - Interior	2' x 4' florescent	Finelight Parabolic Indirect	custom selection
Fixtures - Exterior	no	porch and site downlight	custom selection
Controls	code min	performance package	performance and monitoring package
Sensors	no	yes	yes
Emergency Lighting	code min	code min	code min
Exit Signs	code min	code min	code min
OPTIONAL PACKAGES			
DSA Submittal Set	yes - 2008 PC	yes - 2008 PC	yes - 2008 PC
LEED Certification Docs	yes - 2008 PC	yes	yes
LEED Certification Standard	20+ points n/inc site	Silver or Gold	Gold or Platinum
ADA Restroom	no	option	option
Science Lab	no	option	option
Teaching Monument	no	option	option
Site Orientation Optimization	yes	yes	yes
Site Specific Optimization	no	yes - 2008 PC	yes
Energy Neutral (FROG Zero)	no	option	option



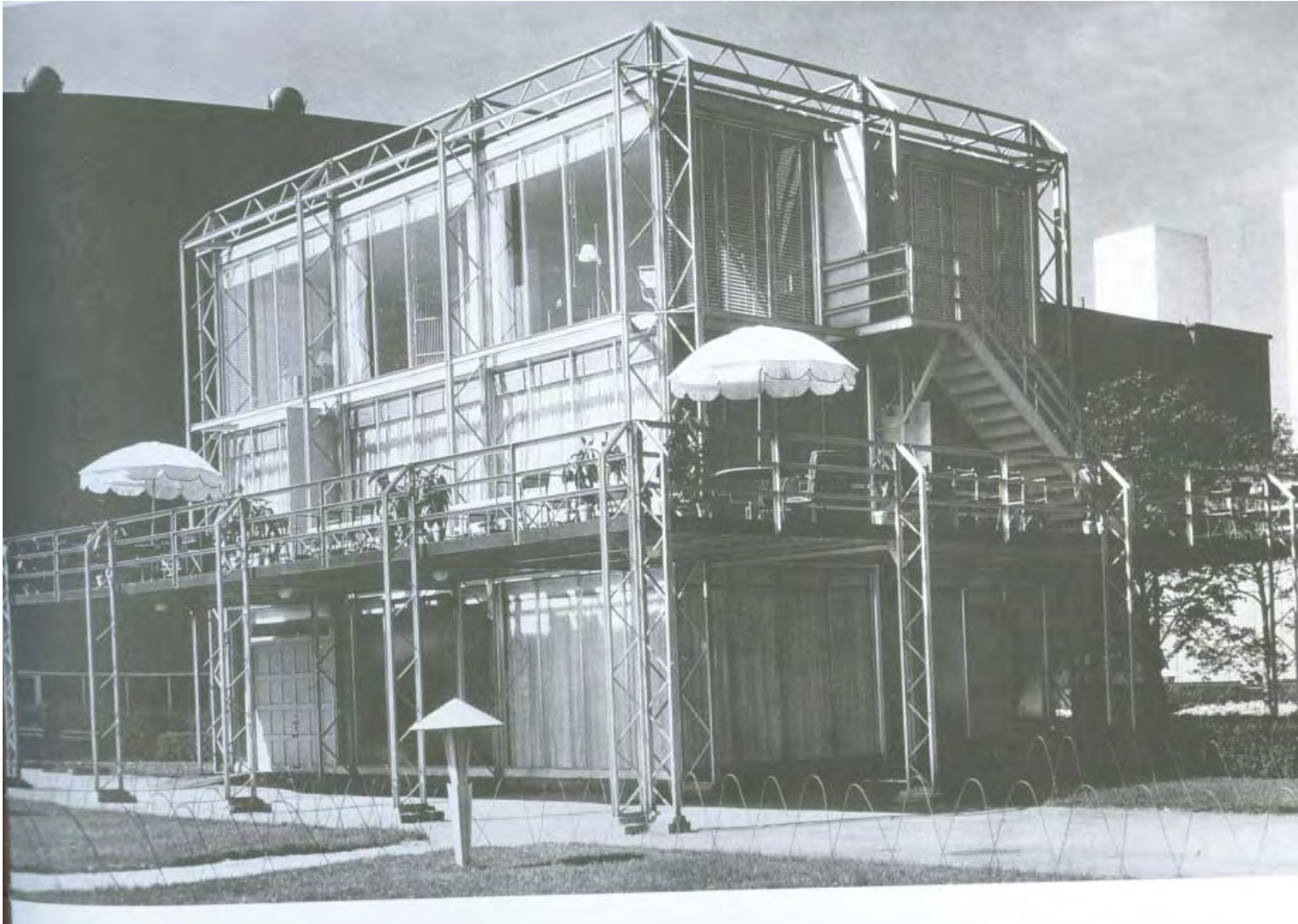
The Project FROG building I visited at Greenbuild was world's first - and only - zero-energy building system for the commercial market. Construction of the 1,280 sf classroom began just after 10pm on Monday, November 10; and on Tuesday, November 18, the FROG Zero demonstration system opened its doors to host education sessions and tours of the facility during the 4-day conference. So in as little as Eight days the building was functional and completed. Constructed of renewable or recyclable materials, the FROG Zero generates more energy within its footprint than is required to operate its systems.

FROG Zero produces virtually no carbon emissions, provides 100 percent thermal comfort hours and has the capacity to return five times its energy use through active solar power generation. A flexible design approach makes optimization for a wide variety of sites and climate conditions simple and cost effective.

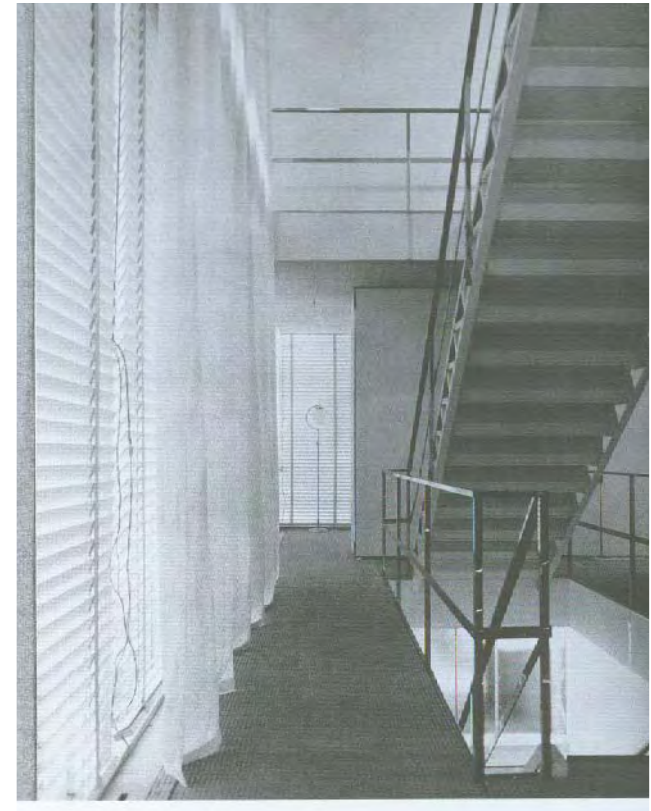
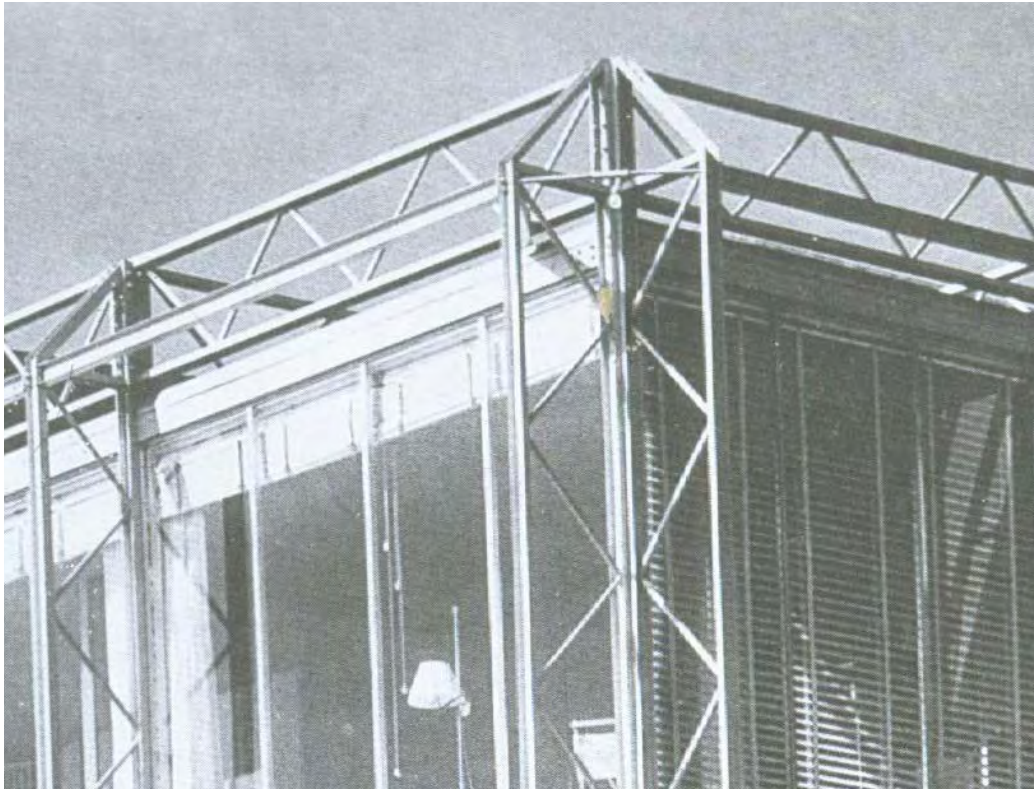


Precedent Crystal House George Keck

[STRABISMAL_EXISTENCE]



The Keck Crystal House was designed in 1933 for an exhibition in Chicago. The house demonstrates prefabricated design using Trusses as the minimal structural component of the house. All the walls on of the exterior are composed of glass. I found the Exterior circulation system to be an interesting feature in the design.



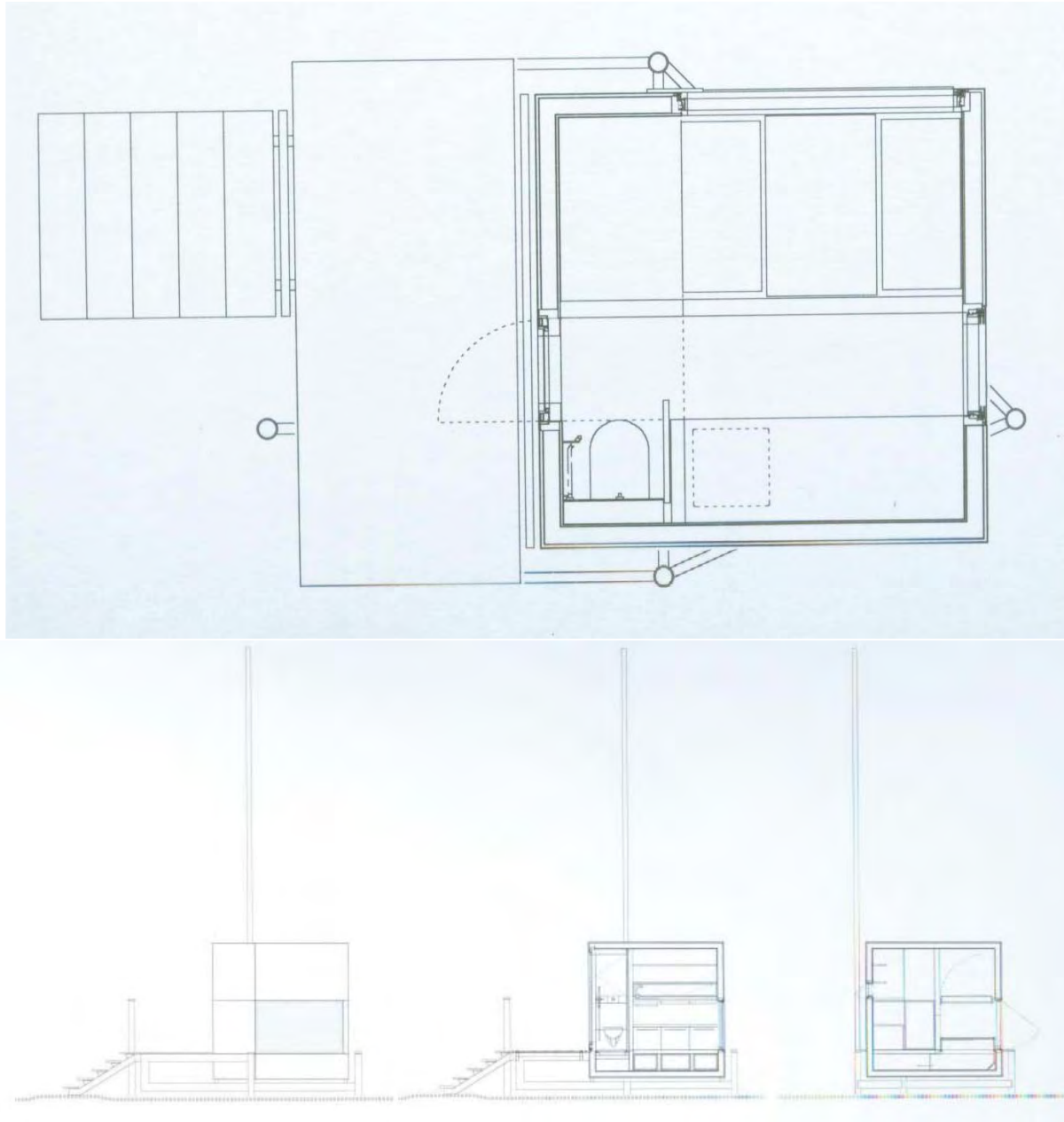
[STRABISMAL_EXISTENCE]

[90]

Precedent Micro Compact Home
Horden Cherry Lee Architectes/
Haack Hopfner Architects

[STRABISMAL_EXISTENCE]





In terms of minimal design it doesn't get much smaller than the Micro Compact home by Cherry Horden Lee Architects. The design is the product of several years of design research at the Universitat of Munich. In the design research that was preformed in a series of design studios; Richard Horden was the professor. The studies found that the ideal minimal volume for living was 8.5' x 8.5' x 8.5'. This was primarily con founded in Virtruvius's description of the proportions of man. Using this as a starting point, students underwent ergonomic studies to manage the space into a unit for living. The Micro Compact Home is my primary go to precedent for this project because of all the built in proportions.







Precedent Cellophane House
Kieran Timberlake Associates

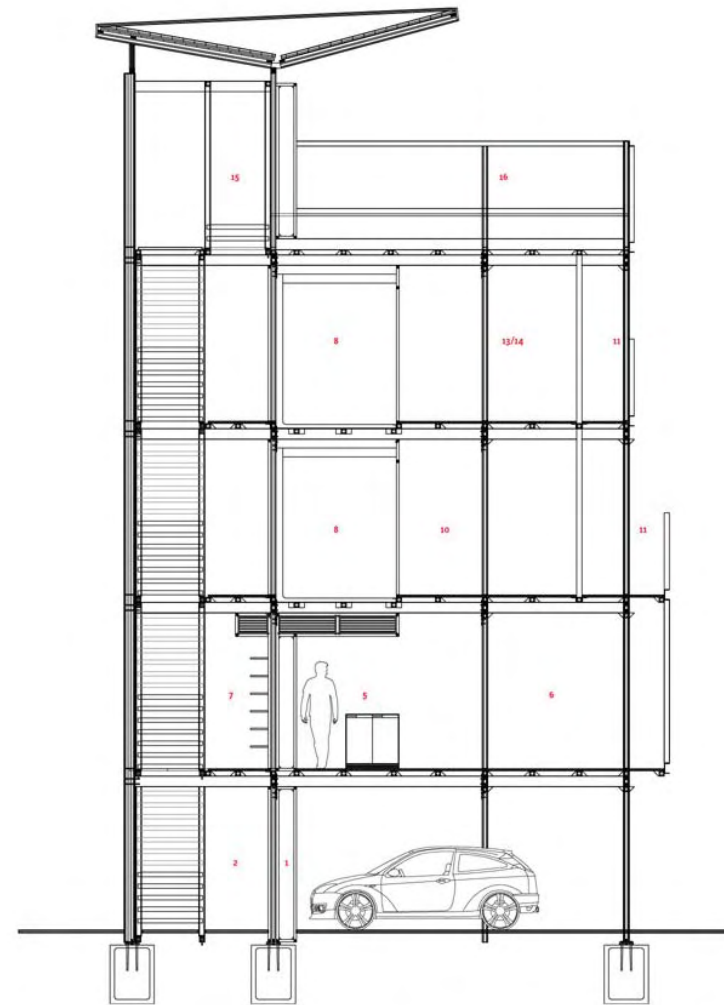
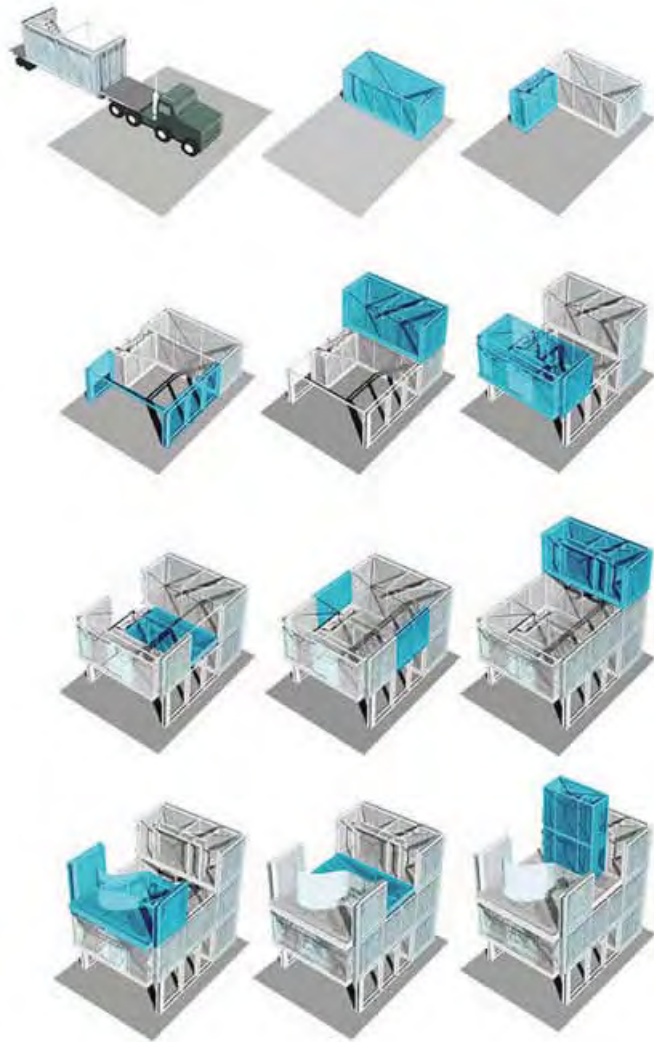


[STRABISMAL_EXISTENCE]



The Cellophane House is my primary precedent for the studio support module. It's design objective is to be a completely prefabricated demountable structure that can be reused and upgraded as technology progresses. The house uses a lightweight prefabricated structural system designed by BOSCH. By using a ready made structural system that is bolted together and able to be taken apart Kieran and Timberlake are able to create an architecture that is completely reusable and will not result in wasted scrap material. For the Studio Support module I would like to create a similar type of structure.

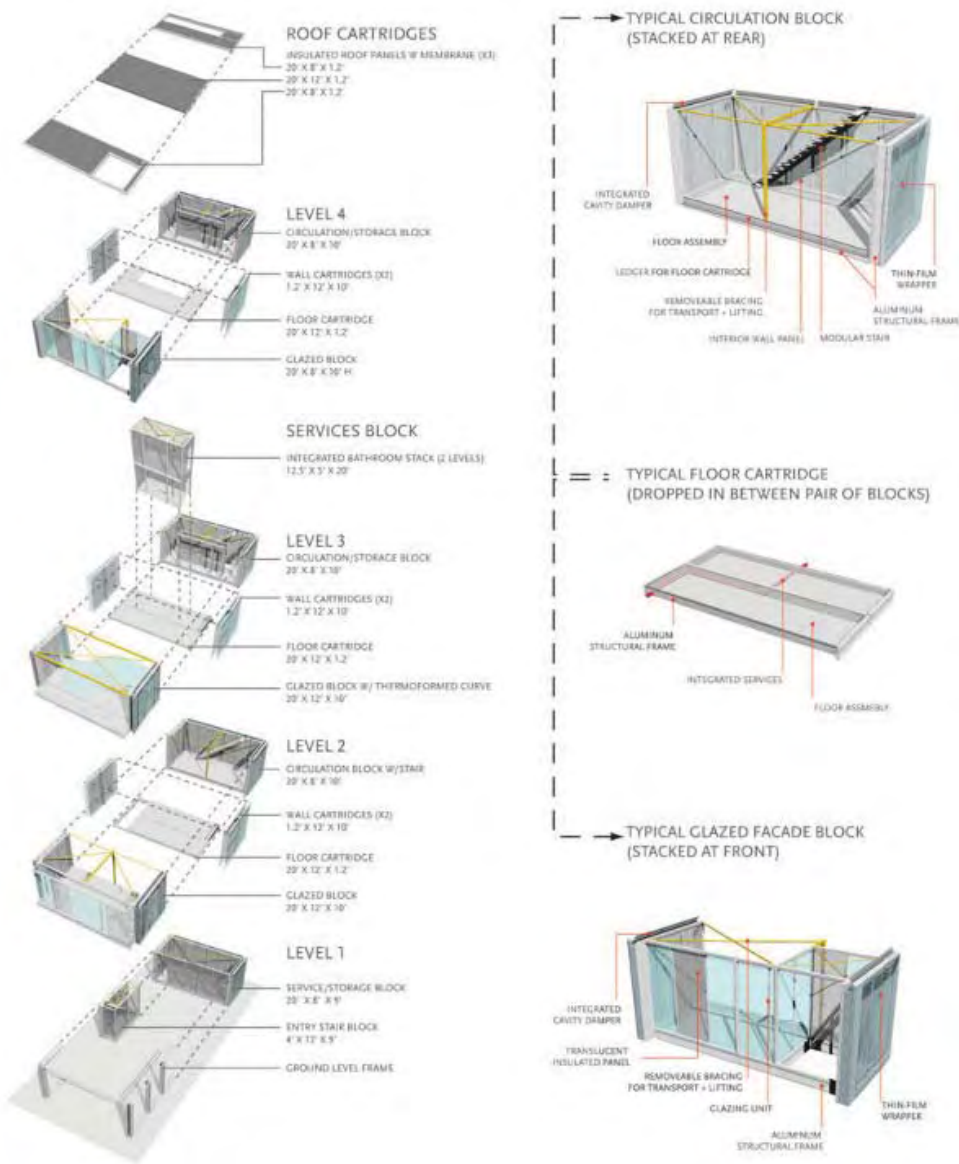




Section

- | | |
|----------------------|-------------------|
| 1 Entry | 9 Master storage |
| 2 Storage closet | 10 Master bedroom |
| 3 Mechanical room | 11 Balcony |
| 4 ADA access | 12 Laundry |
| 5 Kitchen | 13 Second bedroom |
| 6 Living/Dining room | 14 Study |
| 7 Pantry | 15 Mezzanine |
| 8 Bathroom pod | 16 Roof terrace |

[STRABISMAL_EXISTENCE]

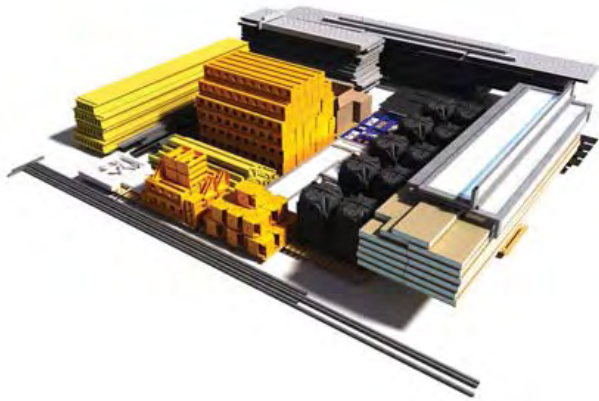


Precedent Recetas Urbanas Santiago Cirugeda



[STRABISMAL_EXISTENCE]

This particular precedent is part of an ongoing series of designs by architect Santiago Cirugeda call Recetas Urbanas (Urban Recipes). This design here is called Chicken and is designed out of light weight readily found structural materials that can be erected with minimal use of heavy machinery. Chicken is designed so that a group of friends can get together and collectively build a house. The design is in response to the overwhelming need for affordable housing in Spain. What attracts me the most to this design is the possibility of people building their own dwelling with a designated kit of parts that can be taken down and put somewhere else. In the above example is an actual construction of a dwelling in a park in Spain. On the following pages there are images of how the units can be configured into a multi-level dwelling.



Carapace House + Minimum Mobile Module Lab Zero



Lab Zero's design for the Carapace house is something I found to be a new frontier in architecture. What makes this house so unique is how it combines Robotics with architecture to create a new type of mobile architecture. The Carapace house is designed to allow a family of four the ability to live in extreme living conditions when infrastructure is not available. The base of the house allows it to walk out to areas that are not traditionally buildable without being permanent. Also the ability to be mobile allows the house to adjust to climate conditions and offer a response that is not capable by traditional means of architecture.

[STRABISMAL_EXISTENCE]



This architecture rises on legs for lowest rates footprint usage **stays temporary** in any landscape: the elevation of the body onto the ground allows **great adaptability** to different site conditions. This dwelling serves as a full autonomous **prototype house** for a family of four to live inside challenging natural environments.

R9801.2
Co412.1
Co509.1

V 0.1

R9801.2

V 0.2

Co412.1



V 0.3

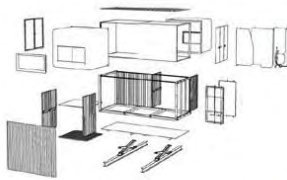
Co509.1

C0509.1

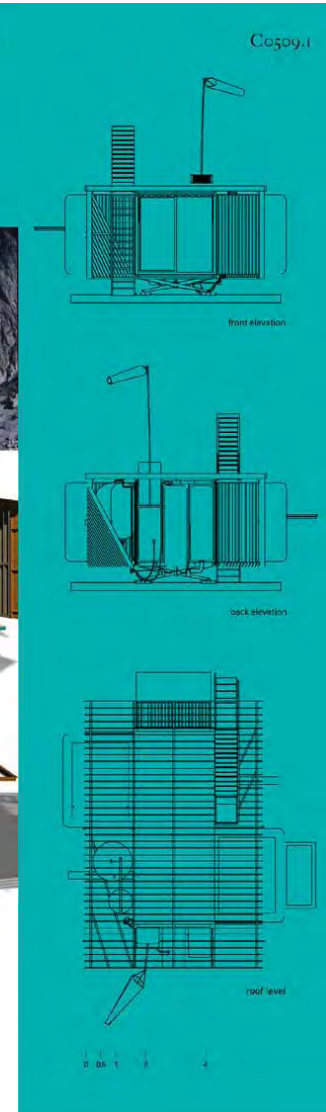
MINIMUM MOBILE MODULE



In this accelerating age of mechanical perfection, we longingly search for some sense of identity within the system. We all are given the same basic components. It's how we configure them that matters. With this experimental project we asserted the **transformation** of the intermodal shipping container into a piece of domestic equipment, turning the mechanism/icon of global trade into **shelter**. Although this technology transfer is on the low end, it is the first of a series of super-samples. The achievement are packets of space to meet changing needs and desires for the masses, developing an idea of **habitation over residence** that has an appeal which will appear to even the elite and other vermin over time.



LAB ZERO



[STRABISMAL_EXISTENCE]

Zoning Regulations

Fall River is a fairly dense city so it has a pretty well documented set of zoning regulations. For the Artist Community I am setting up zoning for a multiple residence in an Industrial Area.

RESIDENTIAL DIMENSIONAL REQUIREMENTS

<i>Zone</i>		<i>Minimum Lot Area (square feet)</i>	<i>Minimum Frontage and Width</i>	<i>Depth</i>	<i>Front Yard</i>	<i>Side Yard</i>	<i>Rear Yard</i>
SINGLE FAMILY	S	12,000	100	N/A	25	15	25
SINGLE FAMILY	R-8	8,000	80	80	20	15	20
SINGLE FAMILY	R-30	30,000	150	N/A	50	25	25
SINGLE FAMILY	R-80	80,000	300	N/A	75	50	75
TWO FAMILY	R-4	6,000/unit 2,000/second unit	75	75	15	10	20
GENERAL RESIDENCE Maximum 3 units	G	5,000/unit 1,500/additional unit	50	N/A	12	10	15
APARTMENTS 6 or less units/ 20 or greater units	A-2	10,000/unit 2,000/additional unit	100	100	30	20	30
MULTIPLE RESIDENCE Maximum 6 units	A-3	8,000/unit 2,000/additional unit	100	100	30	20	30
MULTIPLE RESIDENCE	M	5,000/unit 1,500/additional unit	50	N/A	12	10	15
BUSINESS Maximum 3 units	B	5,000/unit 1,500/additional unit	50	N/A	12	10	15
BUSINESS Maximum 3 units	B-B	5,000/unit 1,500/additional unit	50	N/A	12	10	15
LOCAL BUSINESS Maximum 3 units	B-L	5,000/unit 1,500/additional unit	50	N/A	12	10	15

The dimensional requirements for business uses and apartment complexes can be found in the zoning ordinances.

(Ord. No. 1997-2, § 21-8, 1-28-1997)

[STRABISMAL_EXISTENCE]

DIVISION 4. INDUSTRIAL DISTRICTS*

Sec. 86-201. IND industrial district.

(a) *Uses.* In an IND industrial district, no structure or land shall be used except for one or more of the following uses:

- (1) Buildings and structures may be constructed, altered, enlarged or reconstructed and used and land may be used for manufacturing, assembling, packaging, industrial research and development, biotechnology, processing, fabrication, warehousing, wholesaling, trucking, including terminal facilities and uses customarily accessory to such uses.
- (2) Existing mill buildings in existence prior to 1950 may be altered, reconstructed and used for:
 - a. Office of any kind including medical office;
 - b. Retail store or outlet;
 - c. Bank or other financial institution;
 - d. Restaurant or other eating place; and
 - e. Uses customarily accessory to such uses.
- (b) Additional requirements, as follows:
 - (1) Dust, smoke, fumes, gas, glare, noxious odors, noise and vibrations shall be limited so as not to be injurious to the public health or to the use of neighboring property as provided by the laws of the commonwealth.
 - (2) All buildings and outdoor storage or work areas shall be set back at least 20 feet from any street line and property line.
 - (3) Adequate provision shall be made for the off-street accommodation of all vehicles, including those of employers, employees, customers and visitors.
 - (4) Flashing, moving or intermittent illumination of buildings or signs shall not be permitted.

*Cross reference—Businesses, ch. 14.

- (5) Off-site signs are permitted, subject to the provisions of section 86-252.
- (6) In an industrial district (IND), the following regulations shall apply:
 - a. Minimum lot frontage: 100 feet.
 - b. Minimum lot area: 10,000 square feet.
- (7) Body art establishments shall be permitted by special permit subject to the provisions of section 86-72.
- (8) No gravel pit, concrete or asphalt plant shall be permitted, except that in a specific case, the board of appeals may, after a public hearing, grant a special permit for the construction or operation of such use, provided the board finds that the location, setback and design of such use will not be detrimental to the neighborhood by reason of traffic, noise, dust or appearance.

(Ord. No. 1997-2, § 21-156, 1-28-1997; Ord. No. 2000-9, § 1, 5-9-2000; Ord. No. 2001-29, § 4, 10-4-2001; Ord. No. 2002-19, 6-12-2002)

Sec. 86-202. IP industrial park district.

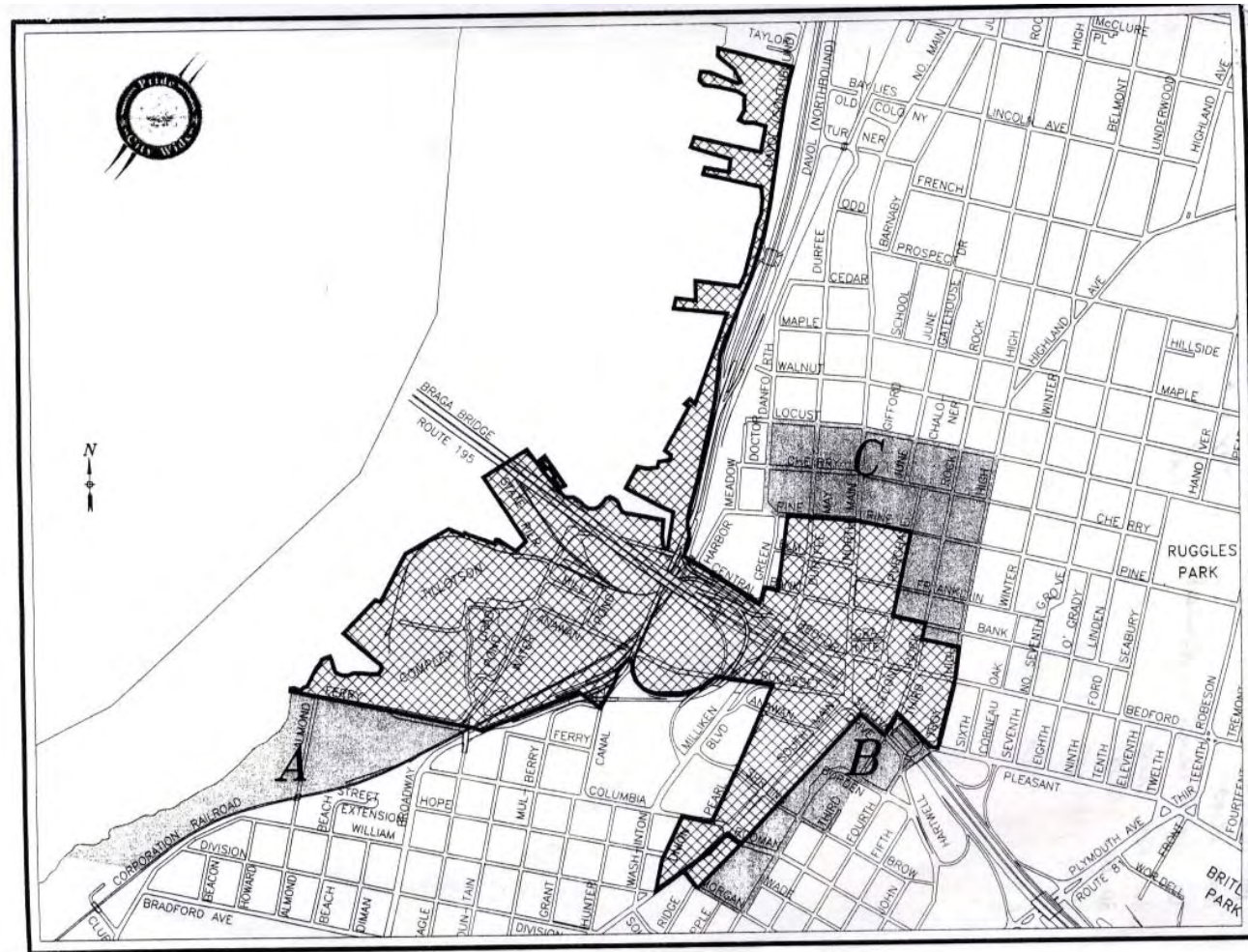
In an IP industrial park district, buildings and structures may be constructed, altered, enlarged, reconstructed and used and land may be used for airport purposes, manufacturing, processing, fabrication, assembling, research and development and biotechnology activities, information and information processing, data collection and data storage, records keeping, instructional and training facilities, telecommunications, public distribution and maintenance facilities not otherwise prohibited by law or ordinance, and uses ancillary thereto, excluding research or use of radioactive, biohazardous or explosive materials. Retail sale shall not be permitted, except that retail sales of products manufactured on the premises are permitted but shall be limited to an area which is five percent of the gross floorspace, or 1,000 square feet, whichever is less. The uses permitted under this section are subject to the following provisions:

- (1) All operations shall be conducted and all materials used in such operations or held

in storage shall be contained within enclosed buildings or enclosed by a solid wall, fence or planting of such nature and height as to conceal such operation or materials from view from any public way or area or neighboring premises.

- (2) Waste materials produced by such operations shall be either disposed of, stored in buildings or enclosed as specified in subsection (1) of this section.
- (3) Dust, smoke, fumes, gas, glare, noxious odors, noise and vibrations shall be limited so as not to be injurious to the public

In doing research for my site's zoning regulations I came across this zoning ordinance passed by the city council on March of 2008. The ordinance calls for the zoning of an Arts Overlay District to propose art and culture to reinvigorate the city. The Arts Overlay District follows the same pattern as the proposed bike path mentioned earlier and should end up connecting with the Mobile artist community I am proposing which is slightly north of what this map shows. The following are the zoning intentions for the Arts Overlay District.



[STRABISMAL_EXISTENCE]

Ordinance No. 2008-8

City of Fall River, In City Council

BE IT ORDAINED by the City Council of the City of Fall River, as follows:

That Chapter 86 of the Revised Ordinances of the City of Fall River, Mass., 1999, which chapter related to Zoning, be amended as follows:

Section 1.

By striking out Sec. 86-85 which section relates to Special permit required, in its entirety, and inserting in place thereof, the following:

Sec. 86-85. Special permit required.

In those districts which permit Adult Use, a special permit shall be required for any such Adult Use to be granted by the Zoning Board of Appeals, pursuant to MGL Chapter 40A, Section 9A.

Section 2.

By striking out Sec. 86-87 in its entirety.

Section 3.

By inserting in Article IV. Supplemental District Regulations, the following new Division, to read as follows:

Division 6. Arts Overlay District (AOD)

Article III. Districts and District use Regulations, Sec. 86-121. Districts established; adoption of district map.

(21) Arts Overlay District AOD, as delineated on the district map adopted herewith:

and, by inserting in said new division, the following new sections to read as follows:

Sec. 86-373. AOD Arts Overlay District.

(a) **Purpose:** The purposes of establishment of the Arts Overlay District (AOD) are:

1. To promote the expansion of art and culture within the community.
2. To enhance the environment and improve site opportunities for fine arts uses within the Arts Overlay District.
3. To enhance vitality in the Central Business District – Downtown – Waterfront areas by fostering a mix of uses through establishing and increasing downtown housing opportunities and fostering arts-related development and activities. This district is intended to create a core of arts, cultural, and residential activities; encourage greater pedestrian activity as part of entertainment and residential uses, mixed with traditional retail and business activities; encourage economic revitalization; nurture artistic contributions to the city and region, and reduce crime in streets by

remaining active for longer hours with shops and restaurants serving increased numbers of area residents and patrons.

(b) **Underlying Districts:** The Arts Overlay District shall be considered as overlaying and shall overlay all other zoning districts within its boundaries. Any uses permitted in the district or portion thereof so overlaid shall be permitted subject to all provisions applicable to the district as set forth in this division.

(c) **Uses:** In an arts overlay district, no structure or land shall be used and no structure shall be constructed, altered, enlarged or reconstructed except for one or more of the following uses:

1. Visual and Performing Art Space, including, but not limited to, exhibition and concert halls, galleries, and stage and screen theaters excluding those related to adult use as hereinafter referred to;
2. Artist Loft or Art Use.
3. Culinary Arts.
4. Retail sales of art, including gift and specialty shops.
5. Community Educational Arts and related activities.
6. Art schools and studios including school and studios of dance and photography.
7. Beer and cocktail lounges.
8. Performing Arts ticket offices or booking agencies.
9. Residential development, both as stand alone development or in conjunction with other permitted uses.
10. Accessory apartments.

Adult Use as defined as in Subdivision II. Adult Entertainment, Section 86-81, definitions of this ordinance is prohibited in the Arts Overlay District Zone.

(d) Development and Redevelopment Standards:

1. All standards and regulations in the underlying zoning district are valid in the Arts Overlay District, except as modified in this article.
2. Residential use is prohibited on first floor frontage on that portion of North Main Street south of Pine Street and on that portion of South Main Street north of Morgan Street.
3. In a specific case the Zoning Board of Appeals, shall after a public hearing grant a special permit to waive minimum lot areas and height, lot coverage percent and yard requirements for multi-family development as cited in the Revised Zoning Ordinances, unless in the opinion of the Zoning Board of Appeals, such waiver would be detrimental to the area and not in the best interest of the city.
4. Town house development in those areas of the AOD District have no minimum lot size.

[STRABISMAL_EXISTENCE]

5. Off-Street parking may be provided through one or a combination of the following means:
- On-site, but not located between the street and the front of the building;
 - Off-site, by contract in public or private off-street parking facilities;
 - Parking may be covered or uncovered.

Section 4.

By striking out in Sec. 86-2, which section relates to definitions, the definition of *Used or occupied* in its entirety, and by inserting in said section, in proper alphabetical order, the following new definitions:

Artist Loft: Artist loft space used, or designed to be used, by artists primarily for "art use" may also be used by artists as a residence. Such residency shall be limited to one family per residential unit. Each unit shall have a minimum of 800 square feet (s.f.) of floor area for one occupant and a minimum of 1,200 square feet (s.f.) of floor area for two or more family members.

Art Use: The production of art or creative work either written, composed or executed for a "one of a kind, limited" production exclusive of any piece or performance created or executed for industry-oriented distribution or related production. Such use may include fine and applied arts including painting or other like picture, traditional and fine artisanry, sculpture, writing, creating film, creating animation, music and theater including lessons, choreography and the performing arts, but shall not include adult entertainment, or adult use.

Town House: A dwelling unit in a row of at least three (3) such units, in which each unit has its own front and rear exposure to the outside, no unit is located over another unit, and each unit is separated from any other unit by one or more common vertical fire-resistant walls.

Section 5.

By striking out in Section 86-172, which section related to CBD Central Business District, (3) *Signs* in its entirety, and insert in place thereof, the following:

(3) *Signs.*

- Applicability.** No signs or advertising devices of any kind or nature shall be erected on any premises or affixed to the outside of any structure in the CED Central Business District except as specifically permitted in this Section.
- Permitted Sign Types.** The following types of signs are permitted.

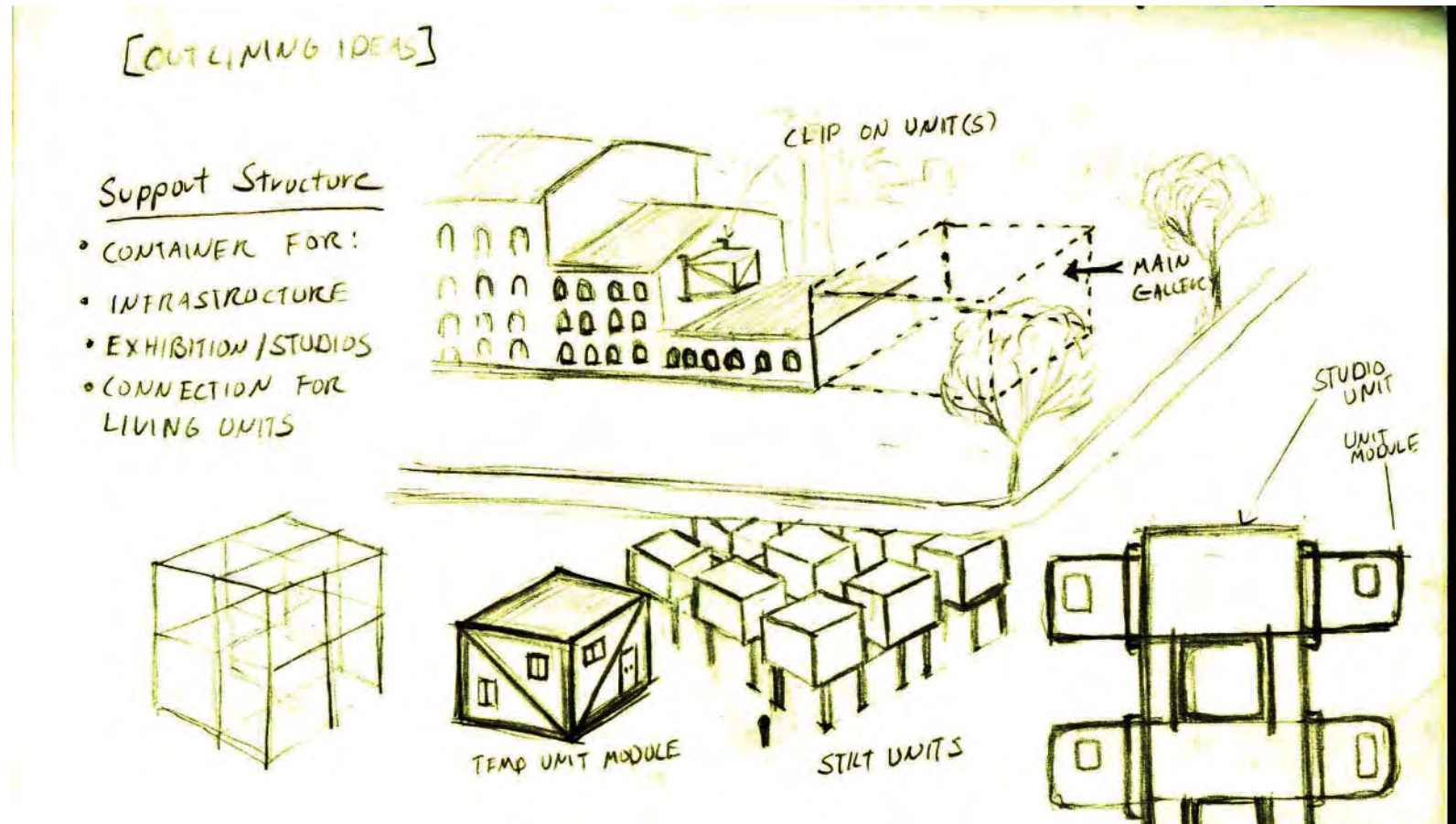
[110]

[STRABISMAL_EXISTENCE]

Design Development

Early Design Phase

[STRABISMAL_EXISTENCE]



Early free hand sketches applying early ideas and concepts to site and architectural intentions

Much of the early design development was spent trying to define an approach to the Design of the Strabismal Artist community. Sorting through precedent research and trying to develop what my exact architectural intentions were going to be for my site and the system I was proposing for this notion of mobile architecture that I had been researching. Exploration was necessary to develop the proportions and ergonomics of the living unit. Site sections were drawn to get an idea of how the site would be handled. It seemed like every step of the way new questions would come up and I would have to develop a response. Questions like “How big will these units be?” “Will the artists build these units themselves?” “Will the units be something that they drive onto the site?” Will they be something they take apart and take with them? These initial questions and my response to them exploring different options during this phase is what shaped the final thesis response. It was through an almost exhaustive reexamination that I found different ideas that I felt to be innovative and interesting that may seem strange at first but were developed throughout this constant process.

On the left is a sketch I drew during studio one day trying to relate my site intentions to the development of a mobile living system. Here is where I began outlining an idea for a module and in the process I began to compile a list of data relating to my research. I used this list to create a sketch illustration for the first schematic design review to show some of the parameters for this type of design along with useful information gathered from precedent studies. This illustration concludes with some of the approaches I was considering taking for my design in an attempt to get some sort of feedback to gain a sense of direction for the project.

During the early phases of the project I decided to avoid using the computer which now looking back I am not sure if it was completely the right idea. In either case drawing allowed me to get out my ideas quickly even if at times they weren't always 'pretty'!

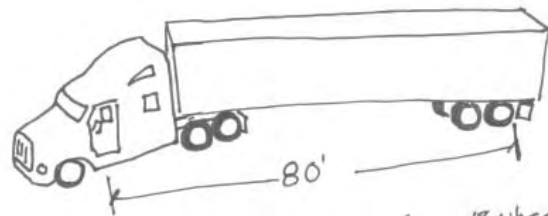
AVERAGE SHIPPING CONTAINER



160 sq ft.

PODS.
portable
on-demand
storage
sizes
USES podzilla
to MOVE
pods.com

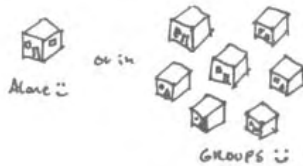
7'x7'x8'
8'x8'x12'
8'x16'x8'



Average length of an 18 wheeler
trucks report.com

[Strabismal_Existence]

Ability to Exist, Adapt, and Survive
in cross-crossing environments.
Architecture functioning regardless of context



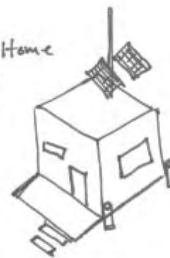
Average Square ft of
an Apartment in the U.S.

847 sq ft.

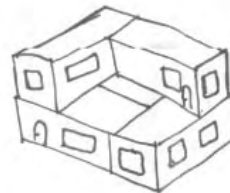
US energy residential
consumption survey

Micro Compact Home
Horden Lee Cheng/
HAACK + HOFFNER

76 sq ft
\$145,528
Fully Equipped
BROAD BAND
Electricity
Water Storage
Television
ect



INHERENT STRUCTURE - SELF SUPPORTING



INTERLOCKING
MODULE
"NO MEGA STRUCTURE
NECESSARY"

UNITS CAN BE COMBINED
TO ALMOST INFINITE
HEIGHTS.

Ex. Habitat 67
MOSHE SAFDIE

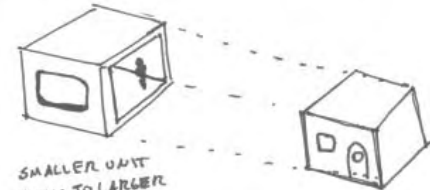
[STRABISMAL_TYPES]

[STAND ALONE UNIT -> DELIVERABLE]



ALL IN ONE
DELIVERABLE UNIT
PACK AND TAKE WITH
BOV. NO DISMANTLE

[CONNECTOR UNIT -> PLUG IN UNIT.]



SMALLER UNIT
HOOKS TO LARGER
FOR EXPANSION.
ADDED STUPID SPACE...ECT.
Leeches Services from Master UNIT.

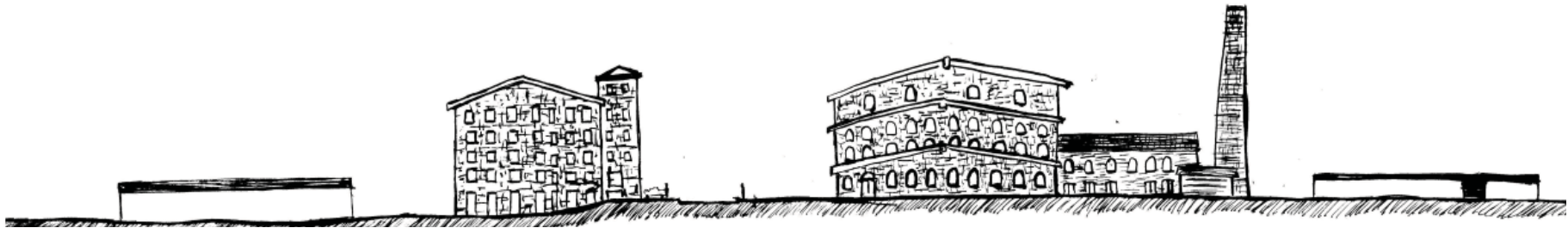
Ex. Kitho Kuriokura

[DEMOUNTABLE -> TAKE APART]



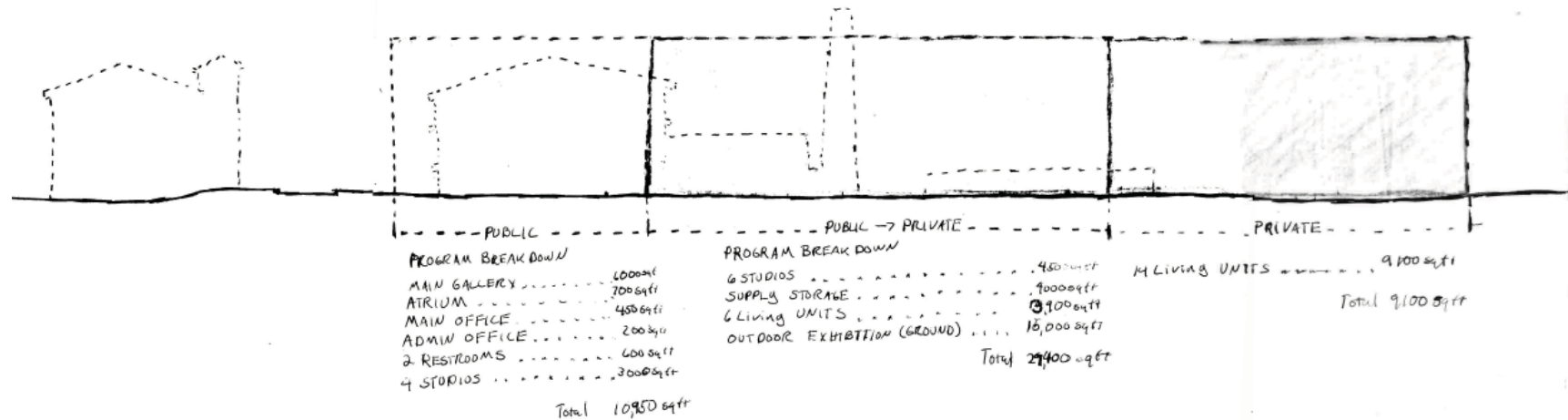
UNITS ARE DISASSEMBLED
AND THEN REASSEMBLED
SOMEWHERE ELSE.
CONSTRUCTED OF SIP PANELS
WITH MODULAR CONNECTIONS.

Y System3 OSCAR LEO KAUFMAN
AND ALBERT RUF

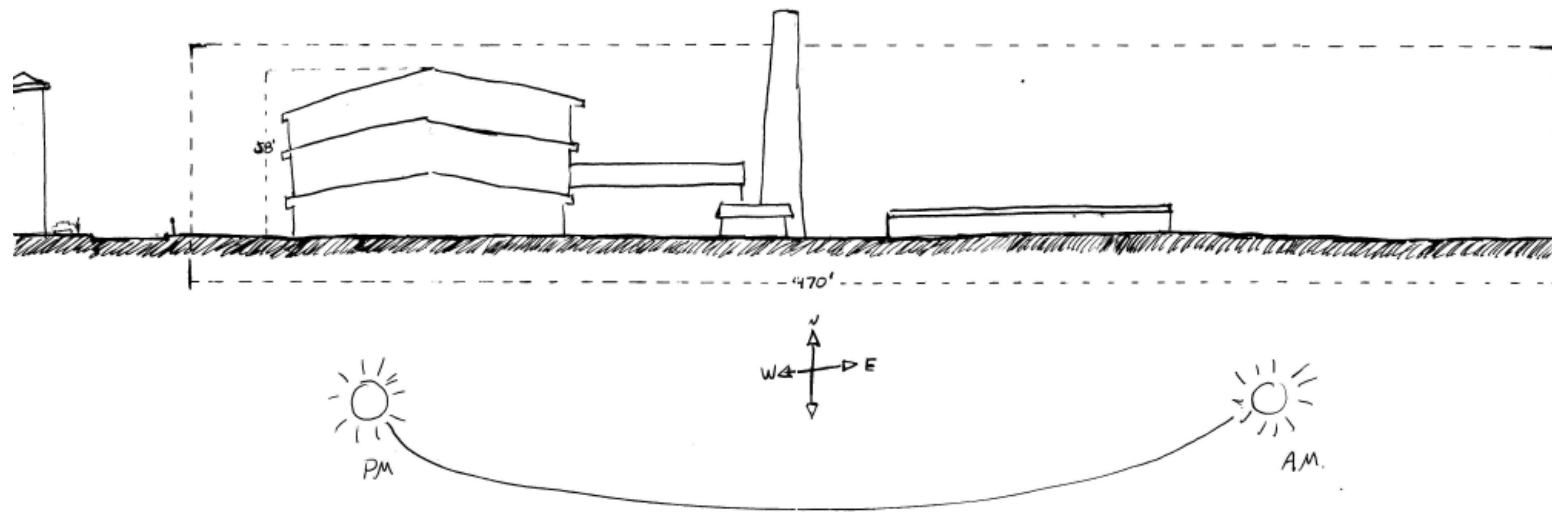


At this point for the schematic design review I also began to explore the possibilities of my site. My original intentions for my project were to only consider using the southern part of the mill yard but as the design developed certain issues kept coming up about my intentions for the mill building. At this phase my intentions were to only use the southern part of the building for galleries and living units and leave the rest of the building for light manufacturing as it was being used. I felt the infusion of artisans would help to make the building more attractive to people setting up small manufacturing businesses as had already been in place but as i will learn later this was too complicated of an intention.

The southern part of the site was explored through a series of site sections that I kept working through on paper and in my head all the way to the final design. These were also some of my initial attempts at documenting the mill asbuilt through scaled drawings.

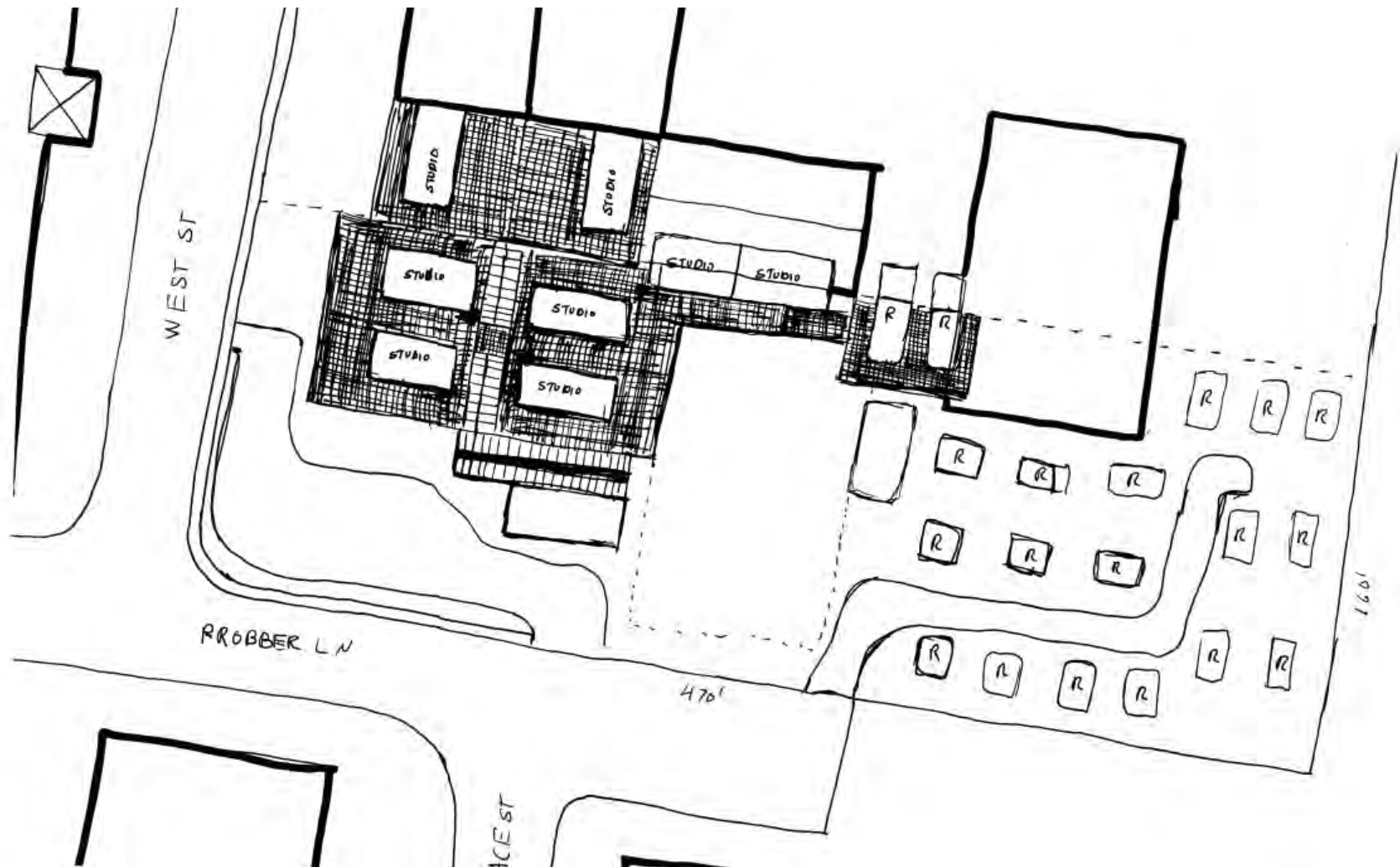


The drawing above shows some of my initial diagrams for how I was going to deal with the site. Starting with trying to figure out the exact programmatic pieces and how they were going to fit on the site. In the diagram above I was starting to break down the program into a gradient of public and private across the site from west to east. The idea was to put the bulk of the living units on the east side of the site which was the more private side and mix the program toward the more public side until most of the gallery space was contained within the southern part of the mill.

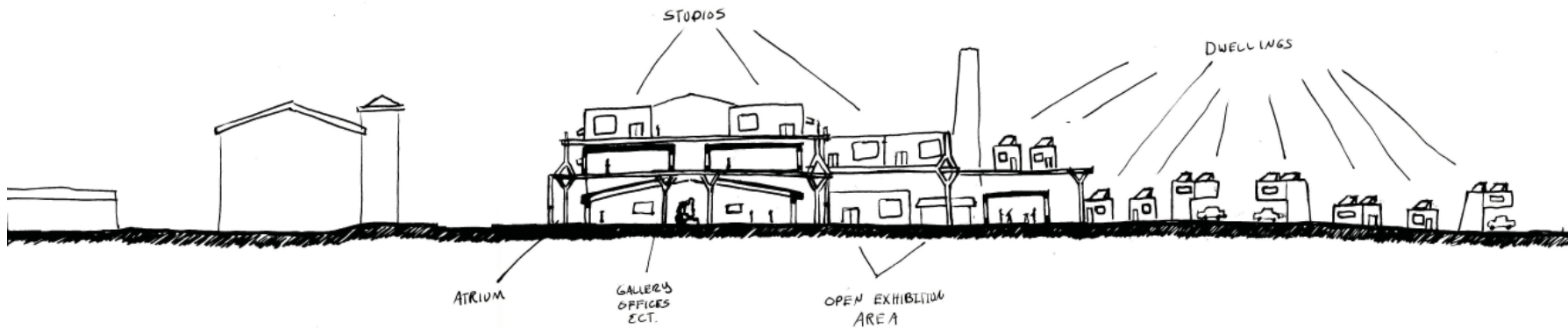


[STRABISMAL_EXISTENCE]

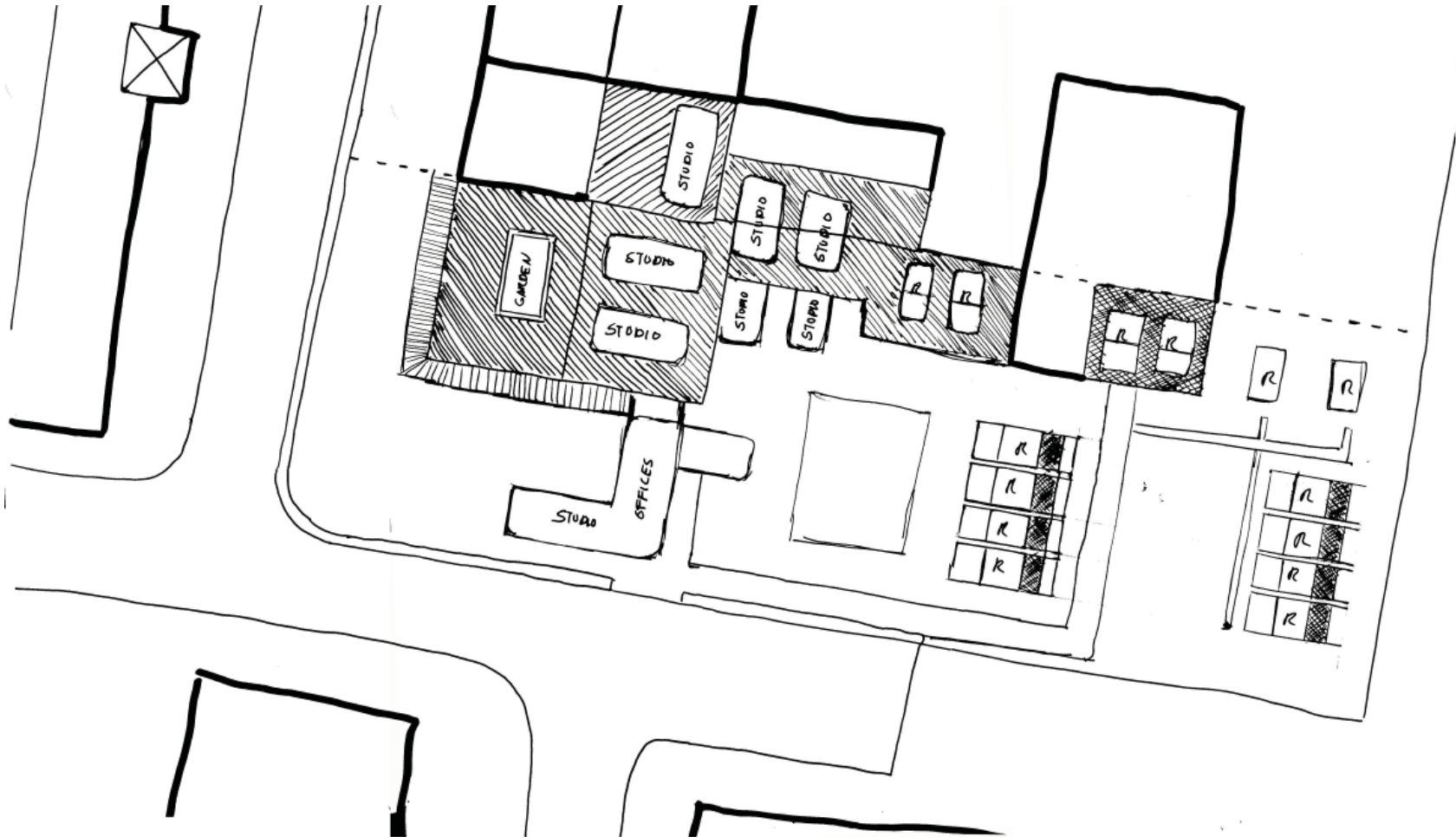
This drawing was the base for my analysis. It defined the solar orientation for the building, reminded me of the height of the different terracing portions of the building, and in coordination with my wind rose diagrams illustrated where the prevailing winds were coming from. The drawing also outlines the intended boundary for the design of the complex.



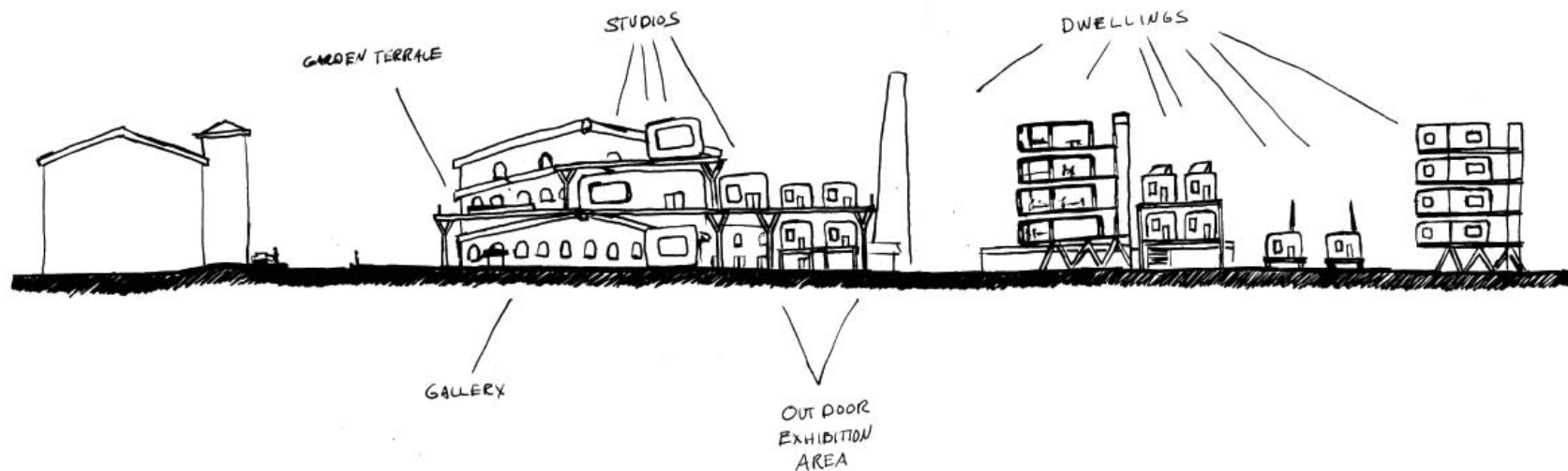
Plan of encampments scheme from schematic design review.



This first scheme was based upon having a separate area for the living units. The outdoor exhibition area was located between the living units in the artists' studios. The artist studios would be above the gallery and the gallery would be located in the original mills structure. Looking at the section above in the area around the original structure you can see the studios are above the gallery. The gallery is located in the smaller portion of the southern part of the mill. Some of the living units are connected to a support structure next to the outdoor exhibition area. On the eastern side of the site which is the most open part of the site is an area for the living units to be arranged. This arrangement resembles something like encampment. An encampment arrangement was one of the first ideas for a site strategy.



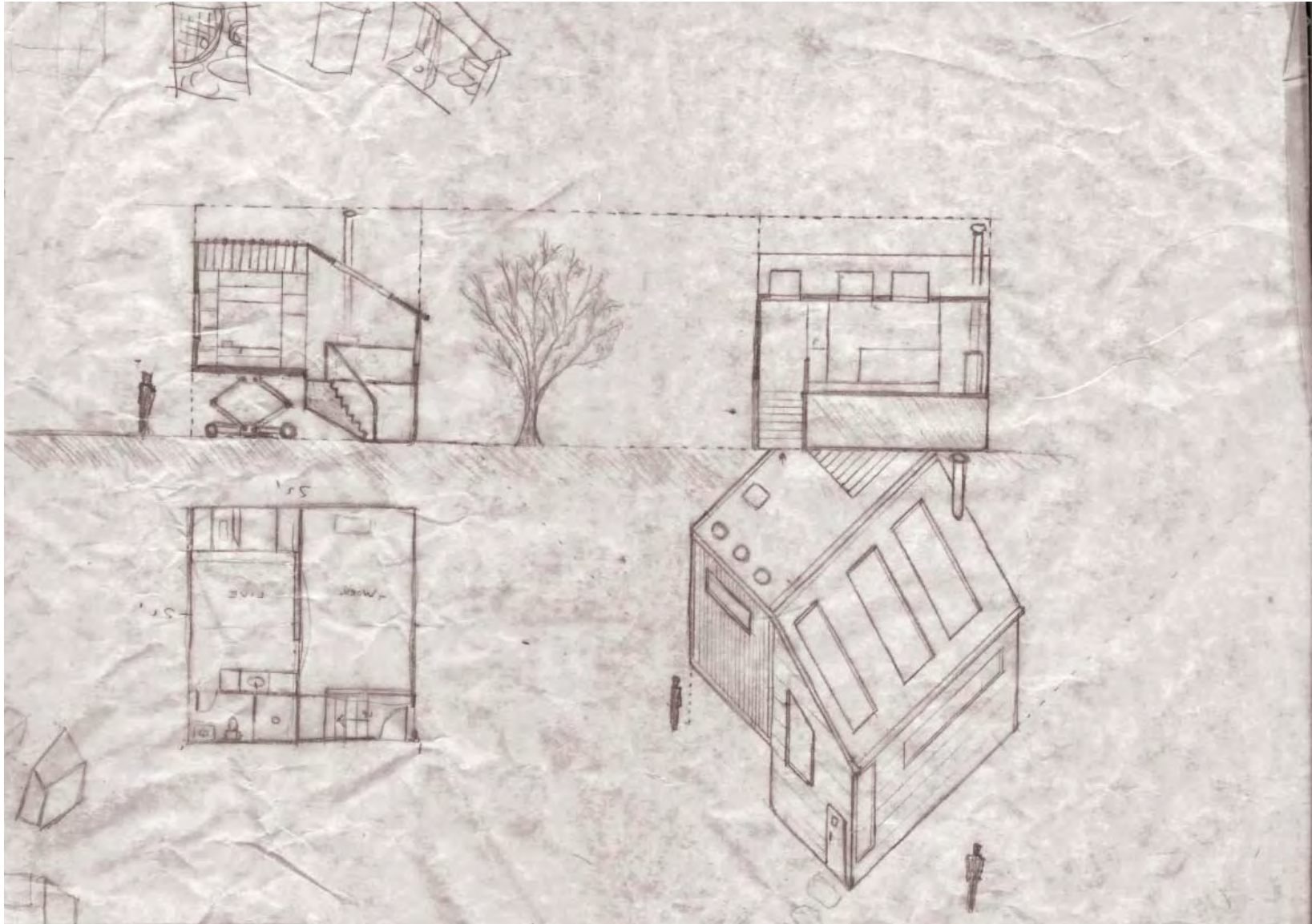
Plan of plug in support structure scheme from schematic design review.



The second idea I had presented was a scheme for a support structure that would be built around the mill. This scheme followed the same parti of a gradient that went from public to private from the west side of the site to the east. The studios were located around the mills structure on a terrace that was built on the lower roofs of the mill. This support structure extended to the east side of the site where the living units were located. On the east side of the site where support structures that had studios where the smaller living units would be plugged in. The strategy was to go vertical to save space. Looking at the section drawing under the dwelling header you can see the structures. In a section through one of the structures you can see how the living unit is divided on the studio. The idea was that artists could bring their living units and plug them into the studio spaces that were provided by the support structure. Another option in this scheme was to have been living unit on the site on its own. Also in this scheme the studio and gallery area are separated from the living area with an outdoor exhibition area in between. This scheme will later on in the project be the one that was developed into the final scheme.

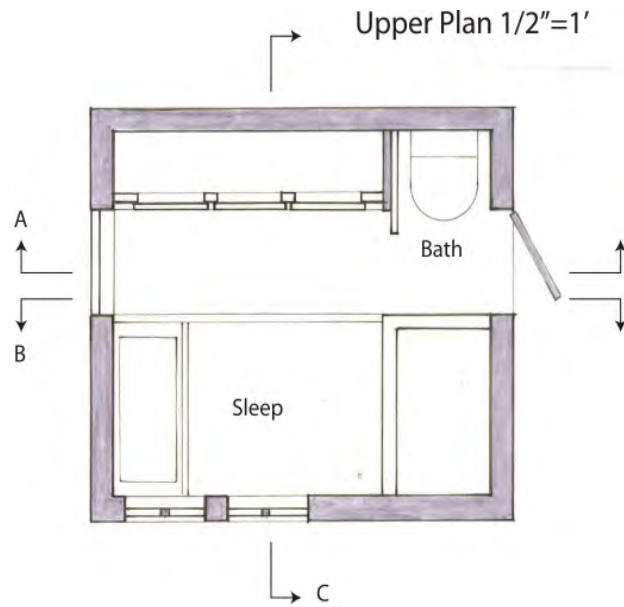
After this review it became evident that I collected my research and thoughts on the project. After receiving criticism from the review it was determined that I needed to develop a single of living module for the next part of the design process. By designing a module I would then be able to determine an appropriate way of distributing these living units on the site. This would begin the next phase of the project and the development of the minimal living unit.

Design Development Review

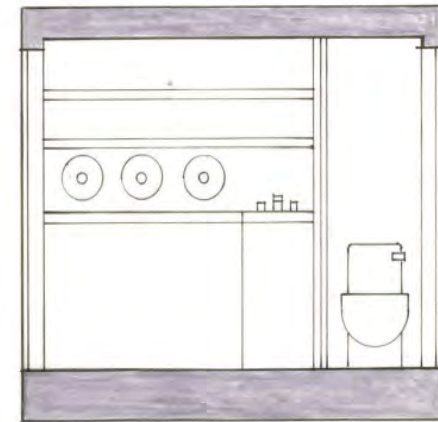


When I got back to the design studio after the first review I set out on developing the living module. On the previous page was one of the first designs that I drew out. The idea was that a portable living unit that contained all of the primary living functions would be separate from a studio structure that was onsite. The living unit would be able to travel and when it arrived at the artists community it would plug into the studio. Here is where I realized that this thing to become portable needed to be much smaller. From here on out it was decided that I needed to make a living unit as small as possible. I return to my precedents and began looking at how each one was laid out in how spaces were separated the functions. Here I began to perform ergonomic explorations to see how much space was needed for different activities. Activities like eating, sleeping, working, standing, and shower to name a few. At some points I would measure out areas in the studio on a 1 to 1 scale to get an understanding of how big these things were in actual space. Then I coupled the ergonomic study with the data I compiled for the sizes objects needed to be to travel on the road. It was then determined that a maximum width of eight and a half feet was the maximum width and the maximum height with a police escort was 16 feet. Using these parameters along with my research of precedents I began to configure a new living unit.

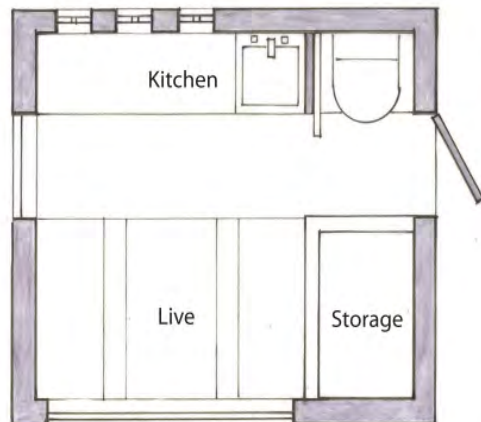
The design development review was probably my worst review of the semester. I was still in the process of developing the minimal living unit and at the same time trying to develop the site strategy. The drawings I came out with for the minimum living unit were not very interesting. Looking at them pinned up on the wall all I could think was that the minimal living unit looked like a washing machine. Also my site strategy was not very well developed at this point. I received a lot of criticism from the critics about my thesis for this project. One critic had trouble justifying my thesis project to himself while the other questioned whether or not it was architecture. This was a tough blow for me considering how much research I had done. I knew it was architecture and I believed my problem was in how much had been developed and the execution of it for this review. This review was a big step for me though. Although I received negative criticism it prepared me for some of the questions I would have to deal with in future reviews.



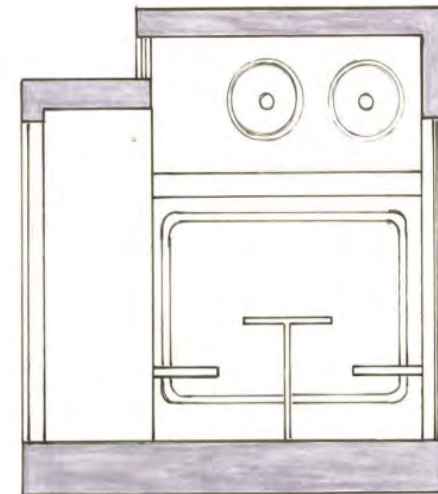
Section A 1/2"=1'

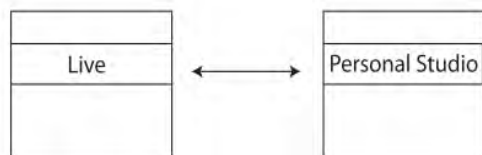


Lower Plan 1/2"=1'



Section B 1/2"=1'



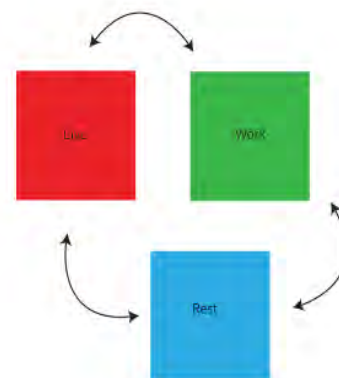
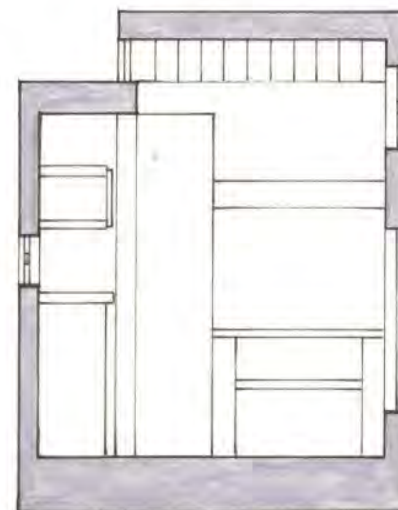


Connection to studio space.

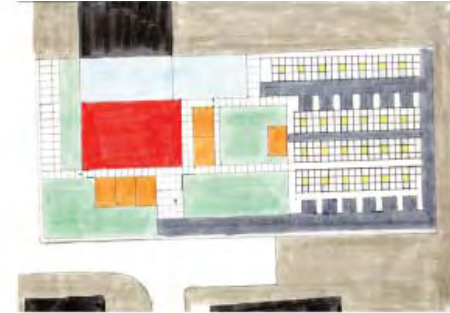


MLM on Support Structure

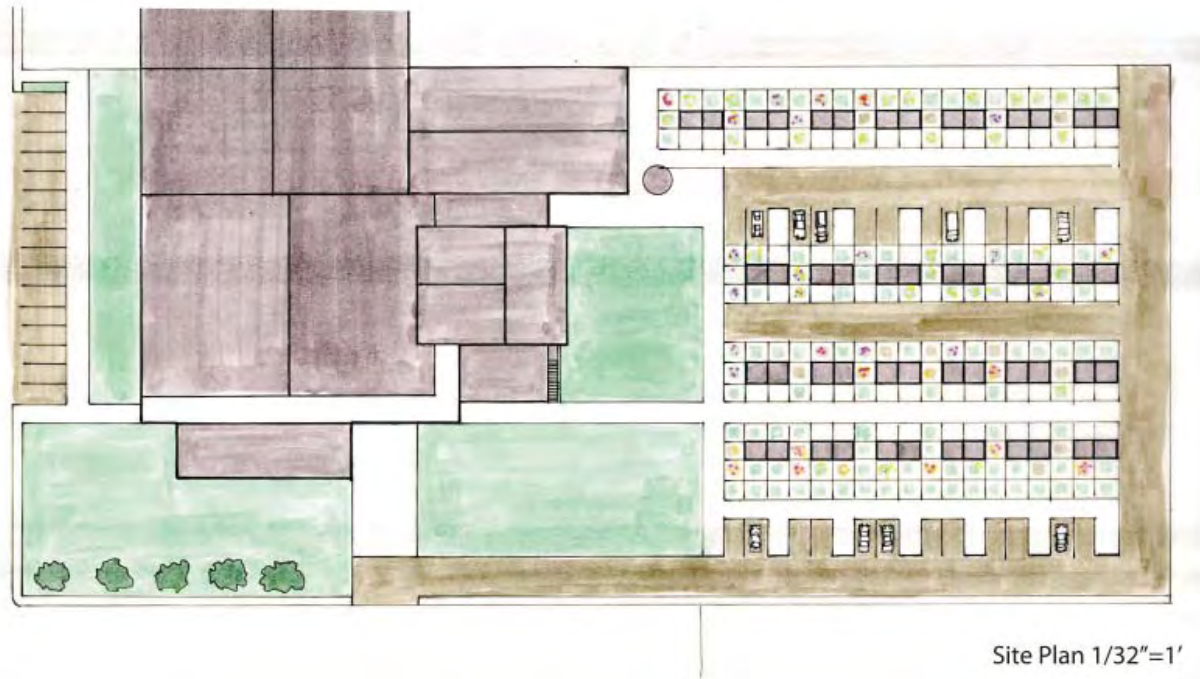
Section C 1/2"=1'



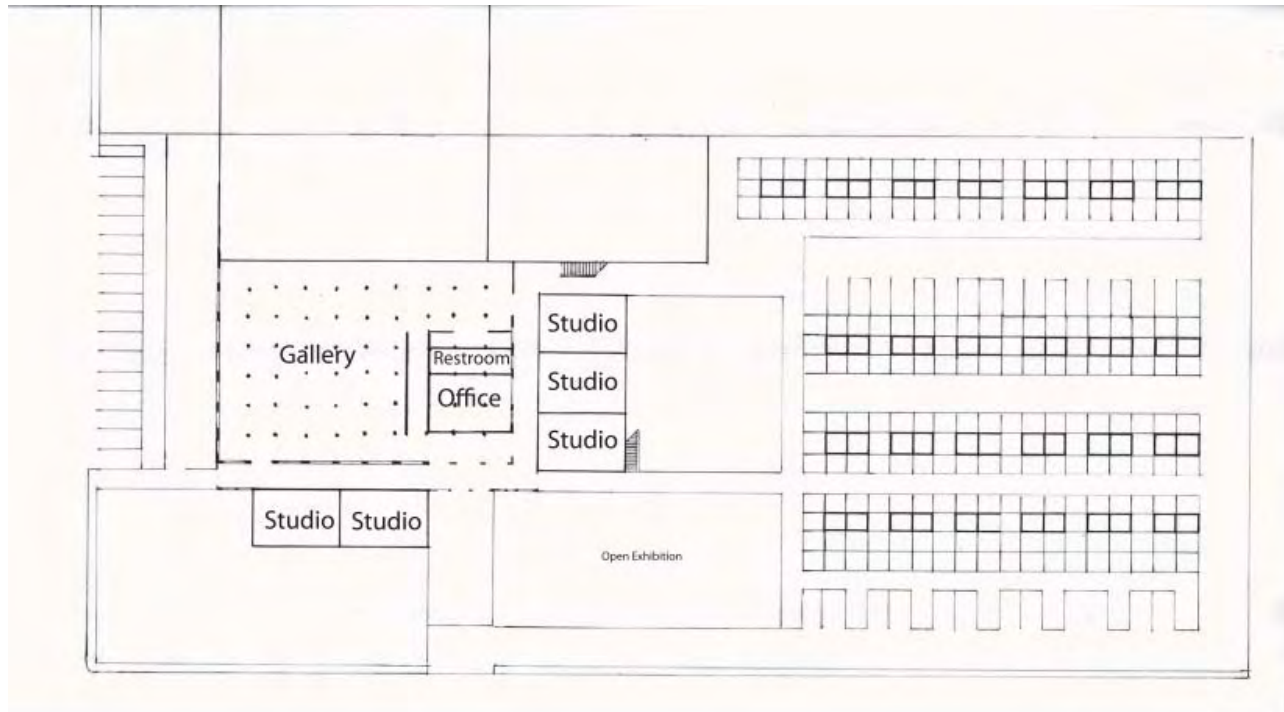
MLM Basic Functions



Drawings for encampment type site strategy.

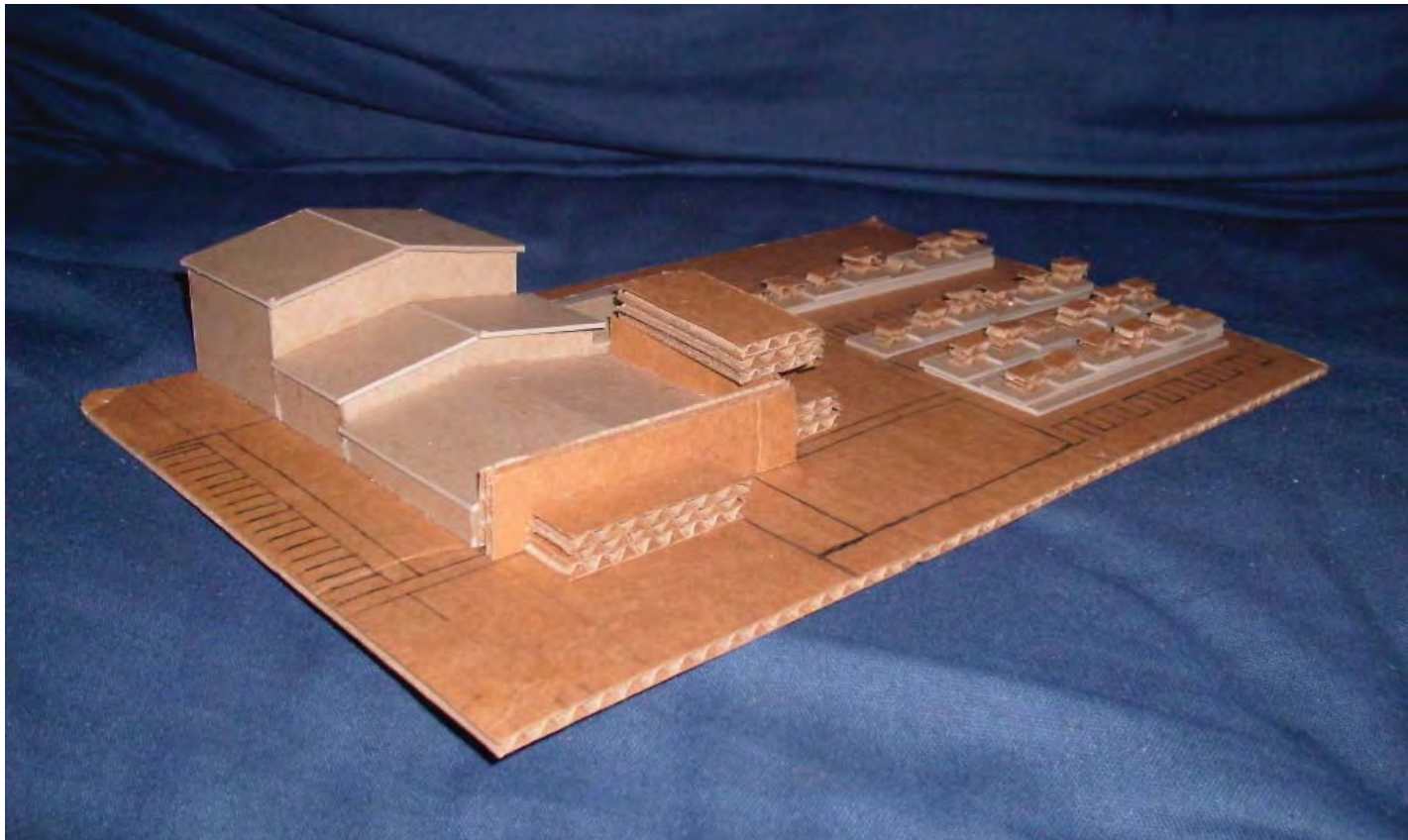


Site Plan 1/32"=1'



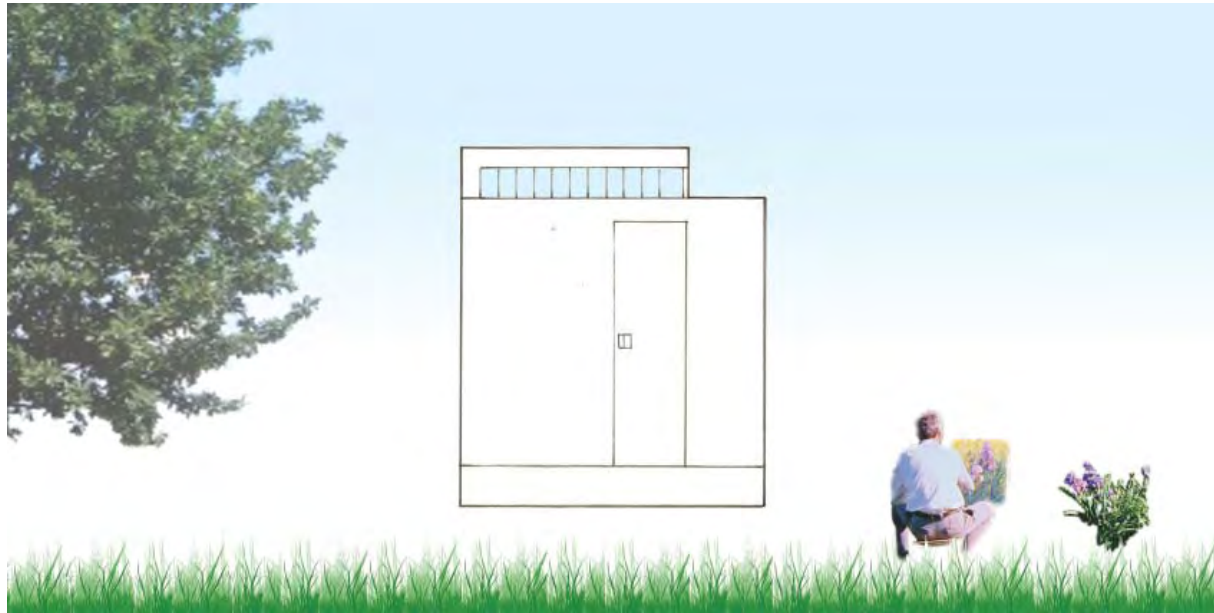
First Level Plan 1/32"=1'

When developing the site strategy for the presentation I was only able to direct attention to the first strategy from the previous review. The idea was to develop an encampment type of support structure system with a living units were on the east side of the site in the gallery in studios were on the Westside all of the site. Using the newly designed minimal living unit I was able to configure the living units in to a module. This strategy developed negative criticism. It was viewed as a suburban way to deal with the site. It was also viewed as a glorified trailer park. This criticism helped me to determine that this was not the proper site strategy and I had to develop a different approach. Looking back at my notes a comparing criticism with the previous reviews and develop a strategy for the next review.

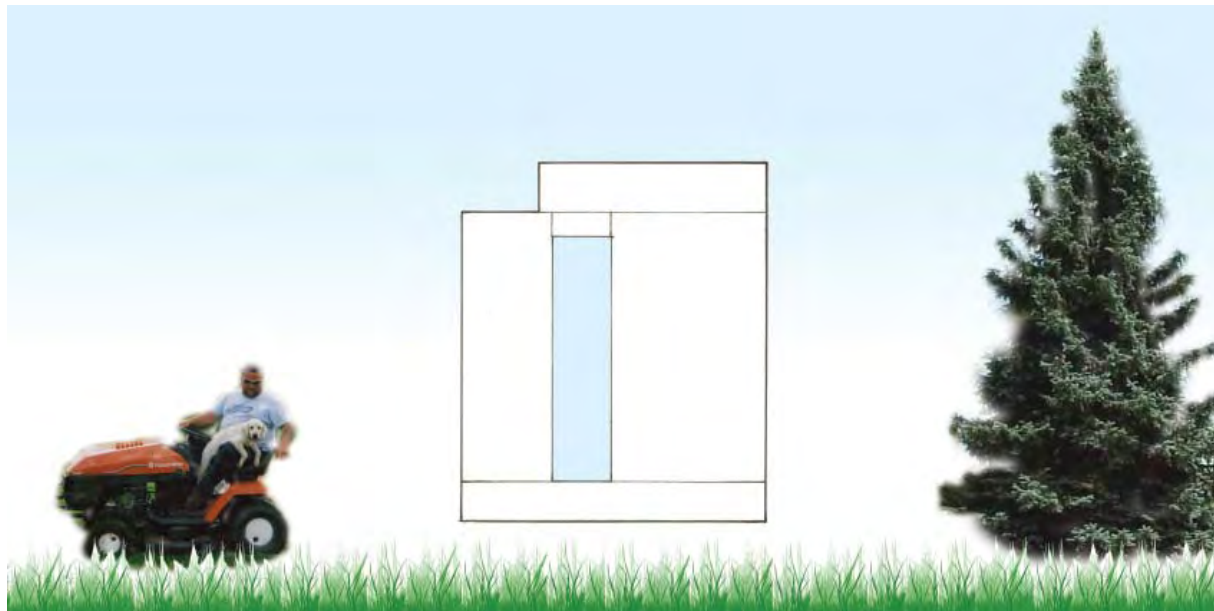


Study model for encampment type site strategy.

The study model was very important to the documentation of the mill and development of my final site strategy. Although the encampment idea for the minimal living units was unsuccessful the organization of the studio areas around the original mill was the original massing for the final design



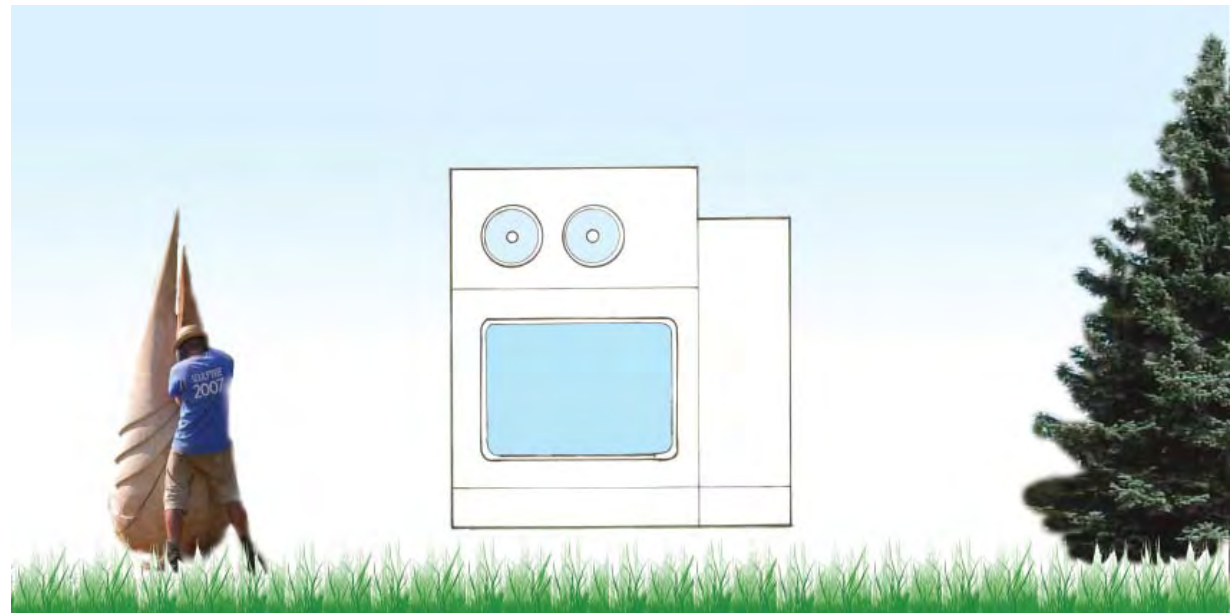
Front Elevation



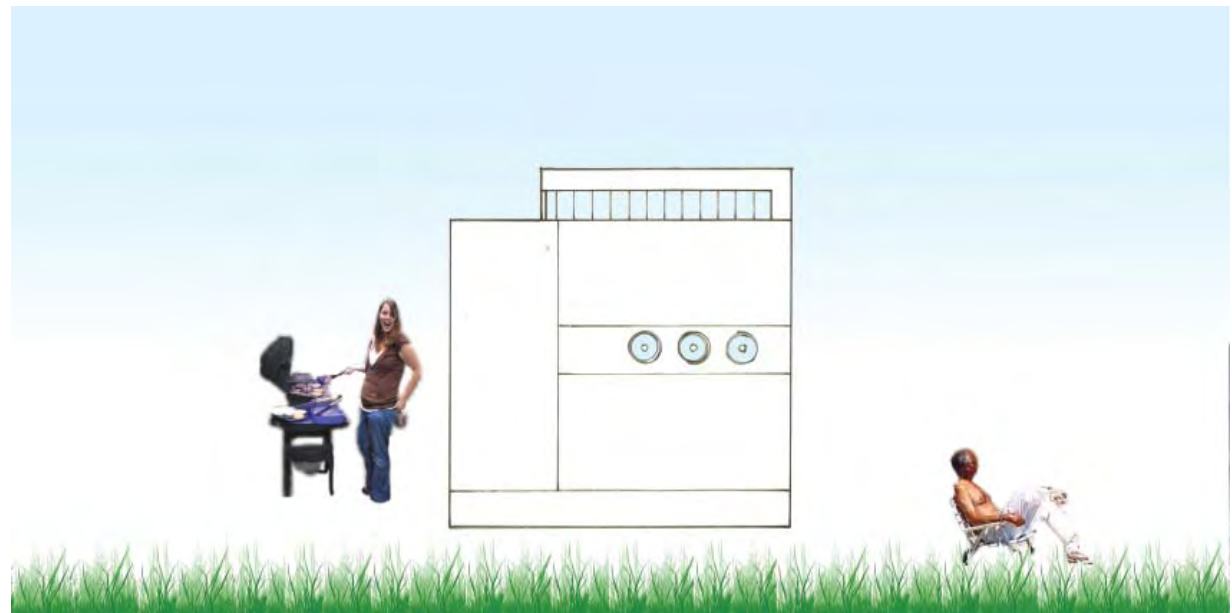
Back Elevation

[STRABISMAL_EXISTENCE]

Side Elevation



Side Elevation





Original cardboard study model of minimal living unit.

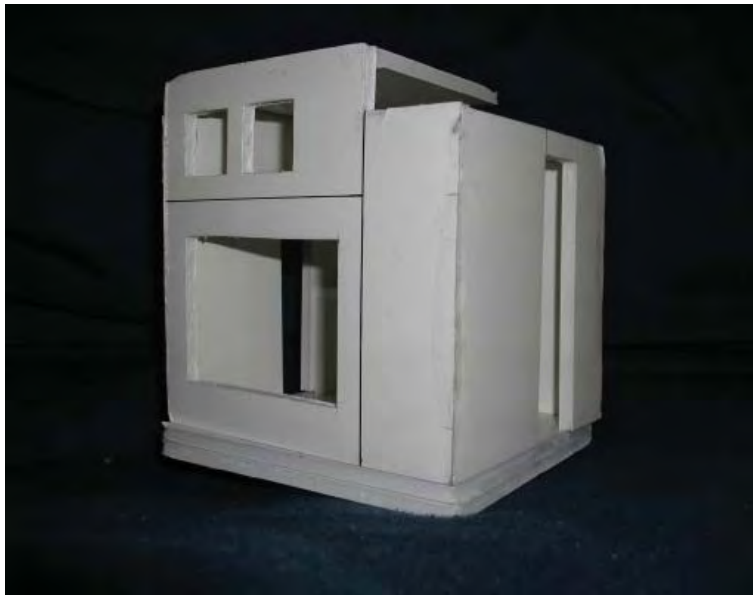


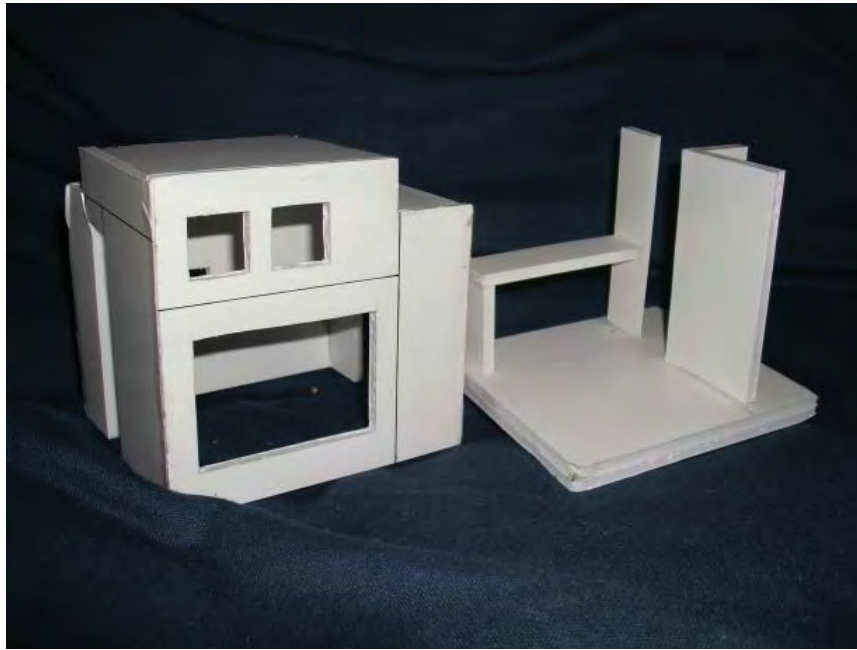
This study model was where I developed my initial dimensions for the minimal living unit. The dimensions were based on ergonomic studies and analysis of my mobile architecture precedents.

[134]

Foam core study model of the minimal living unit.

[STRABISMAL_EXISTENCE]





Top removed from study model to display interiors study model elements.

At this stage of the design process I realized that I needed to move quicker and the hand drawn process was beginning to slow me down production wise. From here I decided to move on and start to work in the computer. I needed to be able to switch to the virtual environment that the computer has to offer to speed up the design process and get the results I needed to advance toward the gate review. Heading into Spring Break I spent most of my time further refining and finessing the minimal living unit while developing a support structure for the artist studios.

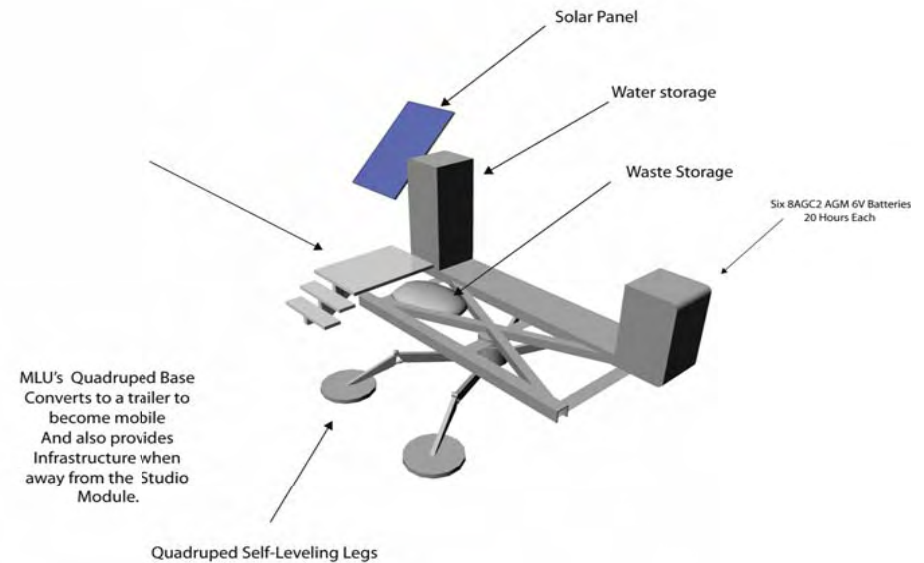
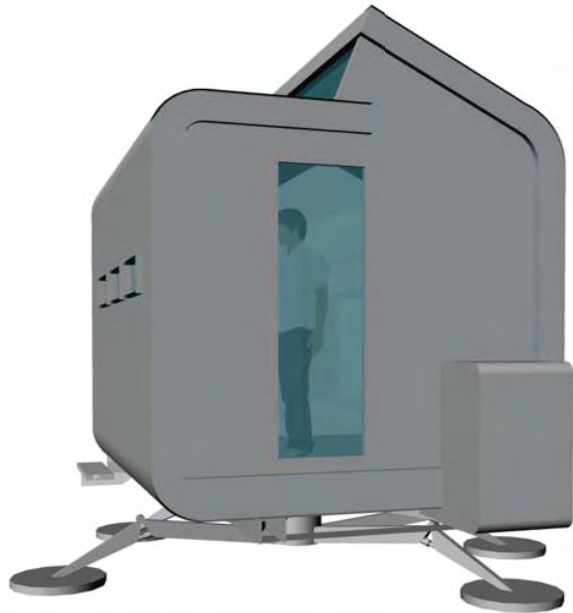
Gate Review



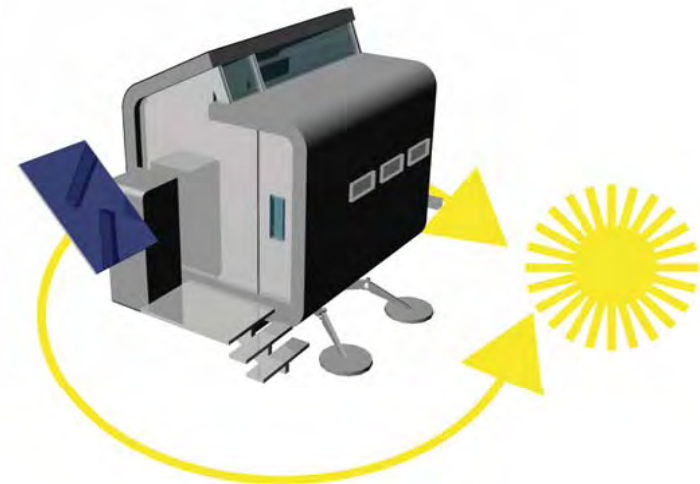
Fueled by the criticism from the previous design review I worked tenaciously through Spring Break to develop my project for the following Gate Review. I developed a new scheme that combined the studio massing from the previous review with a plug in type of configuration between the minimal living units and the studio support structure. This aspect mimicked some of the ideas expressed in the second site strategy from my first review. By using a computer to develop a minimal living unit in the support studios I was able to illustrate my ideas quickly and efficiently. My Gate Presentation went considerably better than the previous one and created new life for my thesis project.

Minimal Living Unit

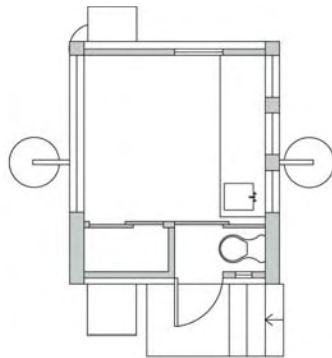
[STRABISMAL_EXISTENCE]



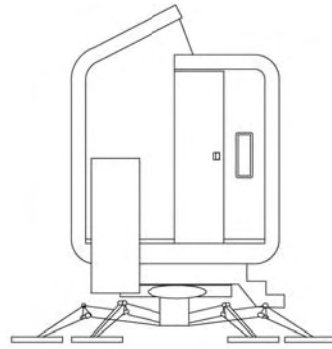
Using the layout concepts from the development of the minimal living unit for the previous review I continued to refine the minimal living unit. I felt that some sort of sectional qualities could be exploited to further enhance the arrangement of the interior space of the living unit. These along with a new solution for how the unit meets the ground were developed. Taking some ideas from Lab Zero and their design for the Carapace House I decided to design a mobile base that contained most of the minimal living units support functions. The base would allow for the minimal living unit to be mobile and carry its life support systems. The idea for the base incorporated robotics into the design which I always thought could be an interesting way to expand functional aspects of buildings. The quadruped base would



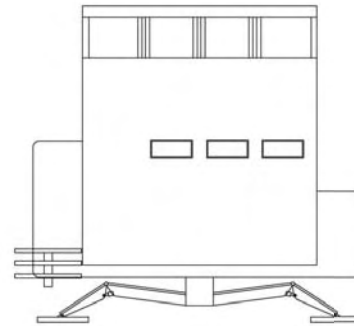
MLU's Quadruped Base Pivots for any desired solar Orientation



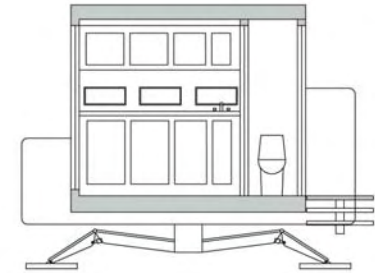
Plan



Entry Elevation

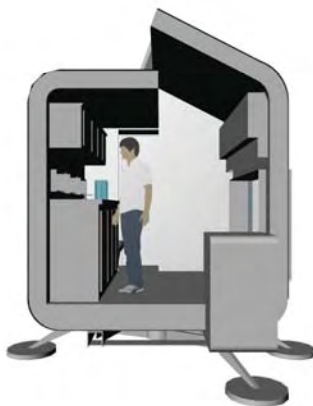


Side Elevation



Section

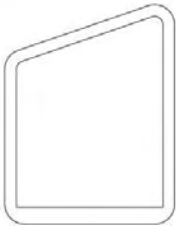
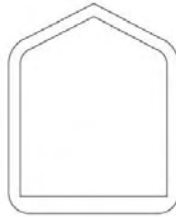
Section of interior with Bed Foldout



[STRABISMAL_EXISTENCE]

allow for the minimal living unit to do things that most buildings cannot do; such as seek out ideal climate conditions and be able to pivot to any desired solar orientation. The base would also house systems for energy creation and storage, along with a water collection system and Waste Management systems. The idea was that the base would be able to migrate to a position where the minimal living unit could be taken off the base placed on a truck and brought to another site, or once it arrives in a place where systems are available the minimal living unit would be able to plug in to some type of support structure that would provide systems without the base.

Multiple Roof Iterations



Flexible Exterior Cladding System



High Density Recycled Stawboard Struts

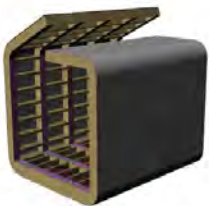


Cut Structural Insulated Panels

-Weight 4.4 psf

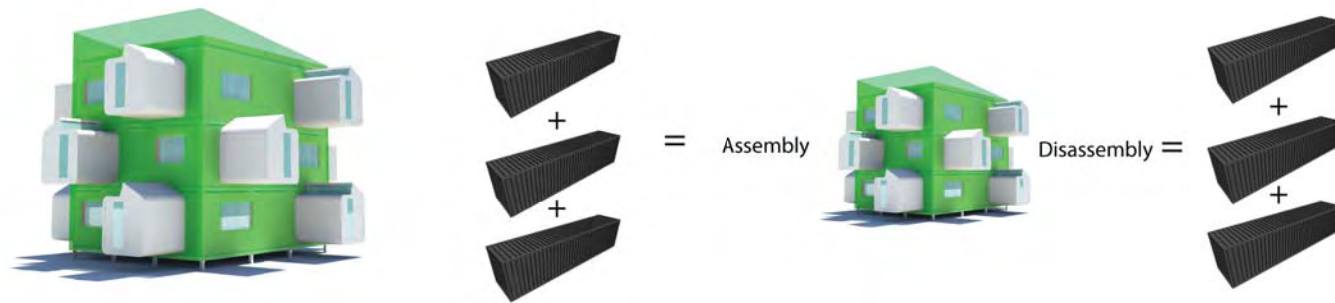
-Cut from five 4'x 8.5' panels

(Same Number of panels whole construct a space half the size)



Basic Composition of Minimal Living Module

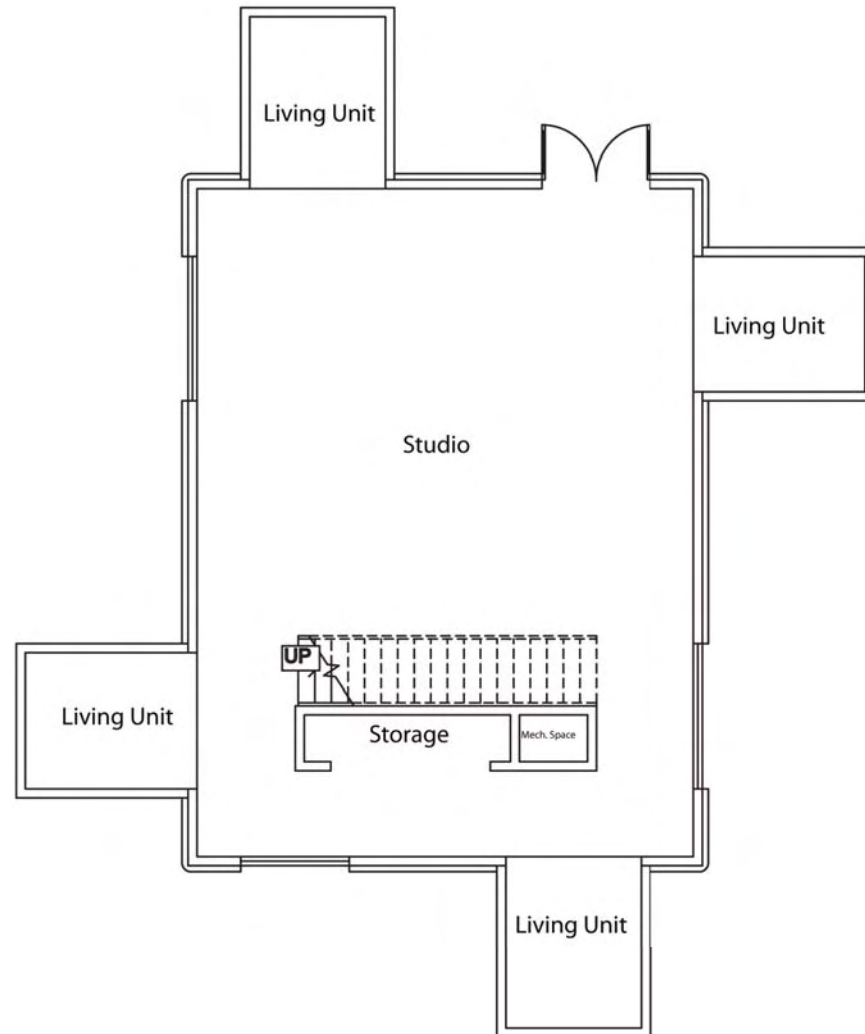
Studio Support Module



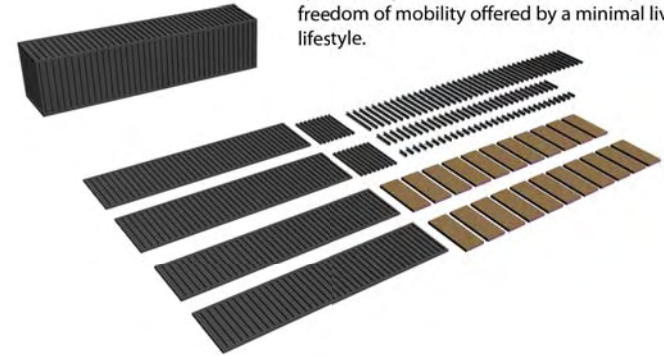
[STRABISMAL_EXISTENCE]

The studio support module was designed to be the support structure of the minimal living units while also acting as the collective studio space for the artists. The studio support module would be composed of prefabricated parts that could be contained in a shipping container type of design. The walls, floors, and ceiling of the shipping containers are designed to be an insulated type of modular steel decking that is used for floor plates and the roof of the support structure design. Within the containers would be walls, doors, windows, modular stair assemblies, structural beams, columns, exterior skin, and the mechanical systems for the support

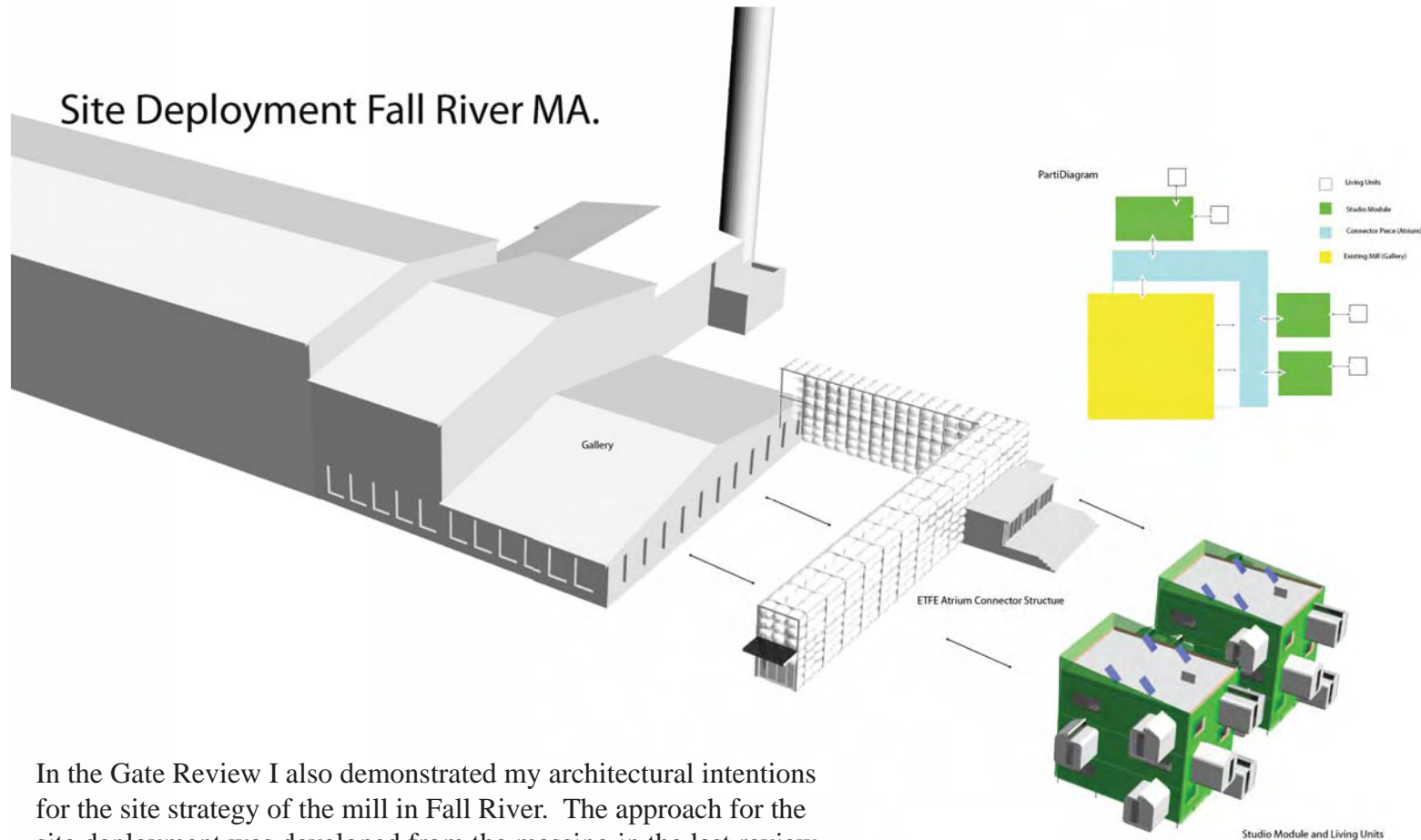
Typical Plan of Modular Studio Space



The Studio Module is a space where the Artists Minimal style of living is allowed to expand in a new and different way. An artist will need extra space to expand and work but not compromise freedom of mobility offered by a minimal living lifestyle.



structure. The support structure studios would be a modular demountable structure that could be set up wherever a community of minimal living units could be used. The idea came from Restas Urbanas where the design of the chicken was constructed from lightweight structure they could be put together by a small team of people quickly. This idea is also similar to the idea illustrated in the Project Frog precedent. The main difference being that these studio support structures will be designed to allow the minimal living unit to plug into them and receive mechanical systems.

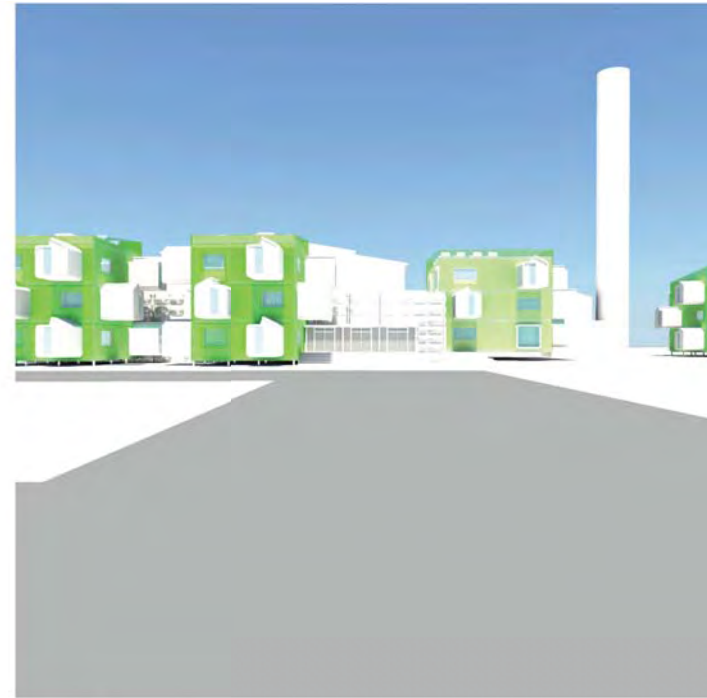


In the Gate Review I also demonstrated my architectural intentions for the site strategy of the mill in Fall River. The approach for the site deployment was developed from the massing in the last review. The idea was to create a skylight structure that connected the studio support module to the original mill utilizing the windows on the outside wall of the mill to create filtering of light into the gallery. This approach was also taken to feed mechanical systems from the mill building to the studio support modules and also for circulation between the galleries in the studios. This further reinforced my original program parti of live, work, and exhibit.

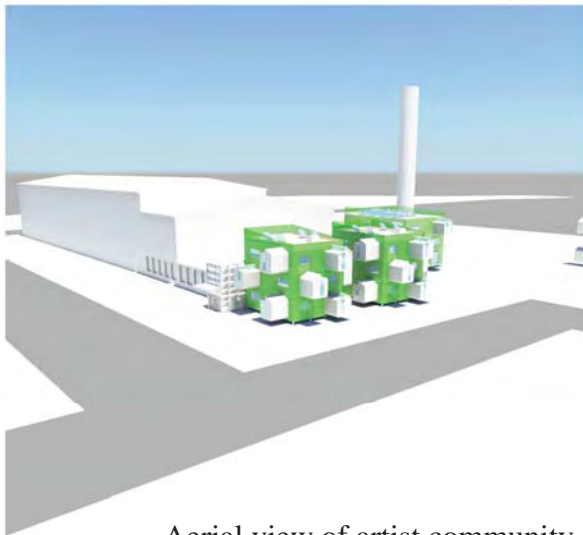
The Connector Atrium is composed of ETFE inflated panels as effective way to create a sky lit atrium. ETFE is 1% the weight of glass making it easier to install if this is to be built by the artists. ETFE or Ethylene tetrafluoroethylene Cost 30 to 70% less to install than typical glass skylights and it is know to transmit more light.



Side view of artist community.

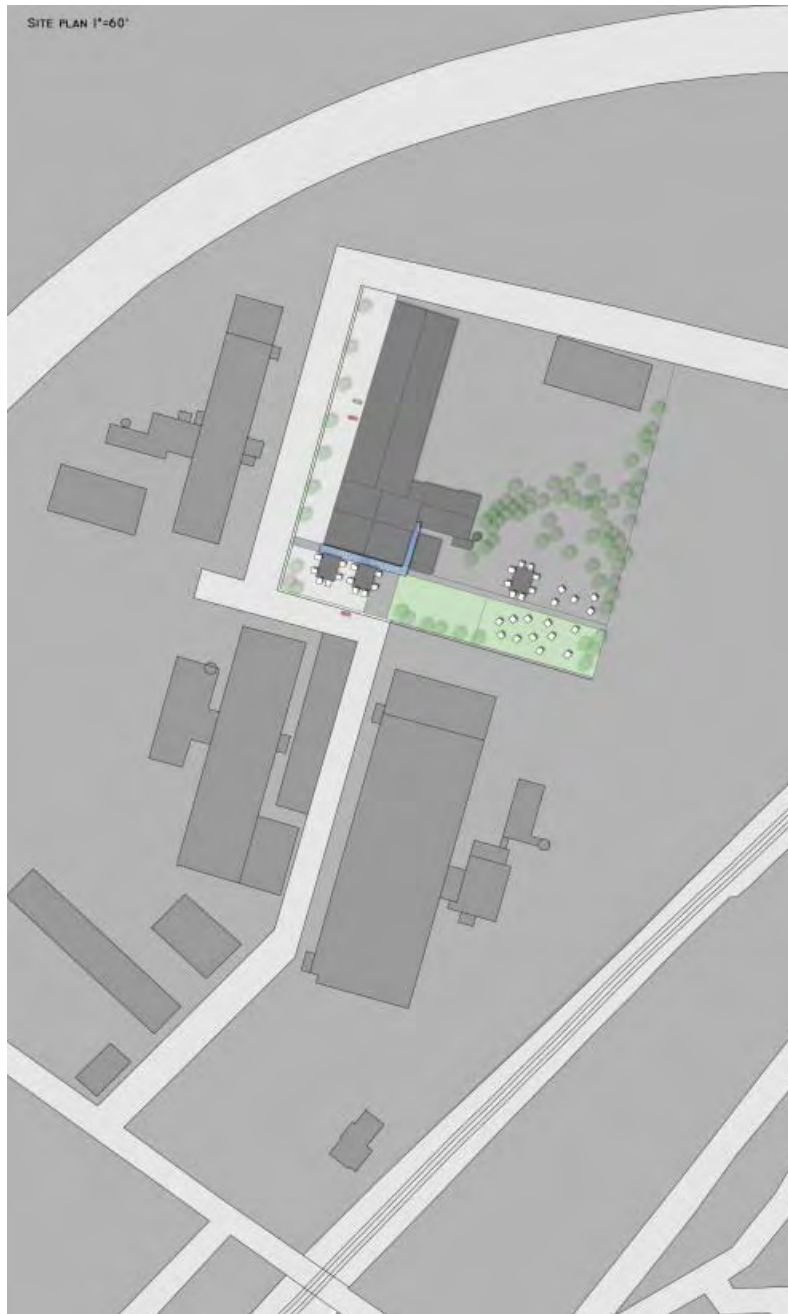


Entry approach to artist community.



Aerial view of artist community.

Renderings were created to illustrate what the site deployment would look like once it is in place. Views were generated from the south side of the site where the main entry would be located along with a side street view an aerial view. Once the support structure was set up near the gallery within the mill the minimal living units could be plugged into the side. Once plugged in the living units would share systems with the mill.

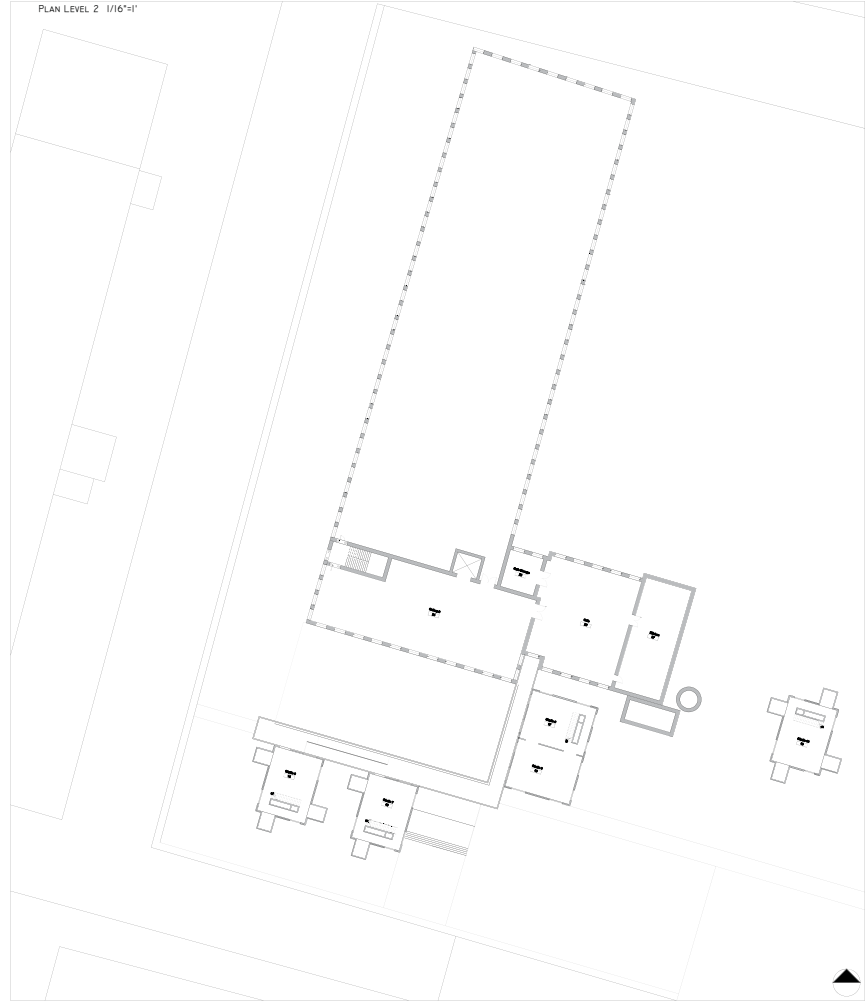


Although this site strategy had been further developed there still needed to be a lot of work done. The site plan I presented at the gate review was still working with just the southernmost portion of the site. Also I had scattered living units placed throughout the site the idea was to have an area where an encampment of artists could still take place. The criticism from the review was that the units should not be scattered throughout the site and should be organized onto the studio support module. It was also suggested that I start to use the entire site of the mill yard. It was suggested that I try an approach with the studio support modules were extended along the back side of the mill offering more spaces for the minimal living unit to plug in.

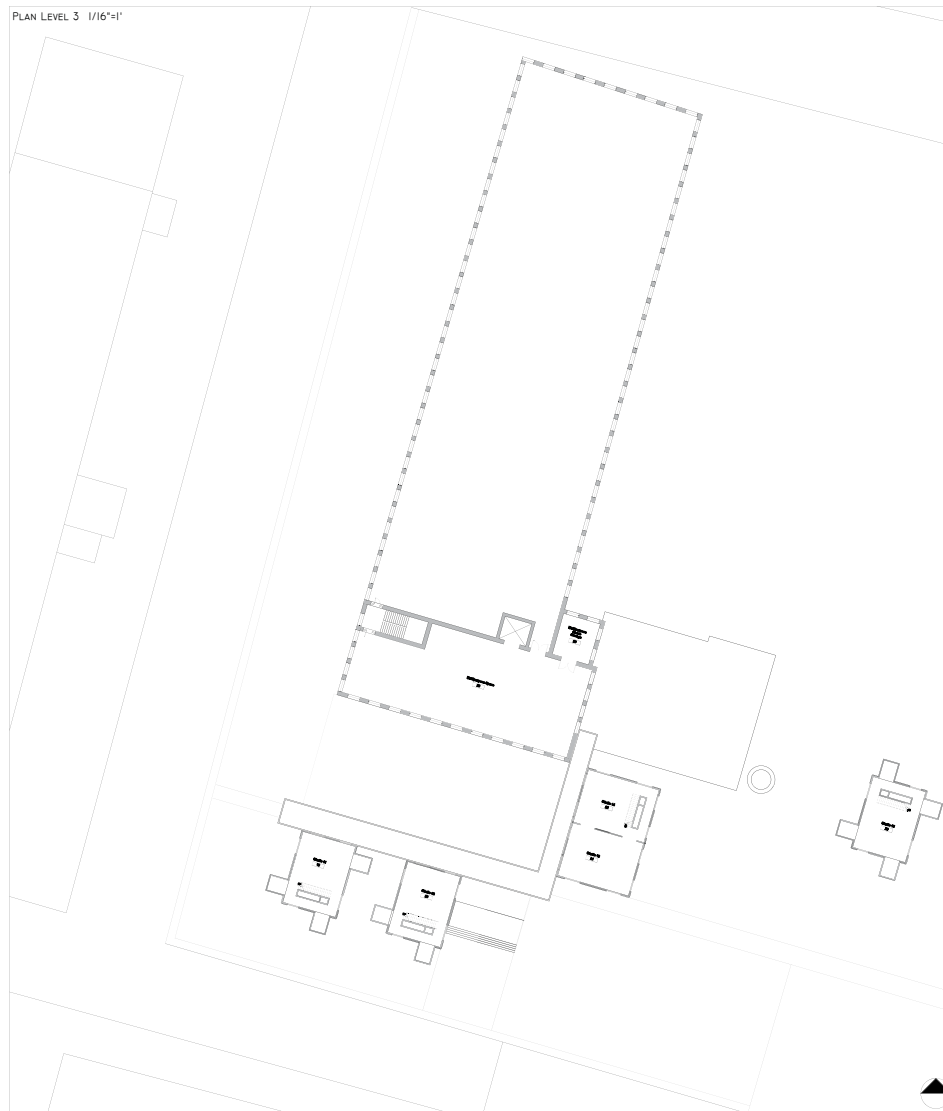
[STRABISMAL_EXISTENCE]



First floor plan.



Second floor plan.



Third floor plan.

During this time I also am further develop a program of the interior reuse of the southern part of the mill. Through careful documentation of the mill I drew up plans for the different galleries in how the different parts of the program would be distributed. These plans also illustrated how the studios would attach to the galleries.

[STRABISMAL_EXISTENCE]



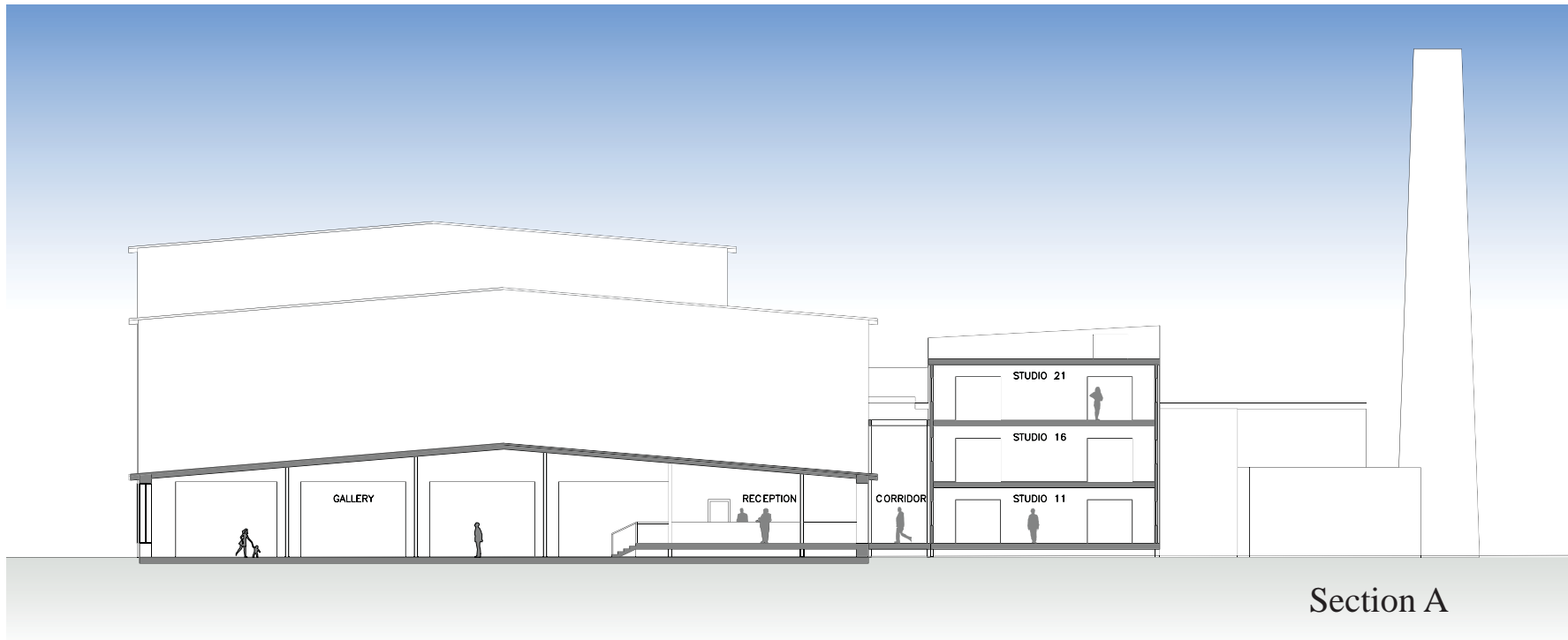


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Second floor plan.

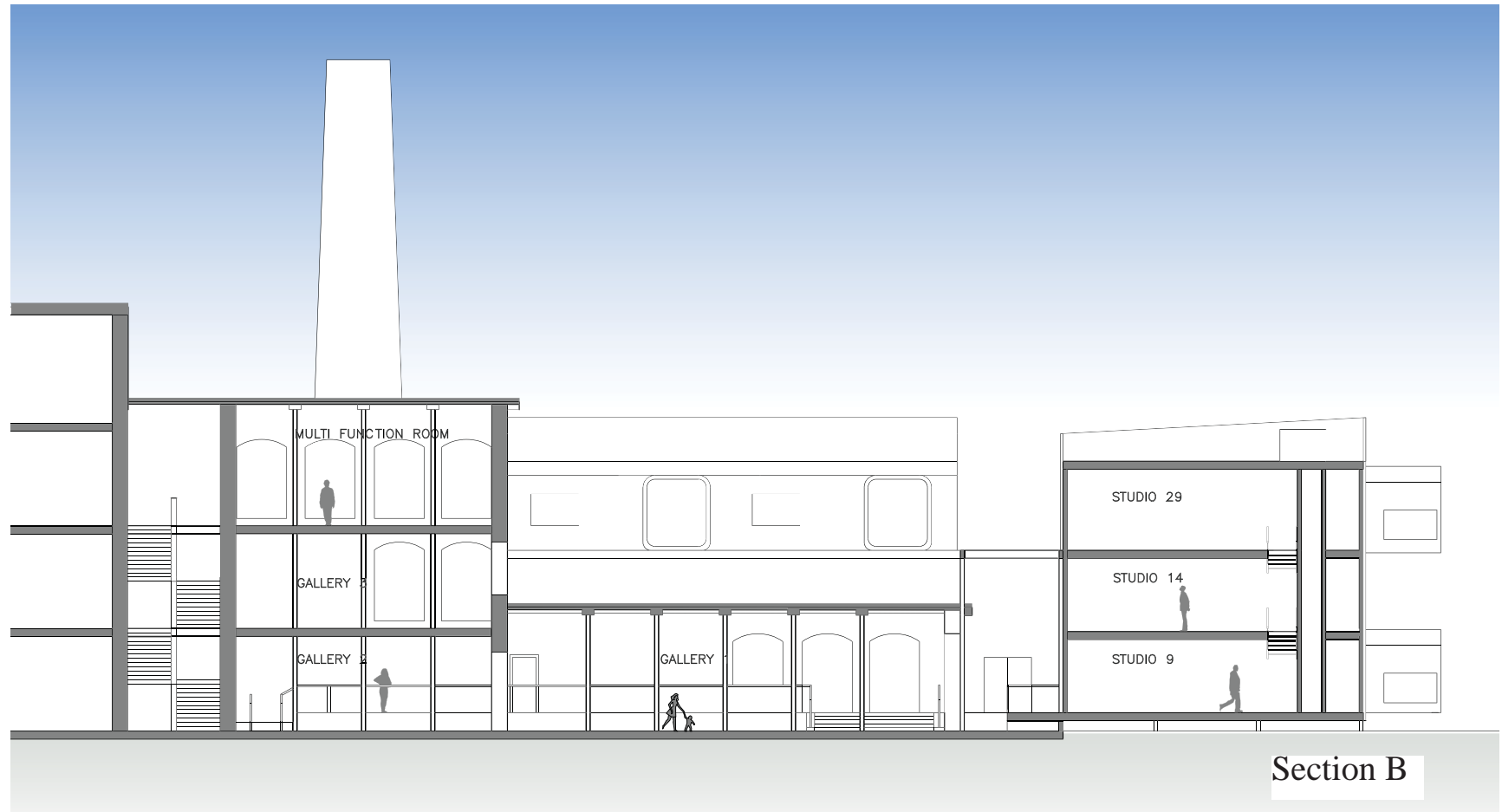


Third floor plan.



[STRABISMAL_EXISTENCE]

This is a section through the main gallery, atrium space, and Westside studios of the main building. This view illustrates how the ETFE structure connects to the original mill building between the studios and the gallery spaces. The section also illustrates how the reception area would be combined into the gallery space and shows how the original window openings would be used to circulate in and out of the gallery.



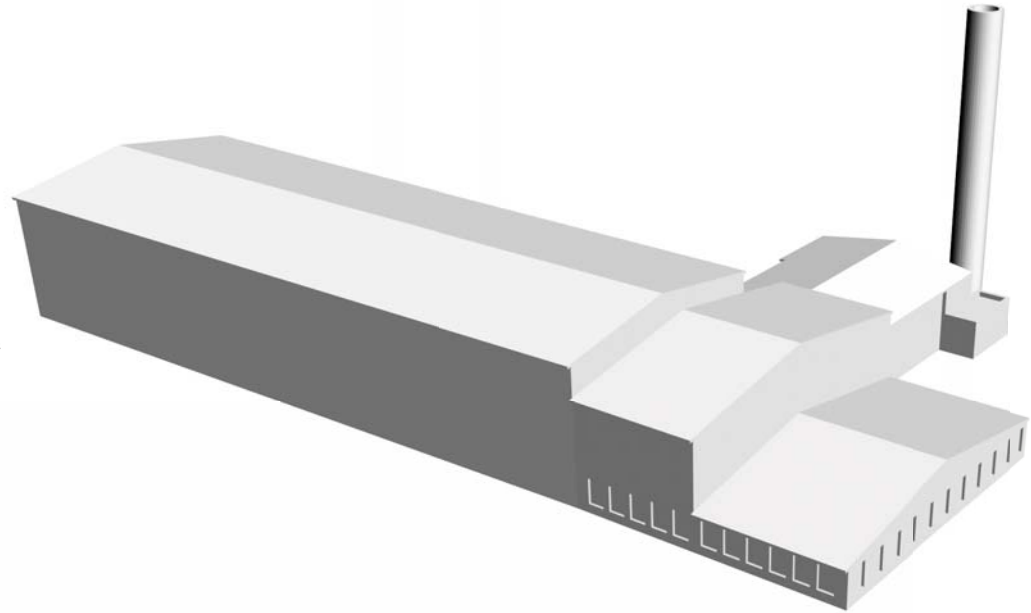
This section is caught in the opposite direction and shows a section cut through the multifunction room and the special exhibitions gallery. It also shows the relationship of the studios with the main gallery in how they are connected through the ETFE structure. You can also see how the old window openings of the mill structure are used to circulate between the studios and the galleries.

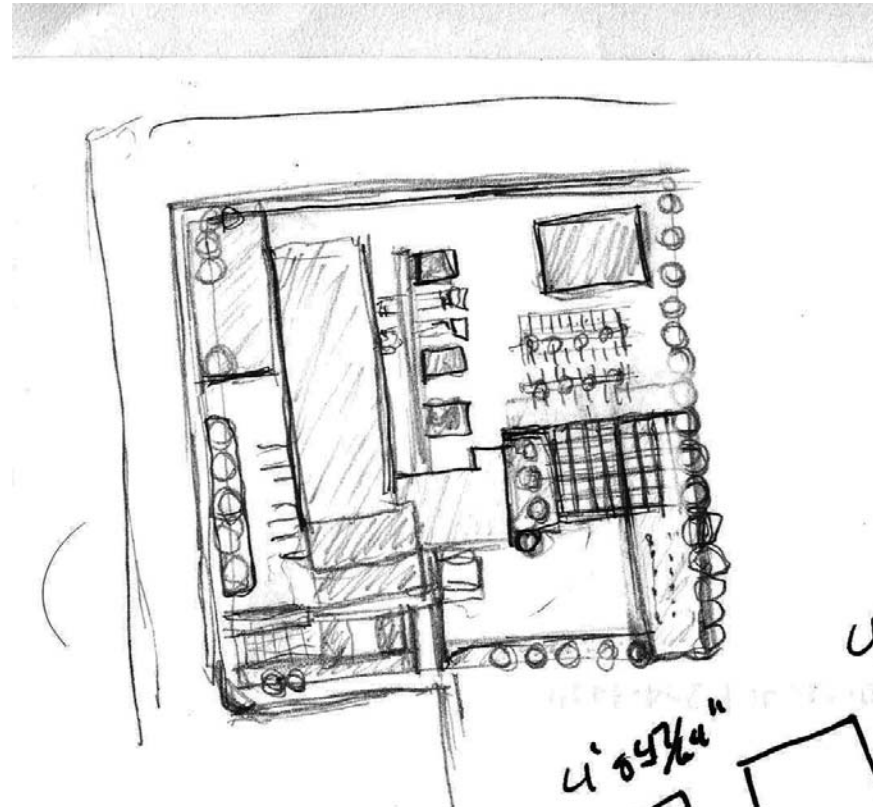
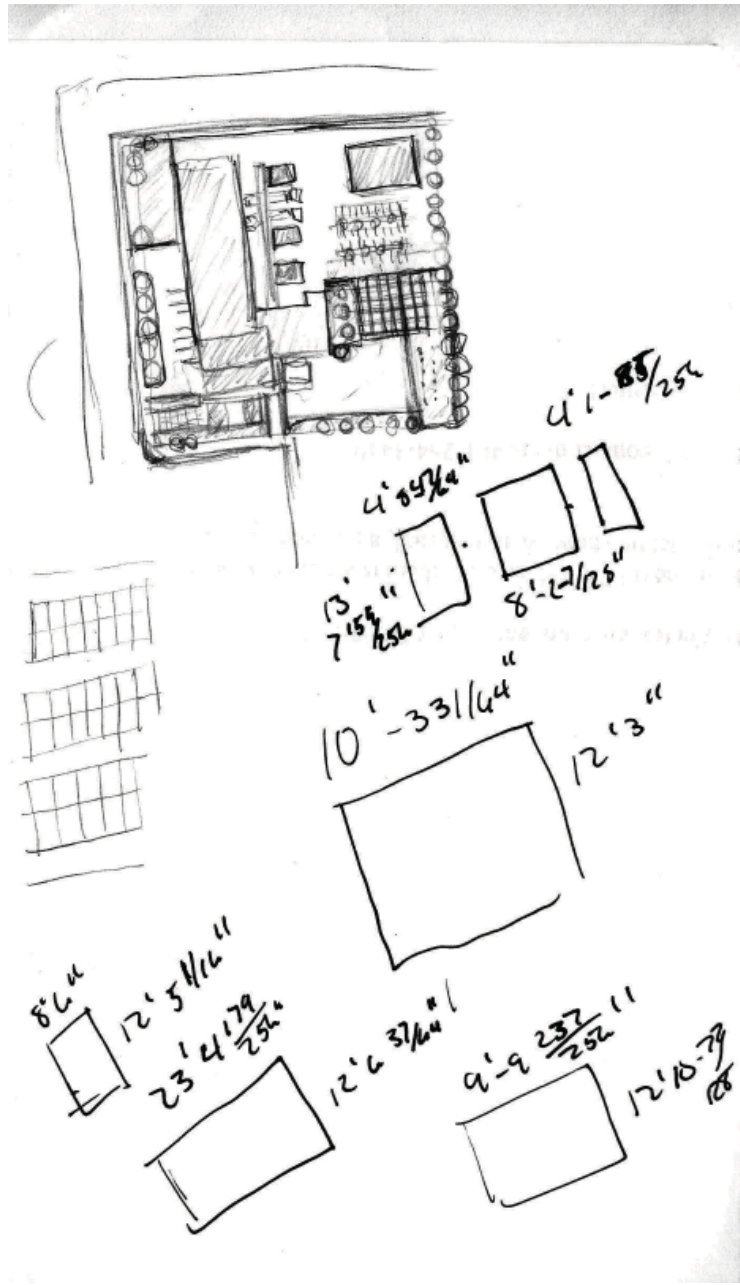
Final Review



[STRABISMAL_EXISTENCE]

From Gate Review until the Final Review we had about a month to refine our designs. During this time I concentrated mainly on fine tuning the studio support module and developing a strategy for the entire site based off the criticism received from gate view. During this time I completed documenting the model of the existing mill structure to further develop its adaptive reuse as an art gallery and function space.





To develop the site I sketched several iterations and continued to refine my 3D model of the site to include massing models of the surrounding buildings. I extended the ETFE connector structure on the east side of the building so it extends to the north side of the site. Connected to it are three new studio support modules where living units can be plugged in. I use these connecting units to demonstrate the self sustaining mechanical systems that could be available for the studio support module (this will be shown later in a closer look at the studio support module). To the east of this is an extended parking area that would service the living units and the light manufacturing and marketplace that currently exist in the



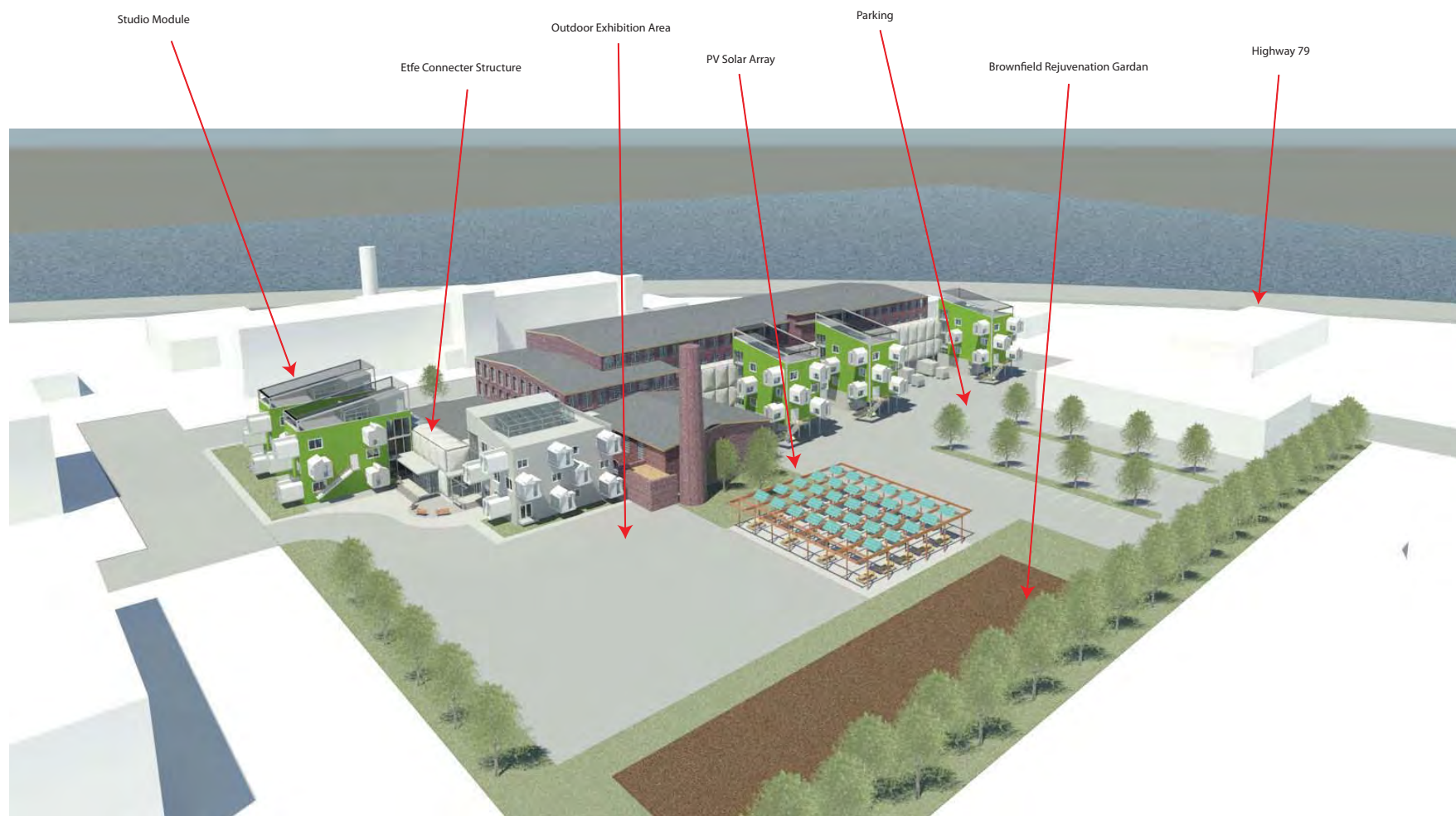
Site plan with surrounding context.

mill. Between 80% and 90% of the site is paved so I decided to maintain the pavement as a hard surface for parking and events. In the areas that are not paved there are two rejuvenating gardens. These gardens would be used to help treat the soil on the site and also provide an area for green space. Directly behind the small part of the mill where mechanical systems and cafeteria are located there is a trellis. This trellis has a photovoltaic solar array that can power up the normal functions of the mill and the studio support structure including the living unit modules.



Site plan zoomed in.

An aerial view of site with parts of program identified.



[STRABISMAL_EXISTENCE]

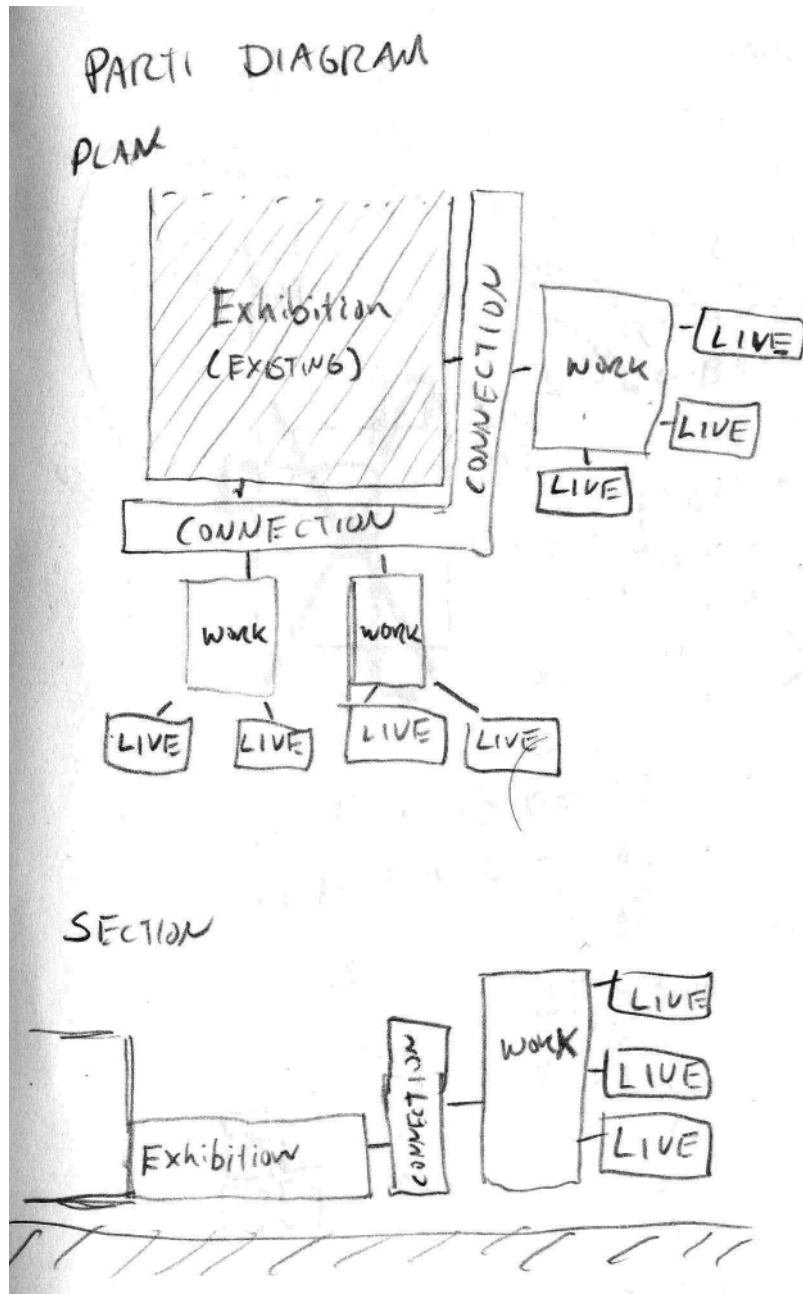


Site from east side.

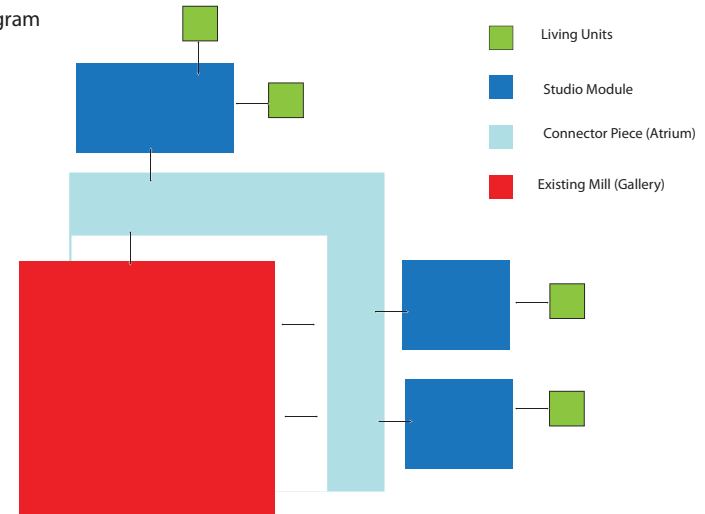
Bird's eye view of site from west side.



[STRABISMAL_EXISTENCE]



Parti Diagram



For the most part I stuck with the original parti outlined in my design proposal document by developing the connection through the three parts of the program live, work, and exhibit. The parti grew with the extension of the ETFE structure and the new studio modules added to the site and maintained the same approach.



Main entry view.

Above View of the Main Entry to the Gallery on south view of the site

View from the corner of West Street and Propper Street. In this view we can see the mill, the ETFE connector structure, and the studios with living units attached.



View of studio support module with living units plugged in.



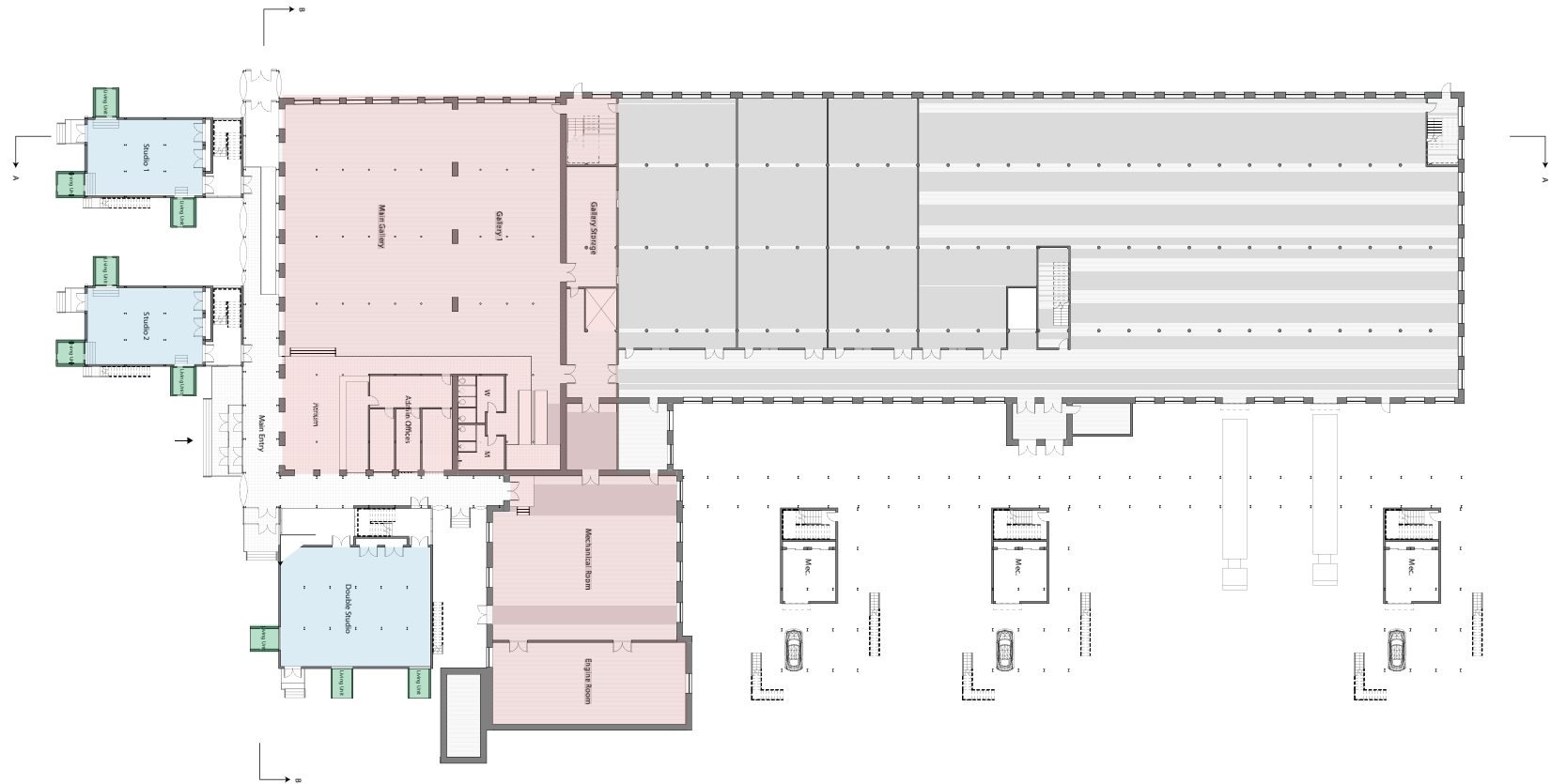
Above: View of the north side of the site. Here we can see the new extension of the studios along the back side of the mill. These studios are levels higher than the ones on the south side of the site. These studios on this portion of the site have a mechanical room on the main level and ETFE structure allows space for people accessing the mill and loading dock below.

Next page top: View from parking lot behind mill looking west.

Next page bottom: View from the open exhibition area on the south side of the site.



[STRABISMAL_EXISTENCE]

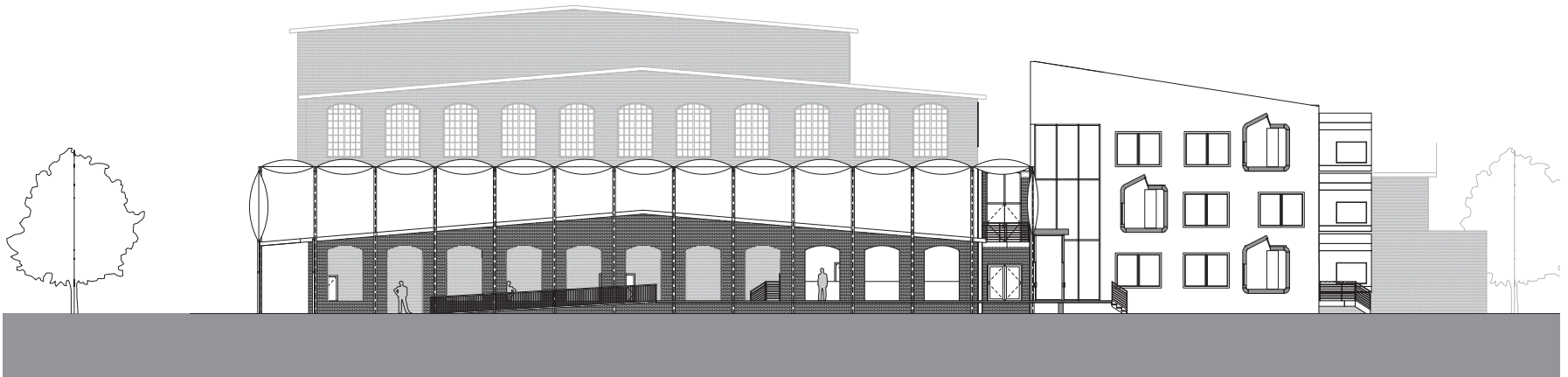


First Floor Plan shows main entry, atrium, main gallery space, mechanical space in mill, mechanical space in studios, first level studios around main entry, loading dock, existing portion of mill, and living units.



Close-up view of First Floor Plan shows living units, studios main entry, atrium, main gallery, and circulation spaces.

[STRABISMAL_EXISTENCE]

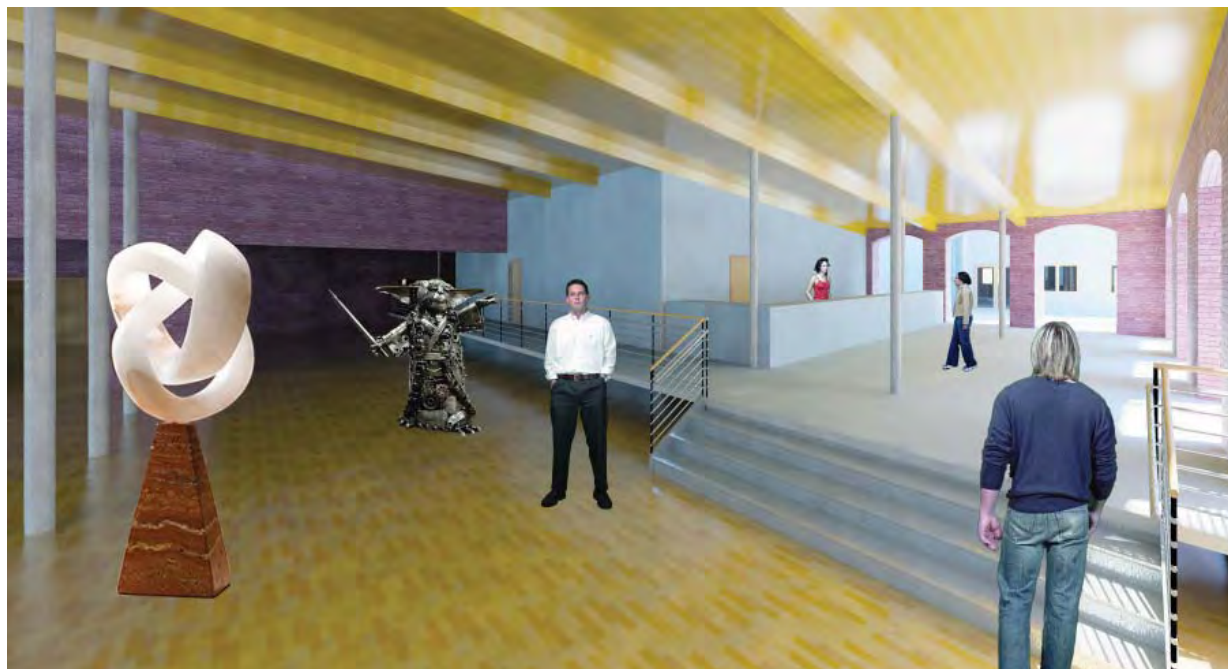


Section of ETFE circulation space where it attaches to the main gallery. Old windows are taken out and openings are used to circulate between the gallery and the studio spaces. A ramp connects from ground level to the level of the studios and the atrium space.

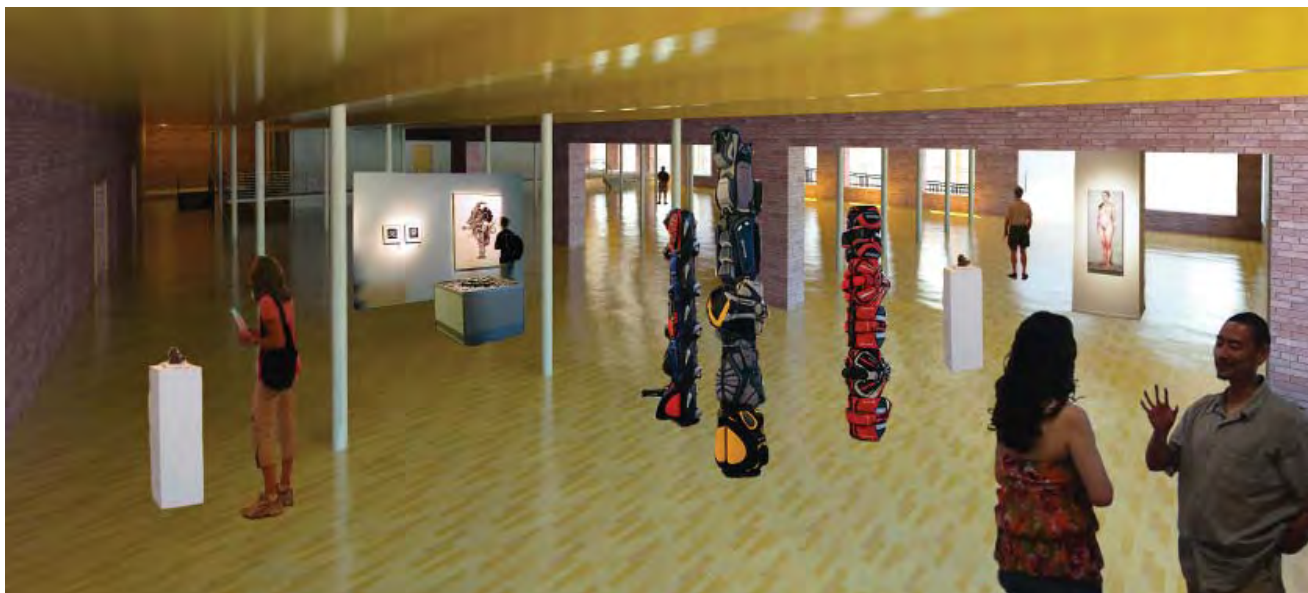


View of the main entry.

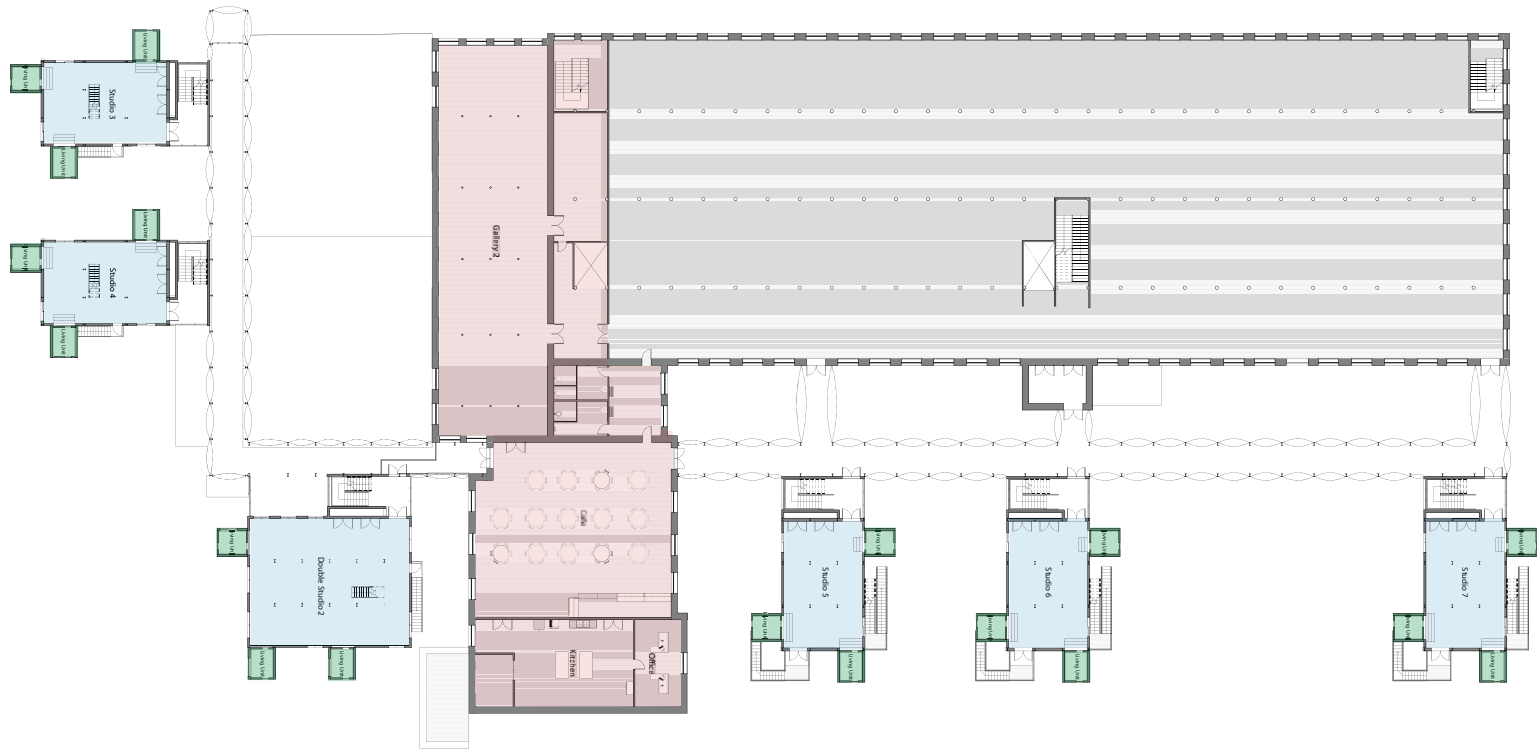
View of atrium space showing entry from circulation space and main entry. This image also shows the reception area, where the offices are located and the stairs to the main gallery.



View of main gallery looking in the direction of the circulation space.



[STRABISMAL_EXISTENCE]



Second Floor Plan showing living units, studio spaces, special exhibition gallery, cafeteria, kitchen, administration offices, existing mill space, and circulation area.



Close-up the Second Floor Plan showing living units, studio spaces, circulation area, special exhibition gallery, cafeteria, kitchen, and administration offices.



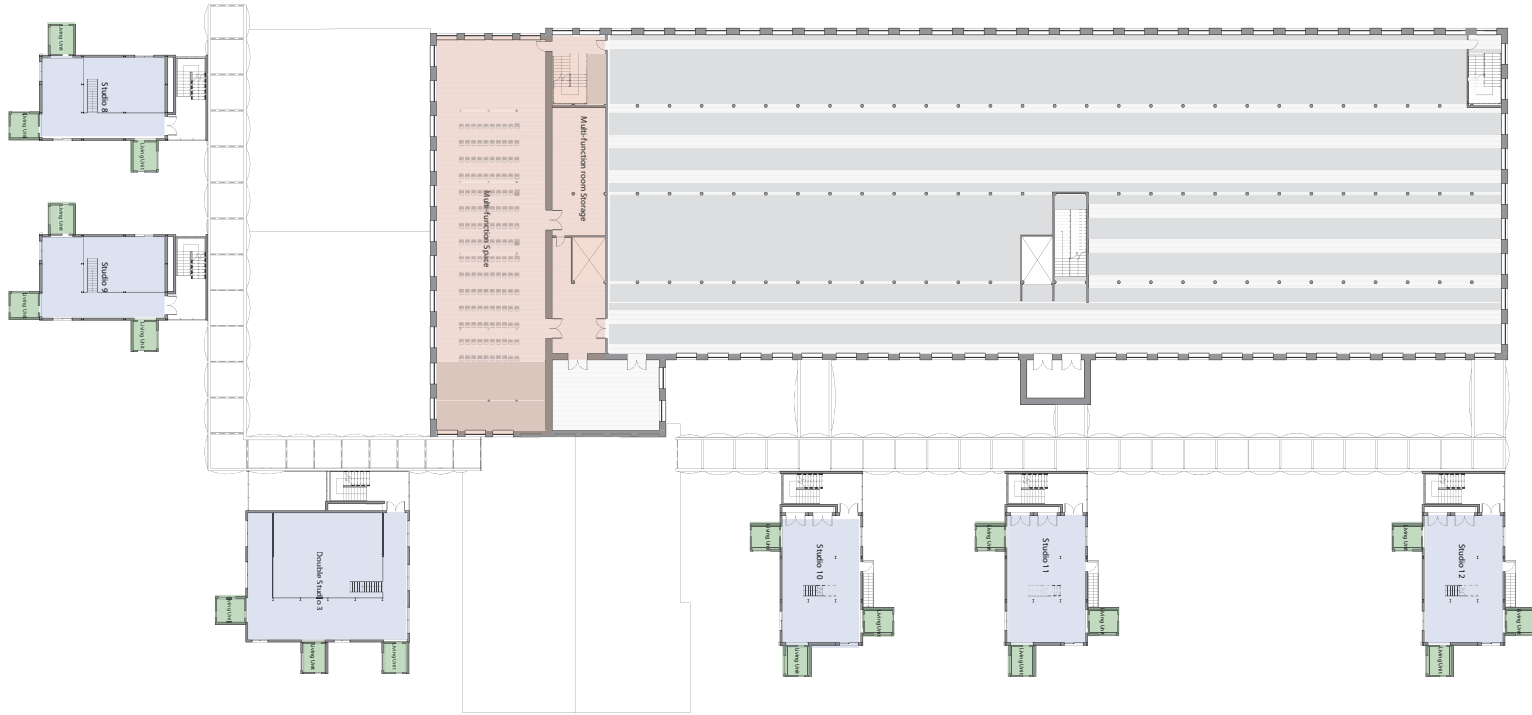
Section drawing that shows the connection of the studio modules with the existing mill. The drawing also shows the main gallery, the special exhibitions gallery, and the assembly space



View of the cafeteria space.



View of special exhibitions area.



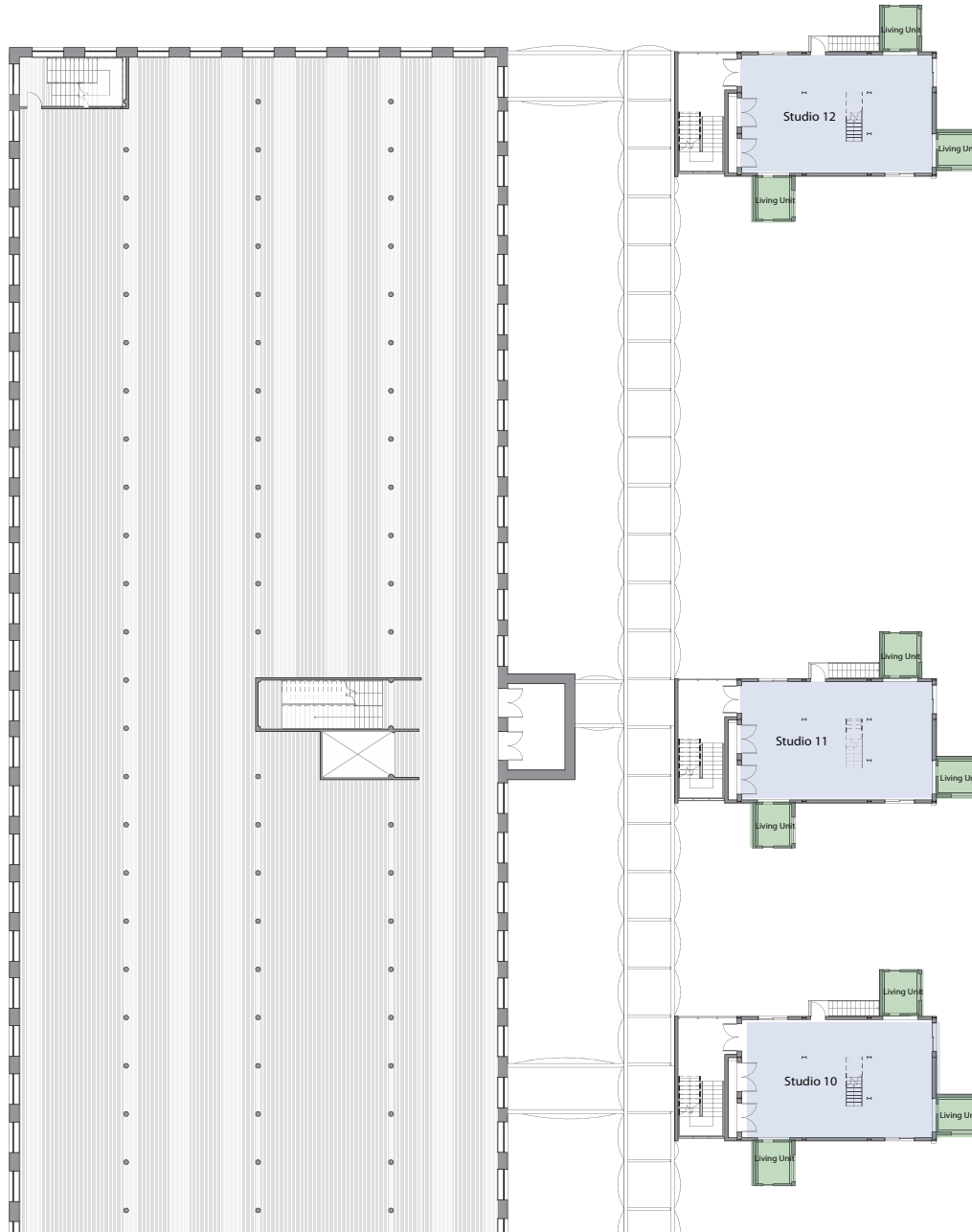
Third Floor Plan showing living units, assembly space, circulation area, and existing structure.



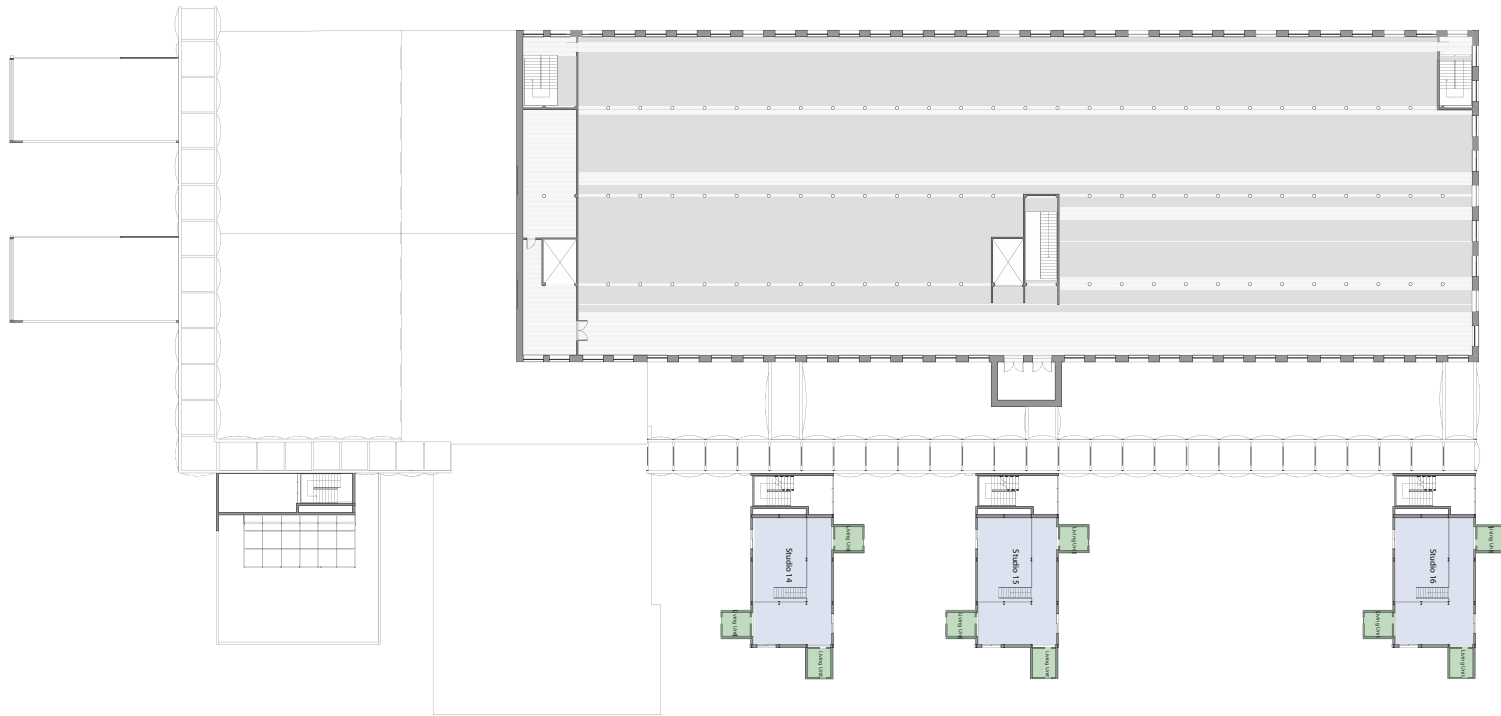
Close-up a Third Floor Plan showing living units, studio module, circulation spaces, and assembly space. A view of the assembly space is pictured below.

[STRABISMAL_EXISTENCE]



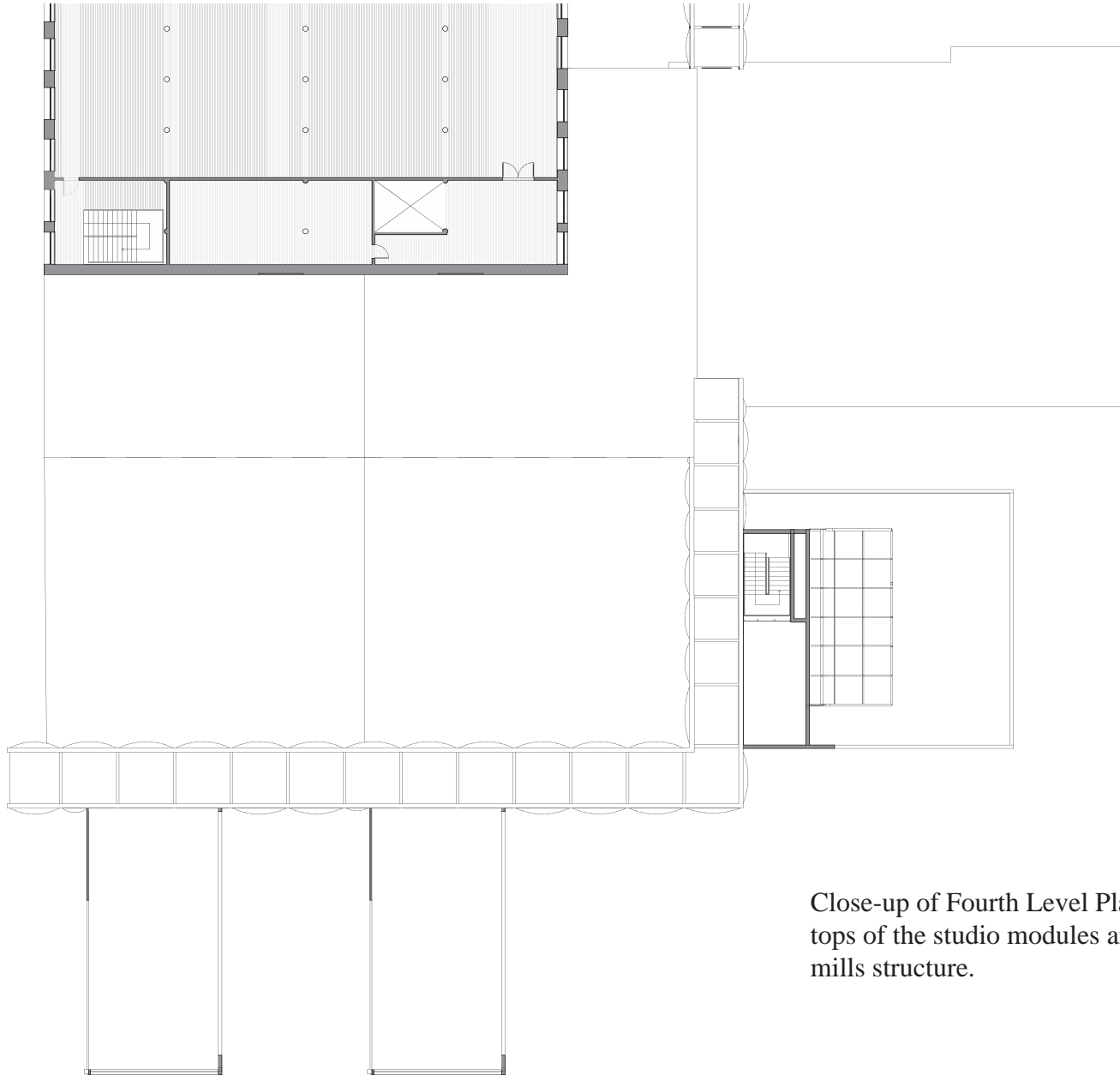


Close-up of Third Floor Plan on north side of site showing the living units, studio modules, circulation spaces, and existing mill.

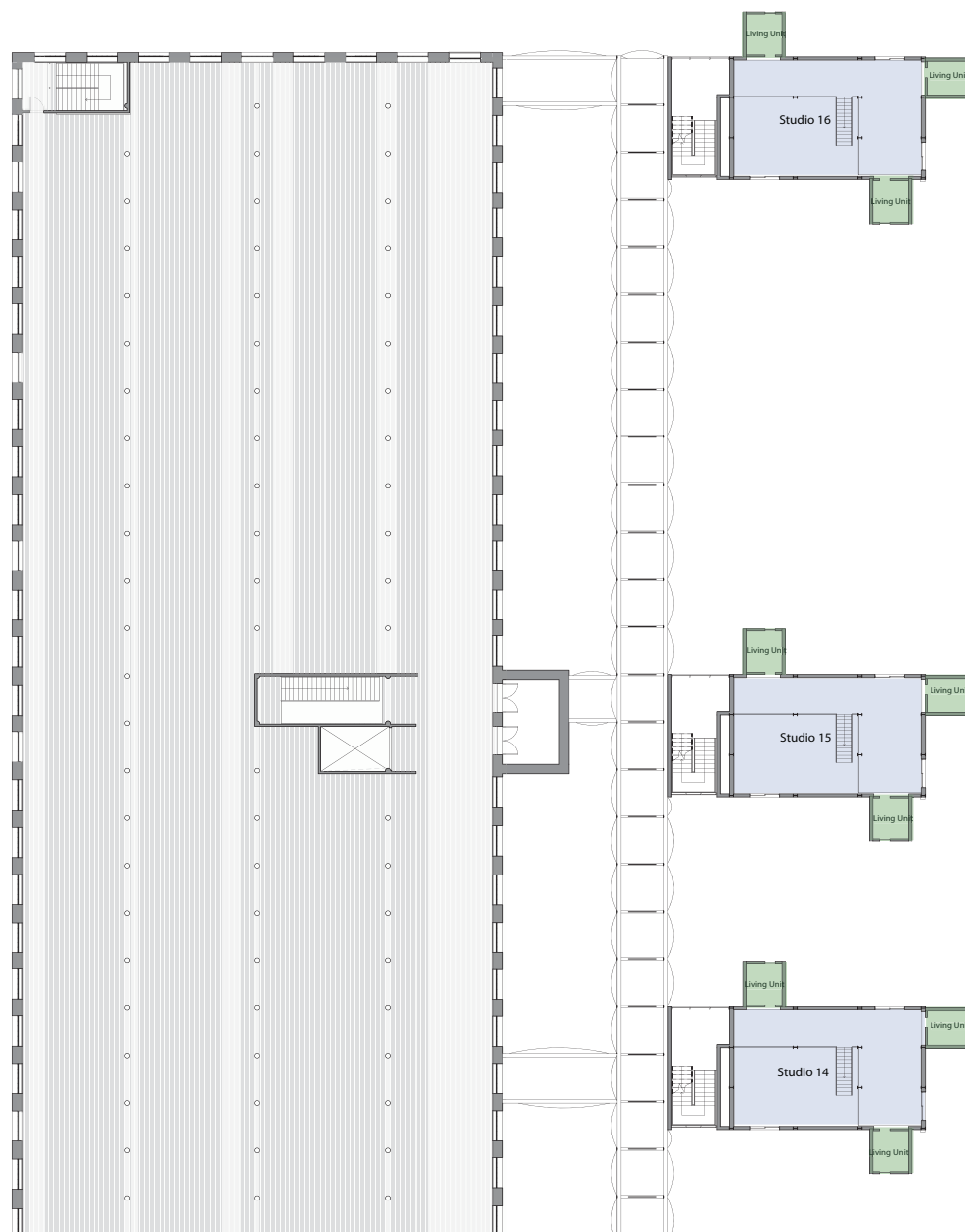


Fourth Level Plan showing studio modules, living units, circulation spaces, an existing mill structure. To the right is a view from the parking lot in the direction of the building.





Close-up of Fourth Level Plan showing the tops of the studio modules and the existing mills structure.

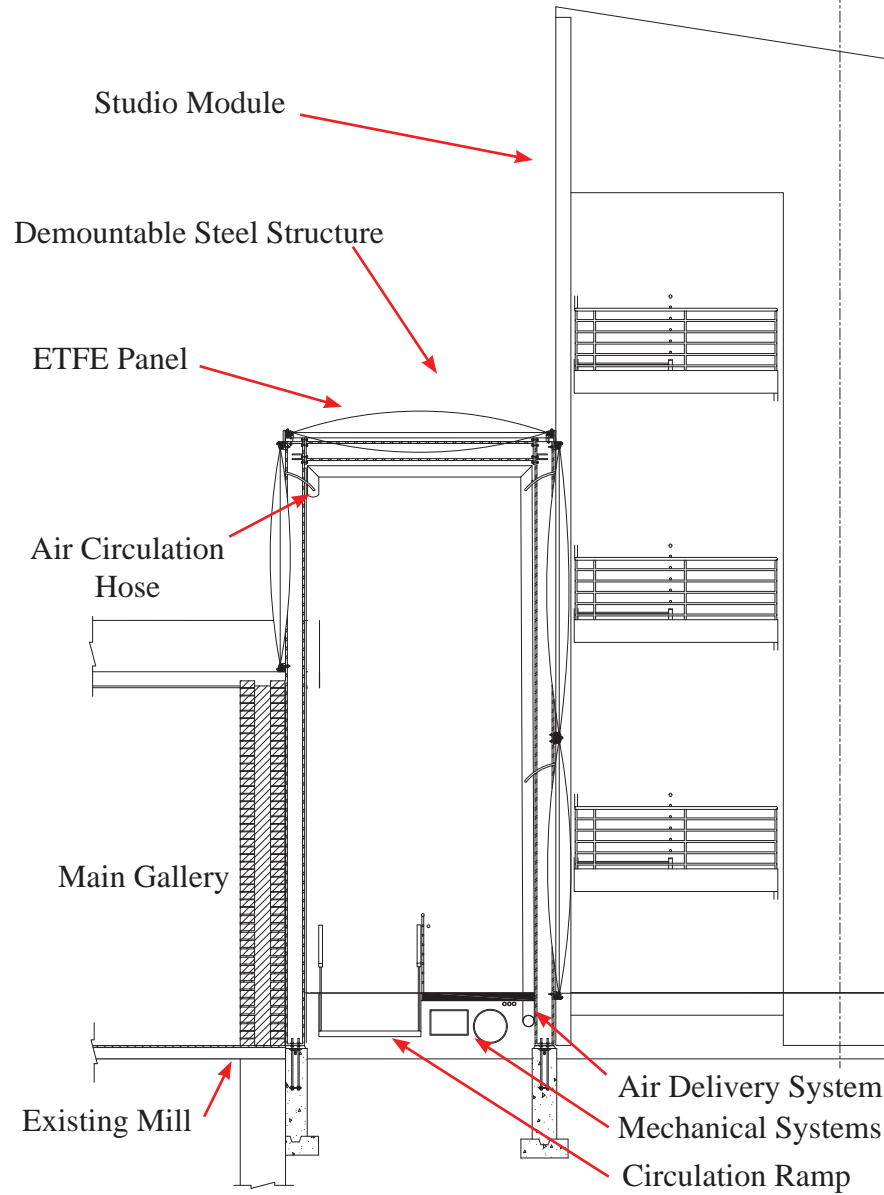


Close-up of Fourth Level
Plan on north side of site
showing living units, studio
modules, and the existing
mill structure.

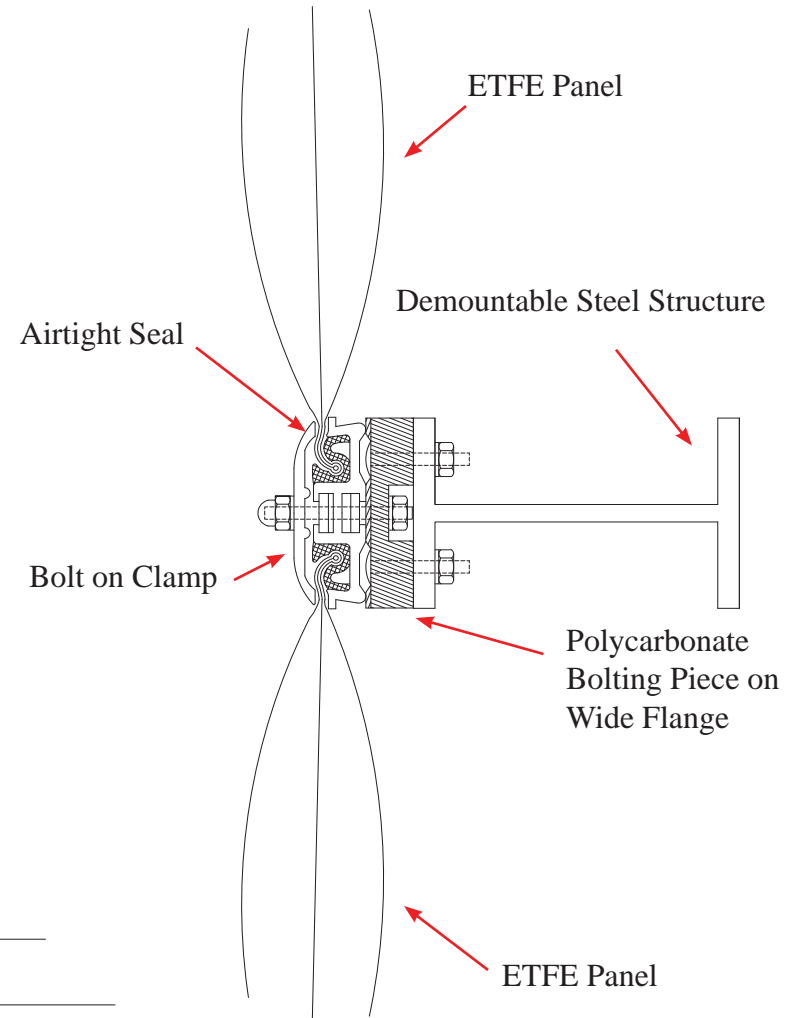
[STRABISMAL_EXISTENCE]

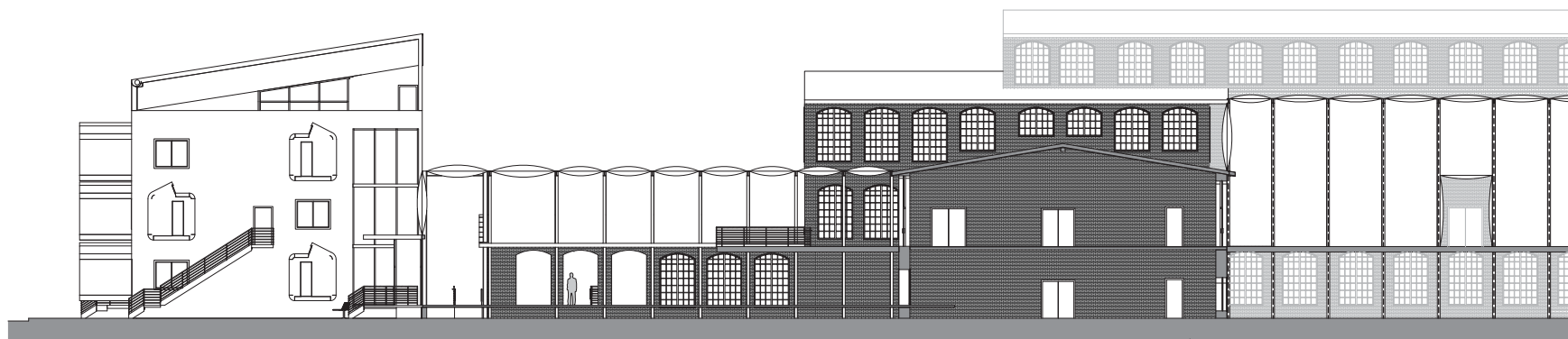
ETFE Structure Section Detail

[STRABISMAL_EXISTENCE]



Detail of ETFE Panel Clip



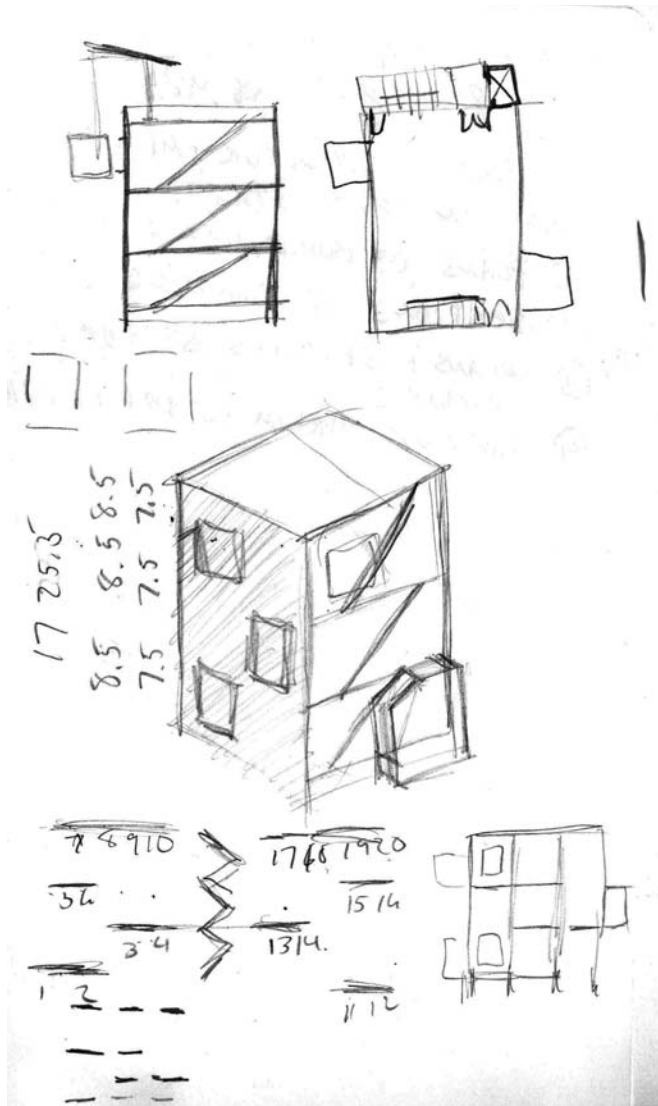


Section drawing through the ETFE structure, mechanical space, and cafeteria space. The drawing shows the main entry in the circulation space around the main atrium and gallery.

[STRABISMAL_EXISTENCE]

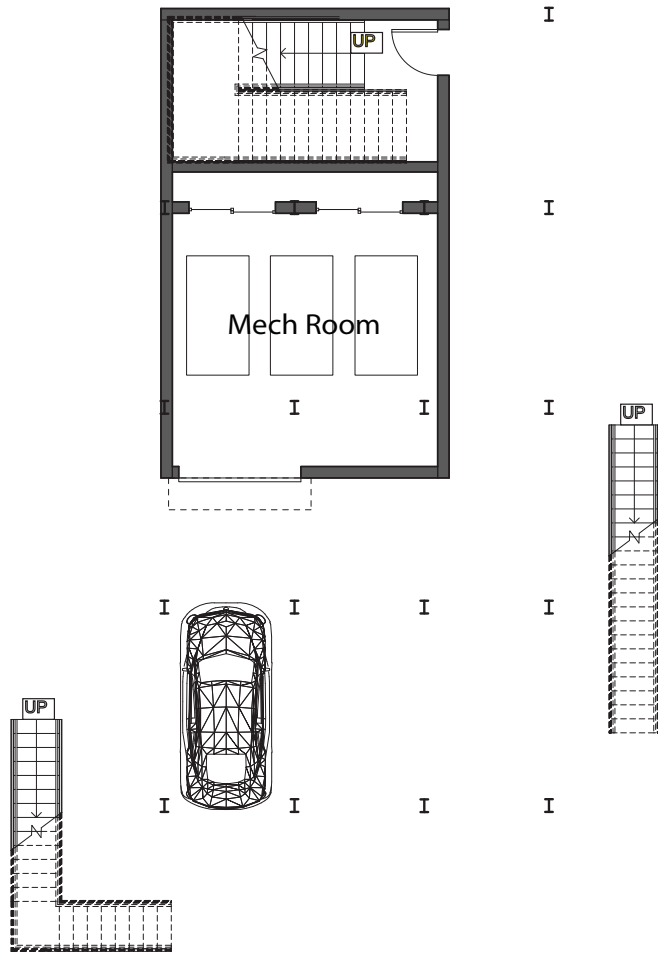
The Studio Support Module

The studio support module is a collective living area where the artists can do work, store material, and collaborate on projects. The support module has the ability to be set up with multiple levels and a maximum of three occupy of low levels with a roof terrace. On the main level is a mechanical space where self-sustaining mechanical systems are located. These mechanical systems are designed to connect to the minimal living units. Each level of the studio support module is stored in a shipping container that is designed to be the floor plates of the studio support module. Within the container is the walls, windows, and finish materials for that floor. The studio support modules could be set up for collecting the living services in any location. For my project they're used as art studios for the resident artists.

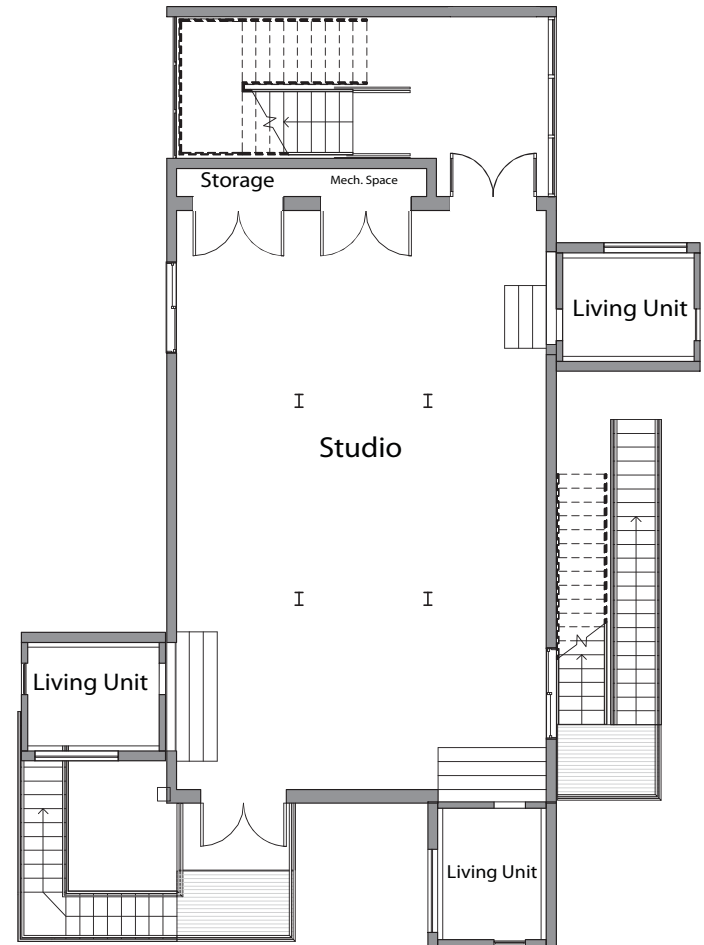


After the gate review multiple iterations of the studio support module were put together to explore different options for egress within the studio support module. For the final design a mezzanine option on the third level of the studio module was used to put together a double heighted studio space. This allowed for more natural daylight and ventilation while allowing for work to be conducted on the mezzanine in circulation between the second and third levels.

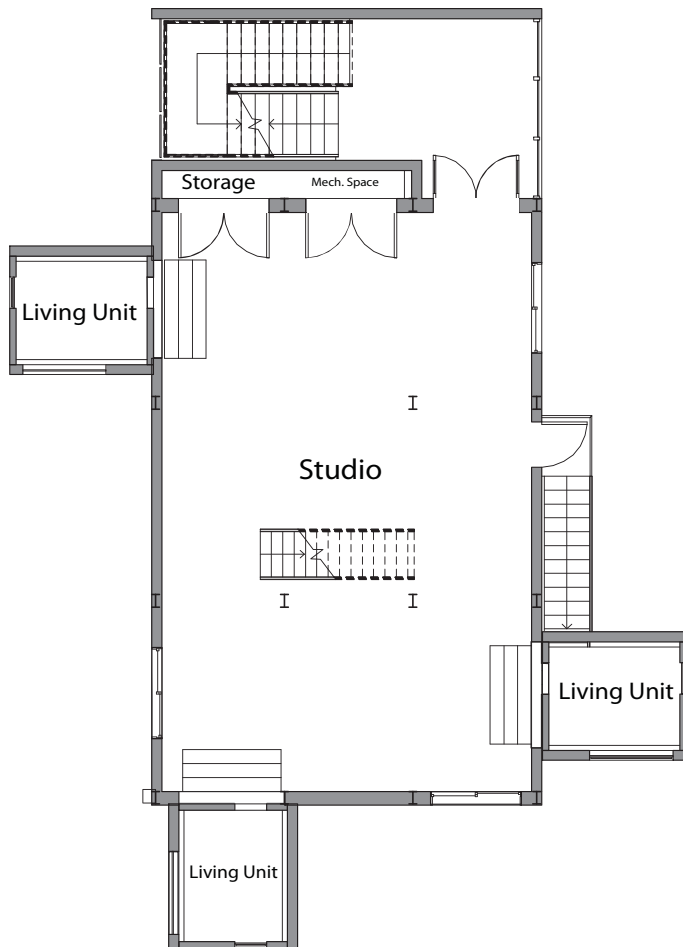
[STRABISMAL_EXISTENCE]



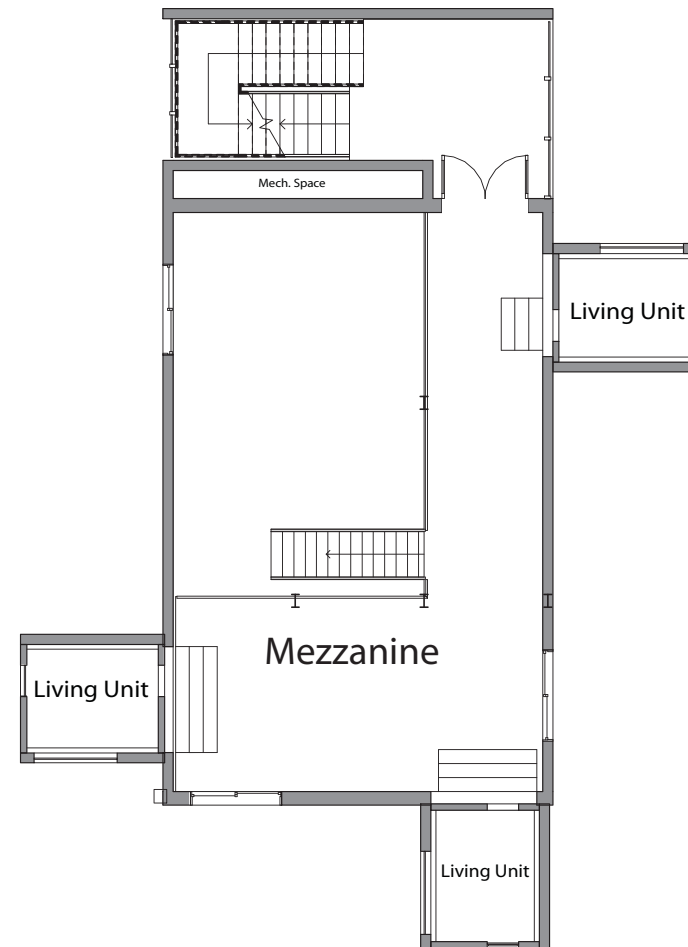
Entry Level and Mech Room



First Level

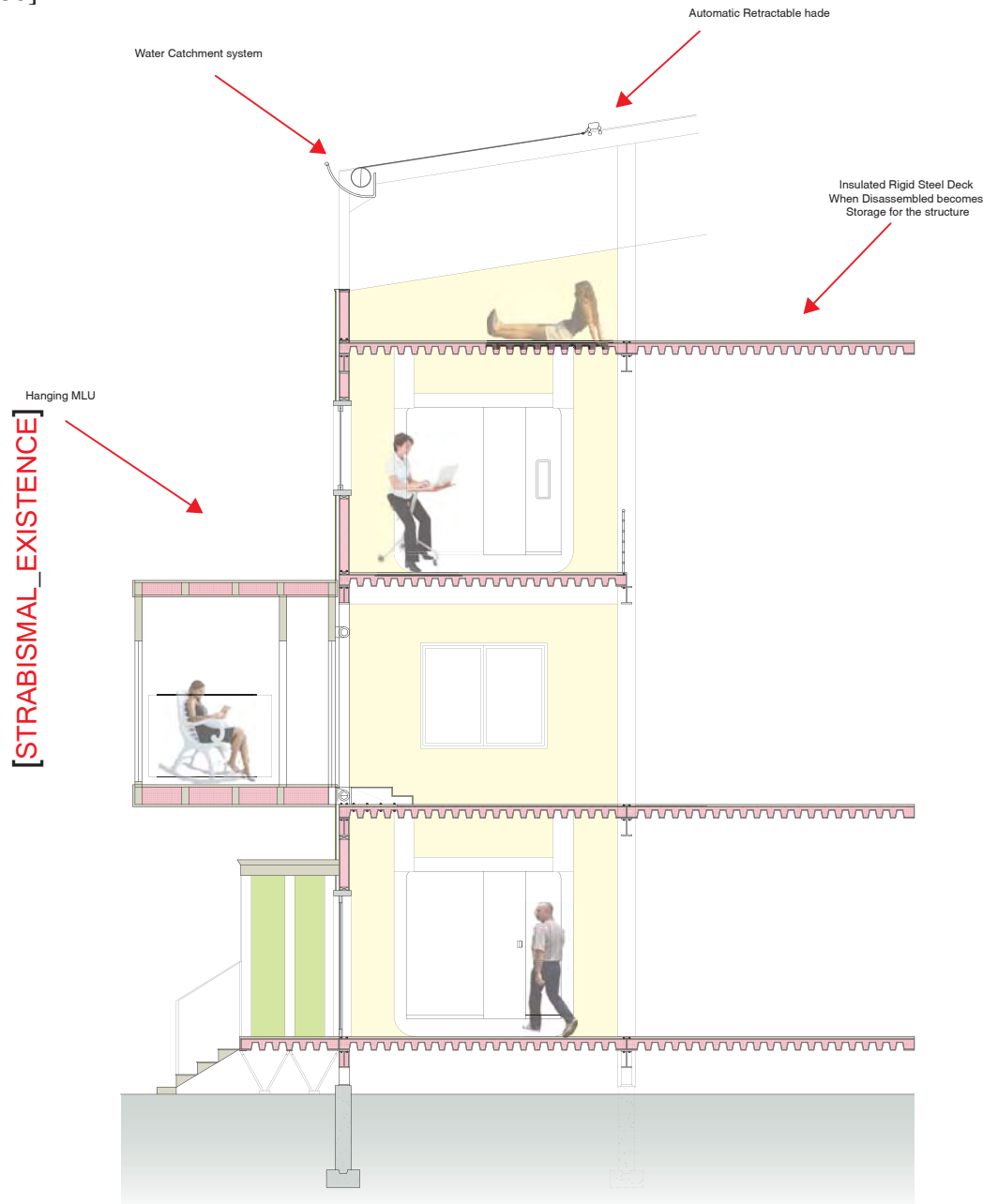


Second Level



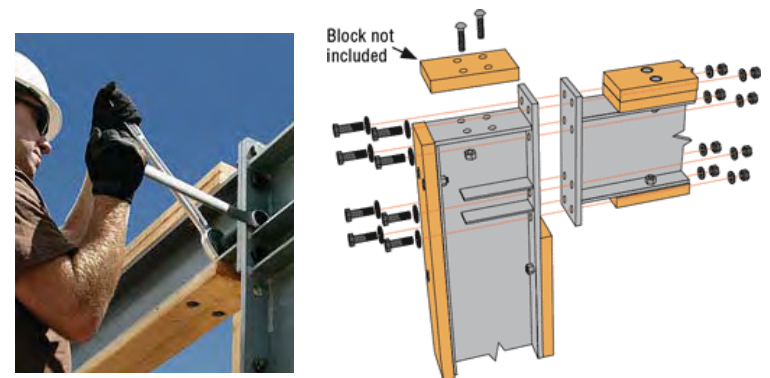
Third Level

[STRABISMAL_EXISTENCE]

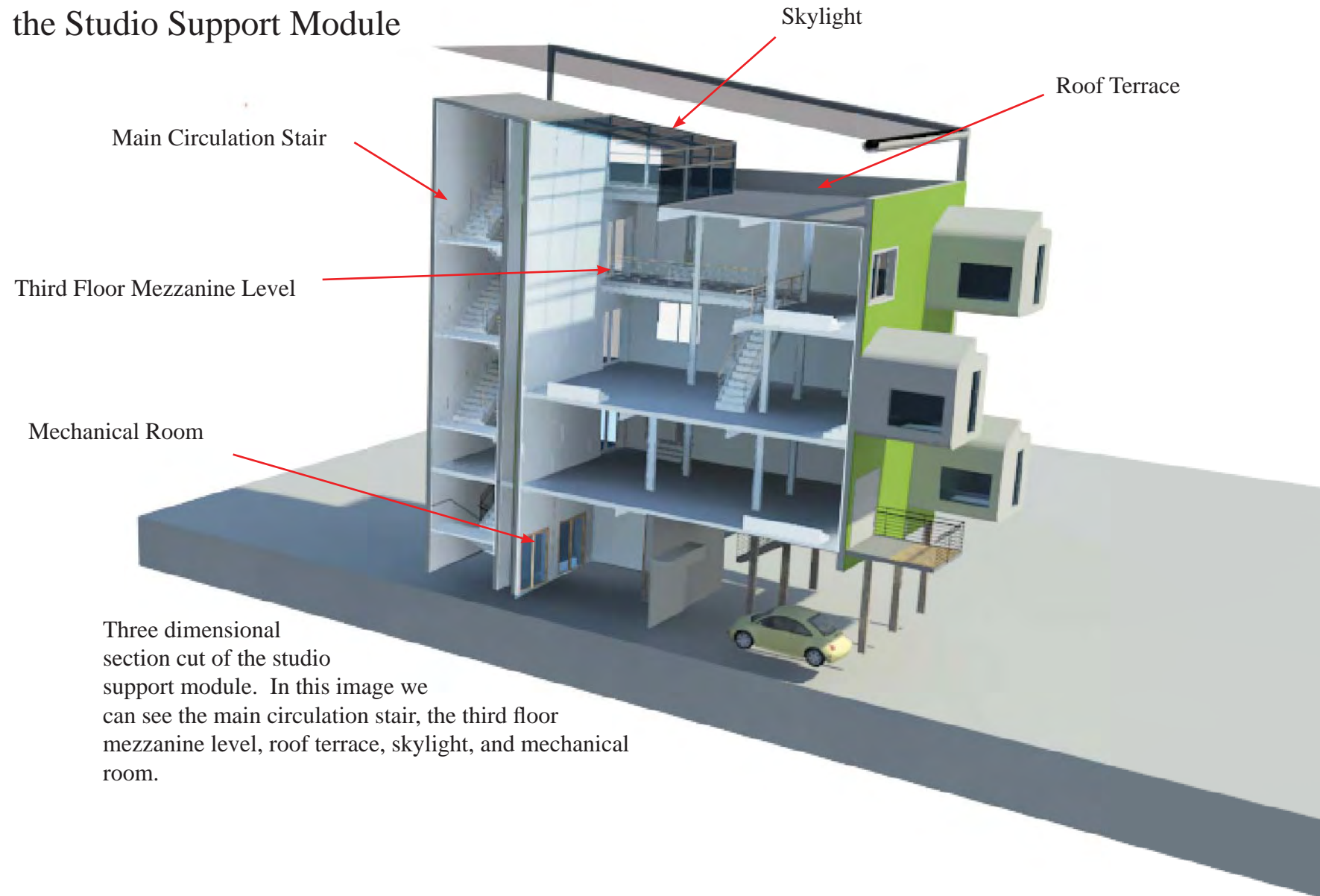


This detail Wall Section shows the floor plates of the different levels along with a glimpse of the roof terrace and the solar shading structure on the roof. Some of the demountable steel frame structures shown and also a section cut through the minimal living unit that is attached on the second level. The minimal living unit is attached on the top corners and in the small stair that leads into the unit. Mechanical systems are connected through space inside of the stair and are run beneath the floor plate. The first floor is a single studio that has its own door access from directly outside and the main circulation stair.

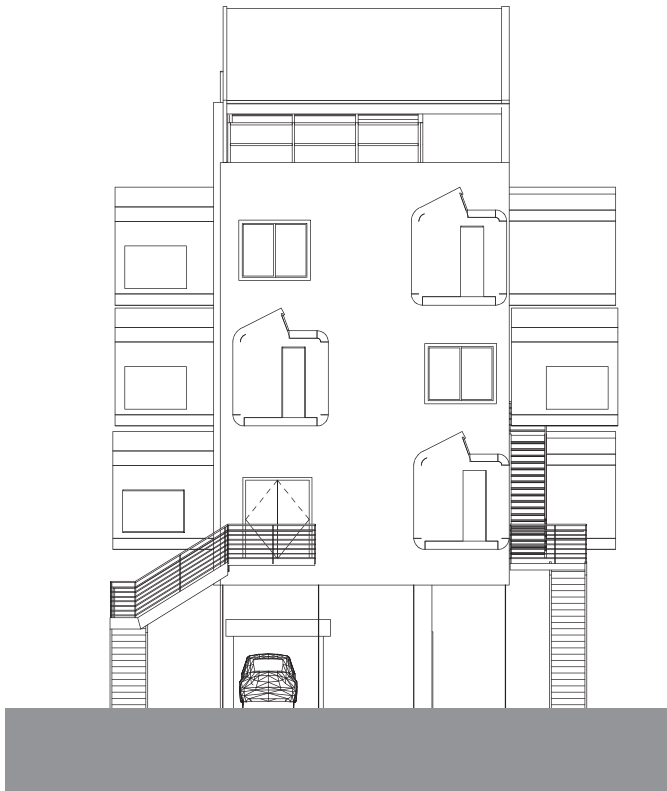
The structure of the studio support module is created through the use of the prefabricated bolt together system called the Simpson Strong Frame. The Simpson Strong Frame is based on typical moment frame steel construction technology with the exception that hand tools can be used to put the frame of the structure together instead of compressed air impact wrenches. Also the system is designed in such a way that heavy lifting machinery may not be needed if enough man power is accessible. This type of construction can also be dismantled using the same tools.



Three Dimensional Section Cut of the Studio Support Module



[STRABISMAL_EXISTENCE]



Front Elevation



Left Elevation



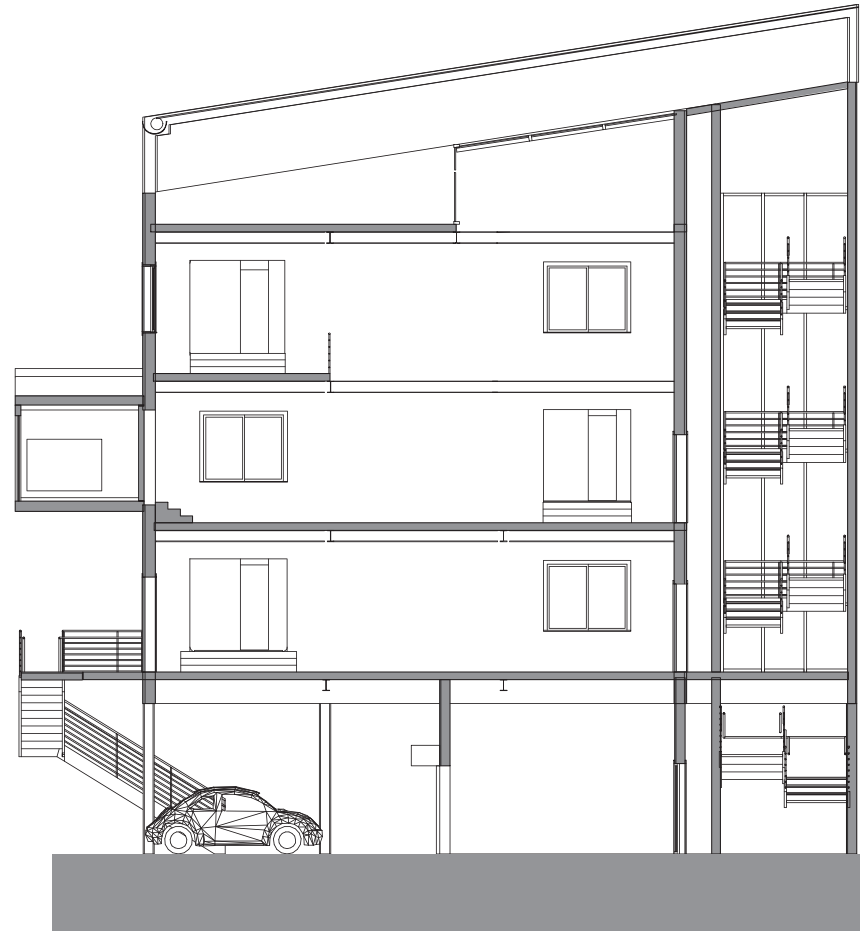
Right Elevation

The elevations show the exterior circulation stairs and how they ramp around the building. The exterior stair on the first level wraps around the west side of the elevation and leaves space below for a carport. On the right elevation there is a stair that extends from the second level to the main level. Also in the elevation you can see how the first level is designated to be a non occupied level that contains mechanical systems. There's also an entry with an interior fire crews stair that can be seen in the right elevation.

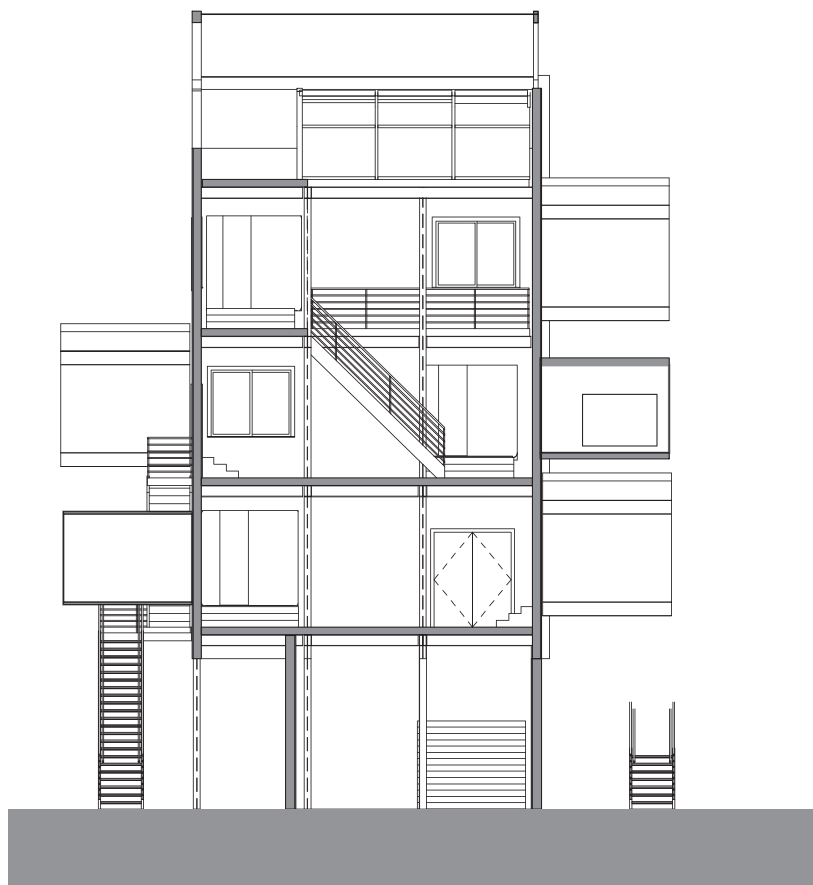


Three Dimensional cross section of Studio Support Module

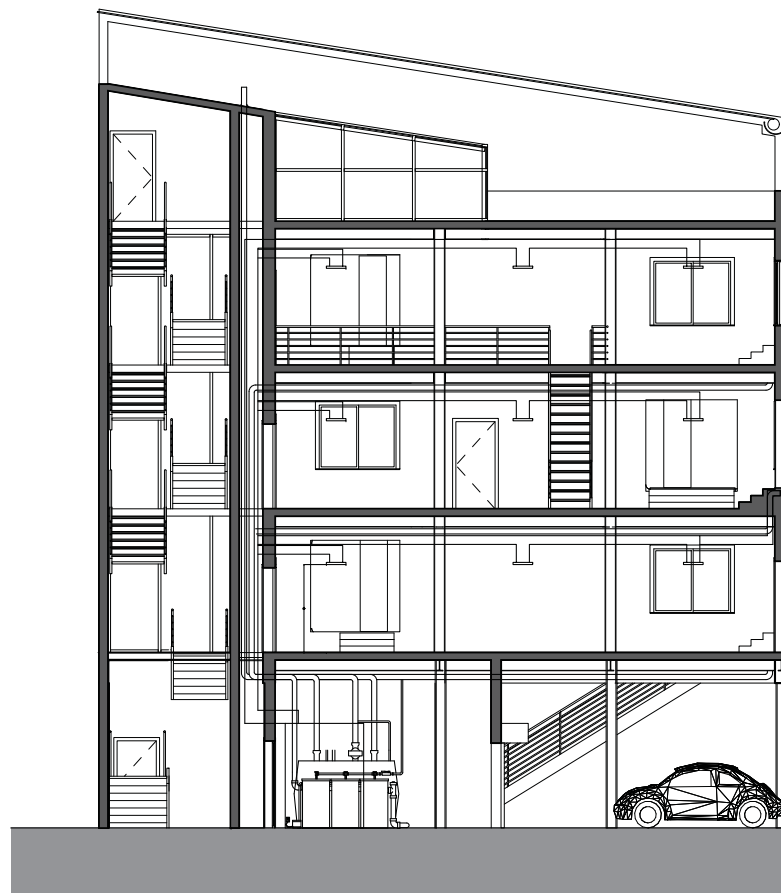
The sections show cuts through the studio support module. In these illustrations we can see the studio spaces, the mezzanine level, mechanical support space, the interior egress stair, roof terrace, skylight, and solar roof shade.



Section One



Section Two



Section Three

[STRABISMAL_EXISTENCE]

Interior perspectives illustrating different functions for the artist studios.

[STRABISMAL_EXISTENCE]



Fine Arts Studio



Graphic Design Studio



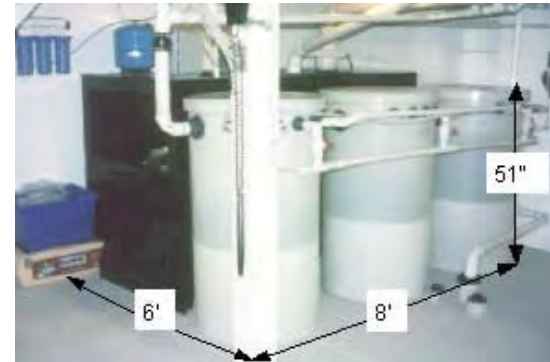
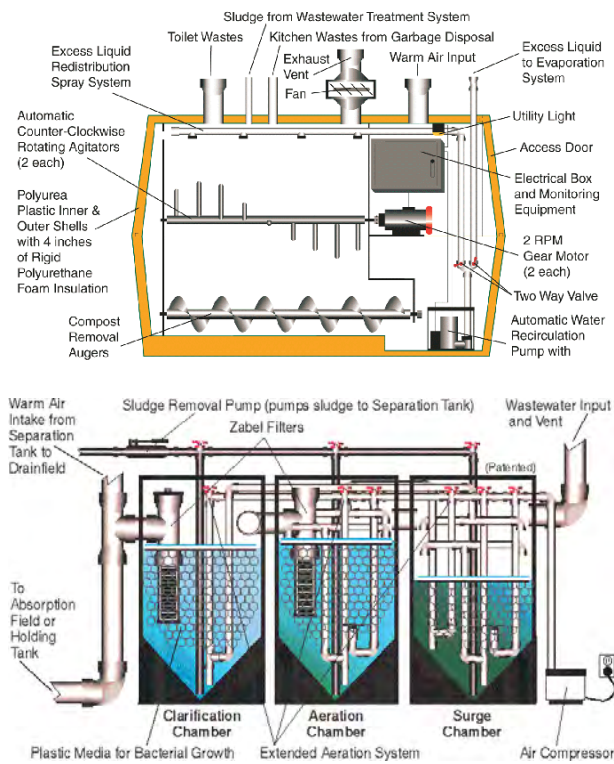
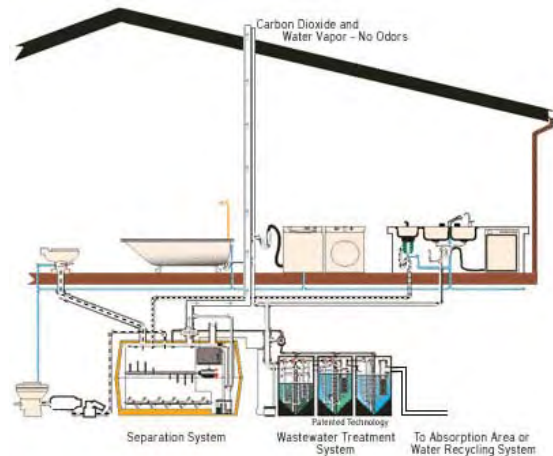
Woodworking Studio



Sculpture Studio



Close-up section showing distribution of mechanical systems to the individual studio levels and living units from the mechanical room on the first level.



The studio support module uses a series of mechanical systems that bring climate control to the studio spaces and also connect to the living units for waste removal and disposal. The studio support module with a mechanical room can be adapted for onsite waste disposal using the Equarius Water Collection and treatment system. The Equarius System takes wastewater and manages it through a system of holding tanks. The first separates water from waste material on site with the use of organic methods to turn waste into mulch. The second takes water treated from the system and purifies it to be reused. A family of six using this system within a year will have their waste reduced to the equivalent of a 5 gallon bucket of soil. Water collection is also obtained from the solar shading on the roof and there's also room for an atmospheric water generation system.

Ventilation in climate control is managed by a single package ventilation unit that distributes air to the different levels from the mechanical room. The individual living units are packaged with their own climate control units as desired and can be plugged in to the electricity of the studio support module

Images and diagrams are from www.Equarius.com

The Mobile Living Unit

[STRABISMAL_EXISTENCE]

The Mobile Living Unit is a portable of architecture that houses all of the basic functions for living in extreme environment conditions. The MLM is a two piece unit that consists of a living unit and a support structure. The living unit provides space for basic functions of living such as working, sleeping, eating, and relaxation. The support structure piece provides mechanical support functions to the living unit such as electricity, water, and climate control. When the living unit is out on its own away from a support community like my site for this project, the ML M has a quadruped base that serves as a slow mobile means of transport for the living unit over difficult terrain. This base provides basic support functions while allowing the living unit itself the ability to separate and be connected to other structures.







Front View



Left View



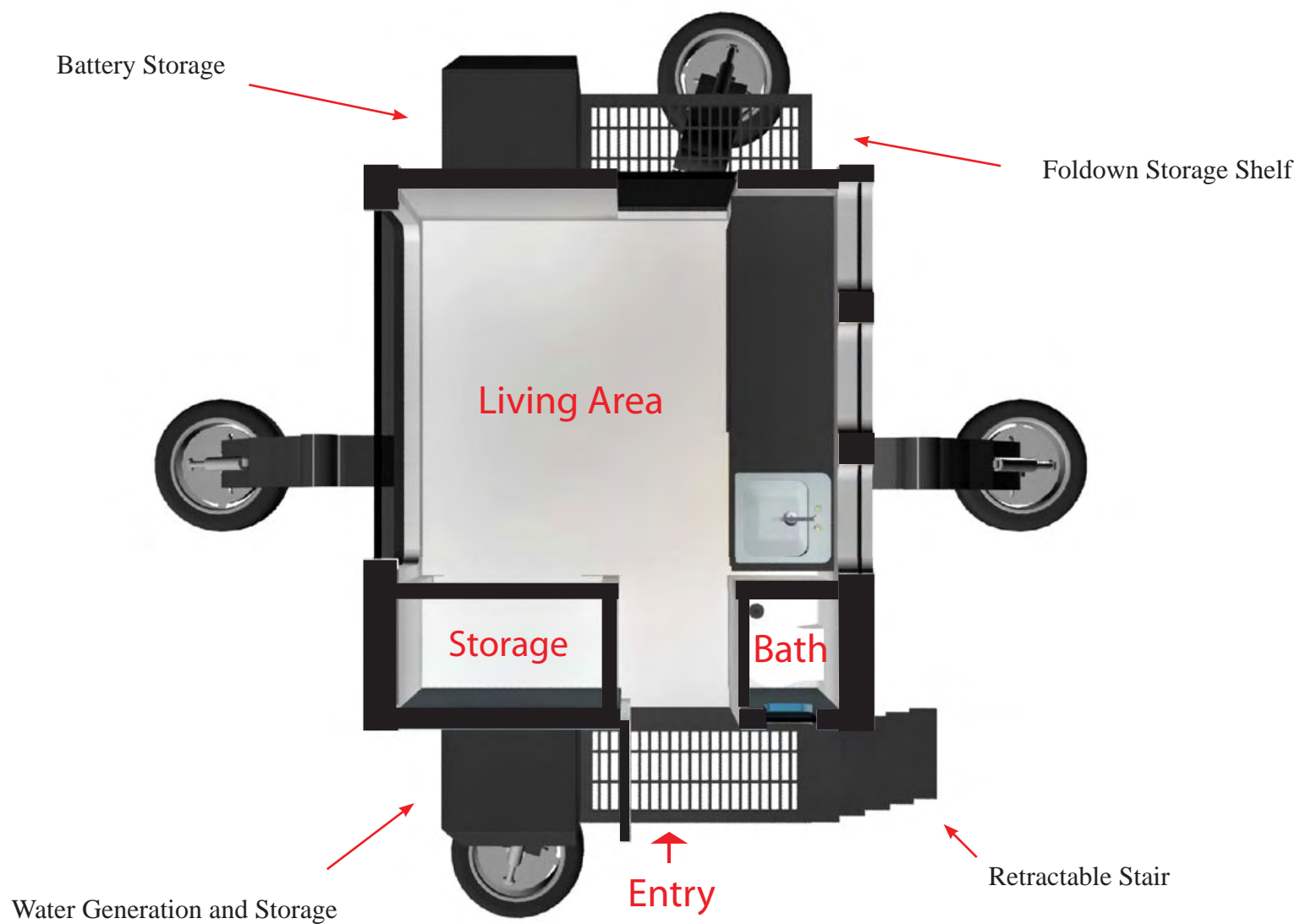
Back View



Right View



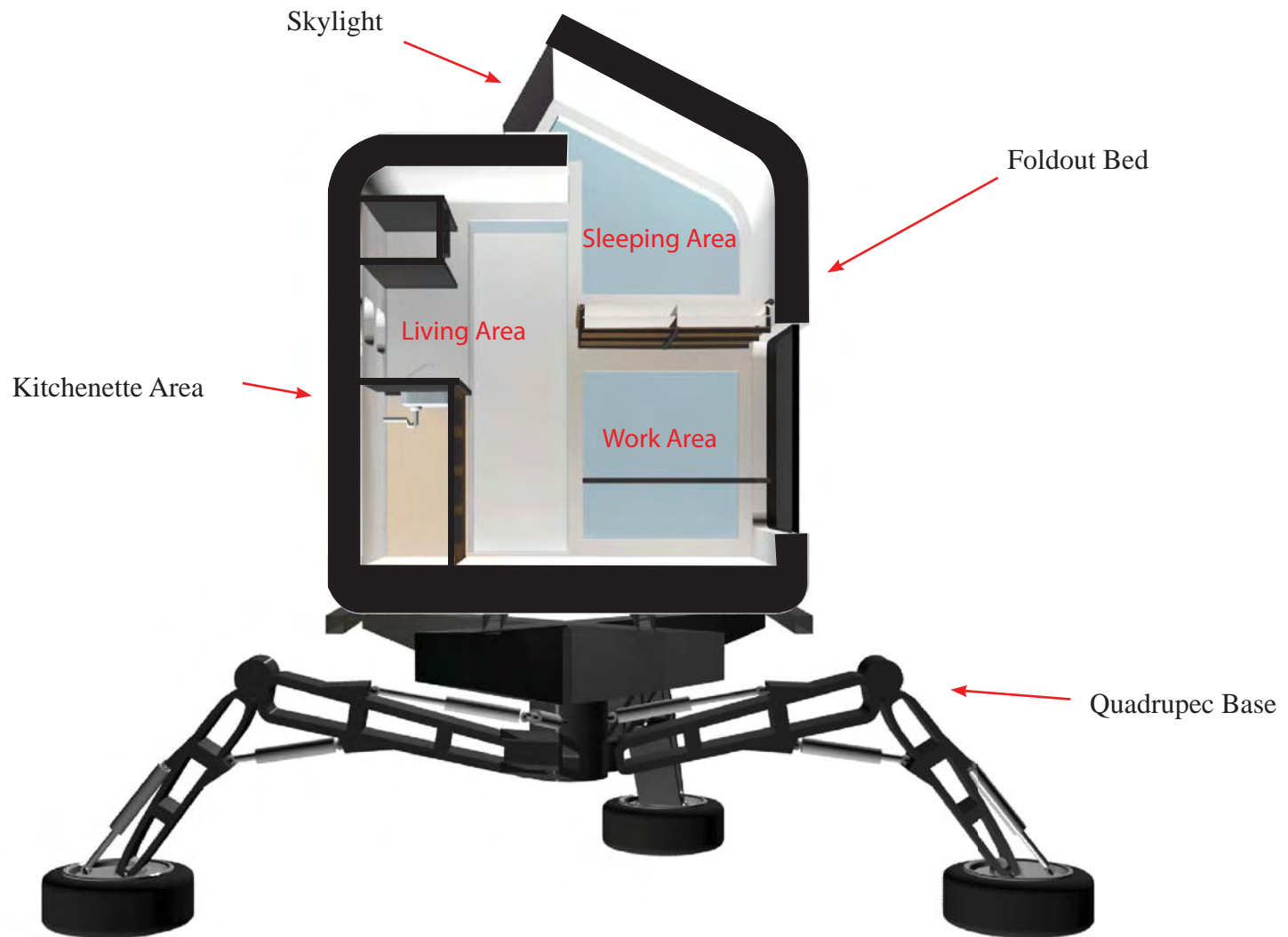
MLM Plan View



[STRABISMAL_EXISTENCE]

MLM Section View

[STRABISMAL_EXISTENCE]

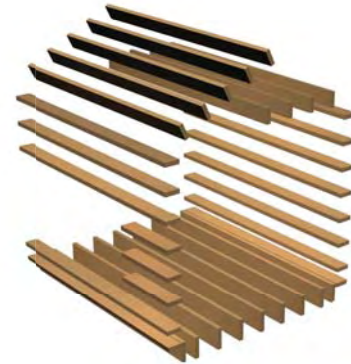




Assembled MLM Unit Structure



High Density Foam Core
Sandwiched OSB Board



OSB StrawBoard Struts

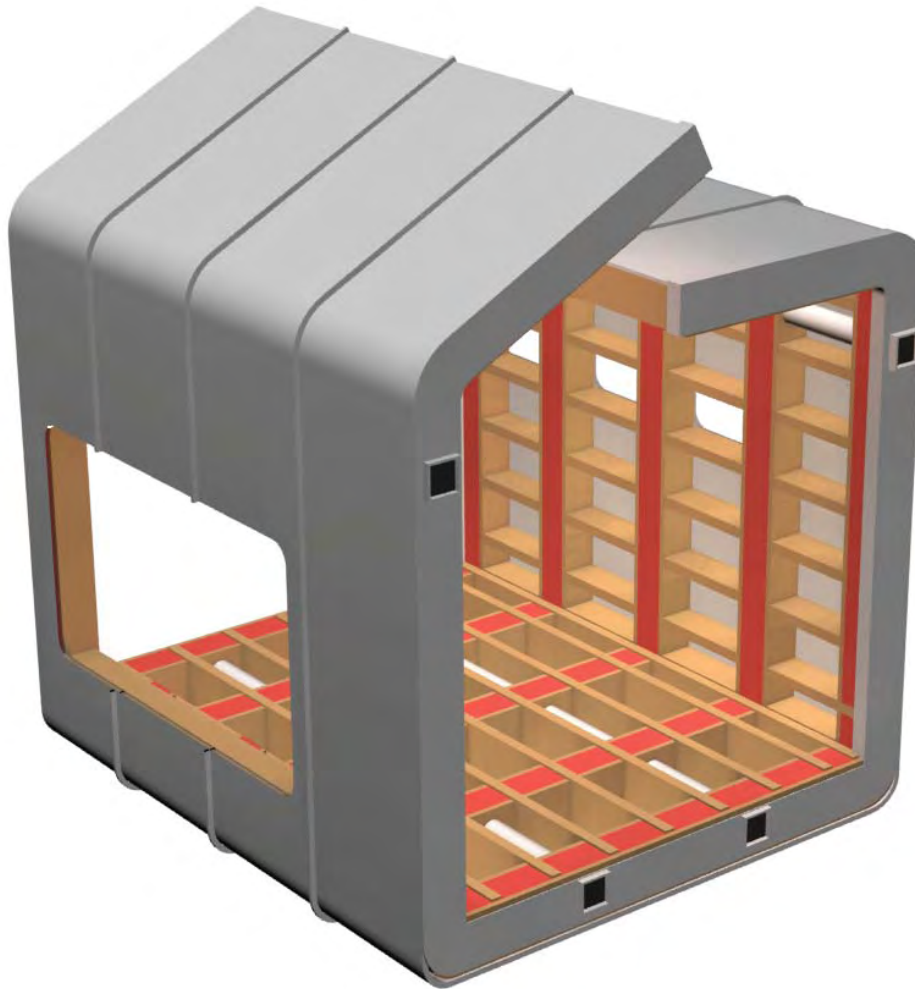


Steel Reinforcement Rods
Provides Stability When
Hanging MLM From
Crane and Walls

[STRABISMAL_EXISTENCE]

Exterior Skin of MLM

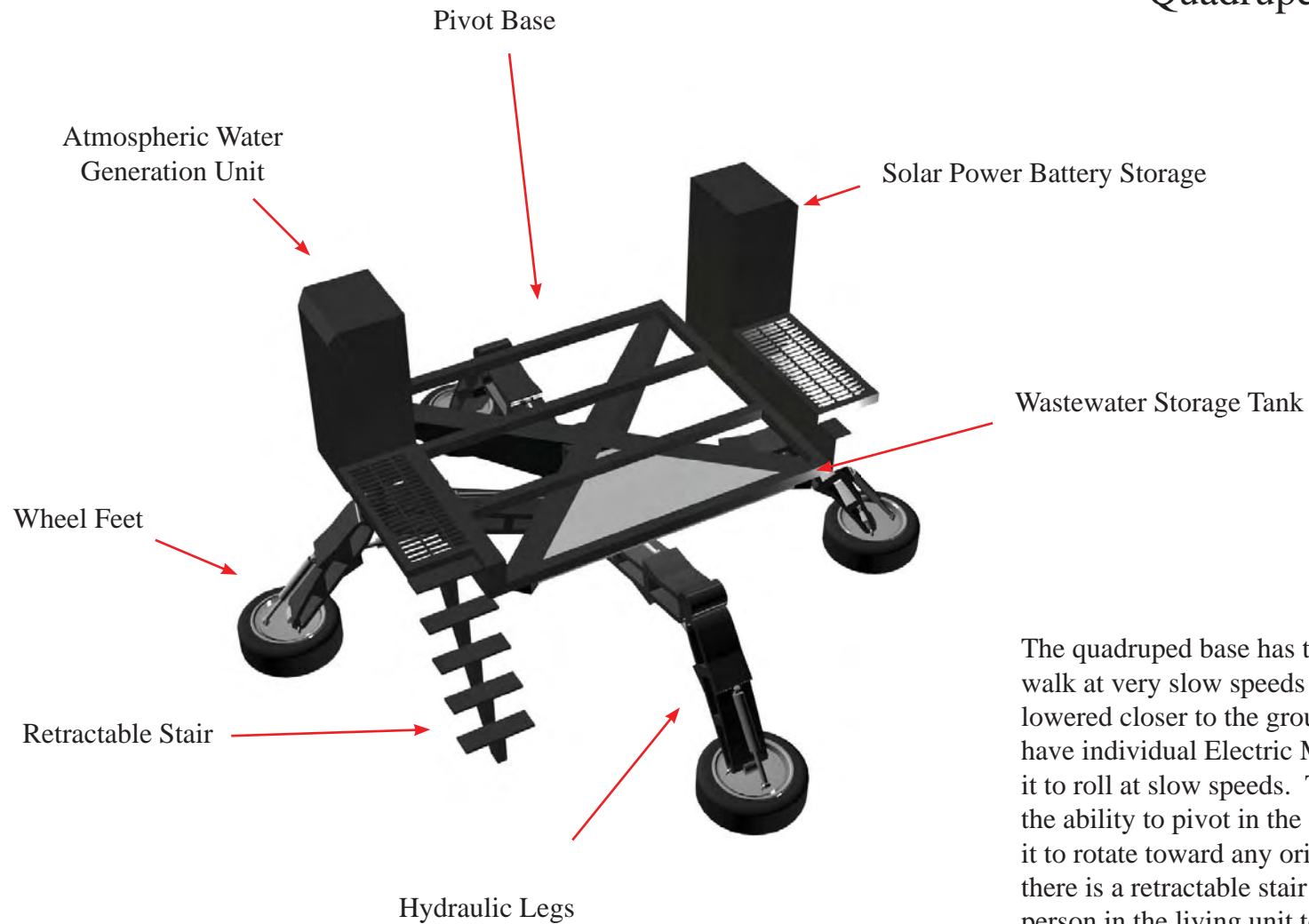
[STRABISMAL_EXISTENCE]



MLM Being Lifted By
Crane From Above.

The MLM Has a Wrapped
Aluminum Skin with
Standing Seam Panels

Quadruped Base



The quadruped base has the ability to walk at very slow speeds and can also be lowered closer to the ground. The wheels have individual Electric Motors that allow it to roll at slow speeds. The base also has the ability to pivot in the center allowing it to rotate toward any orientation. Also there is a retractable stair to allow the person in the living unit to access it.

[STRABISMAL_EXISTENCE]

Atmospheric Water Generation Unit

[STRABISMAL_EXISTENCE]



Condenser Unit

Ultraviolet Water Purifier

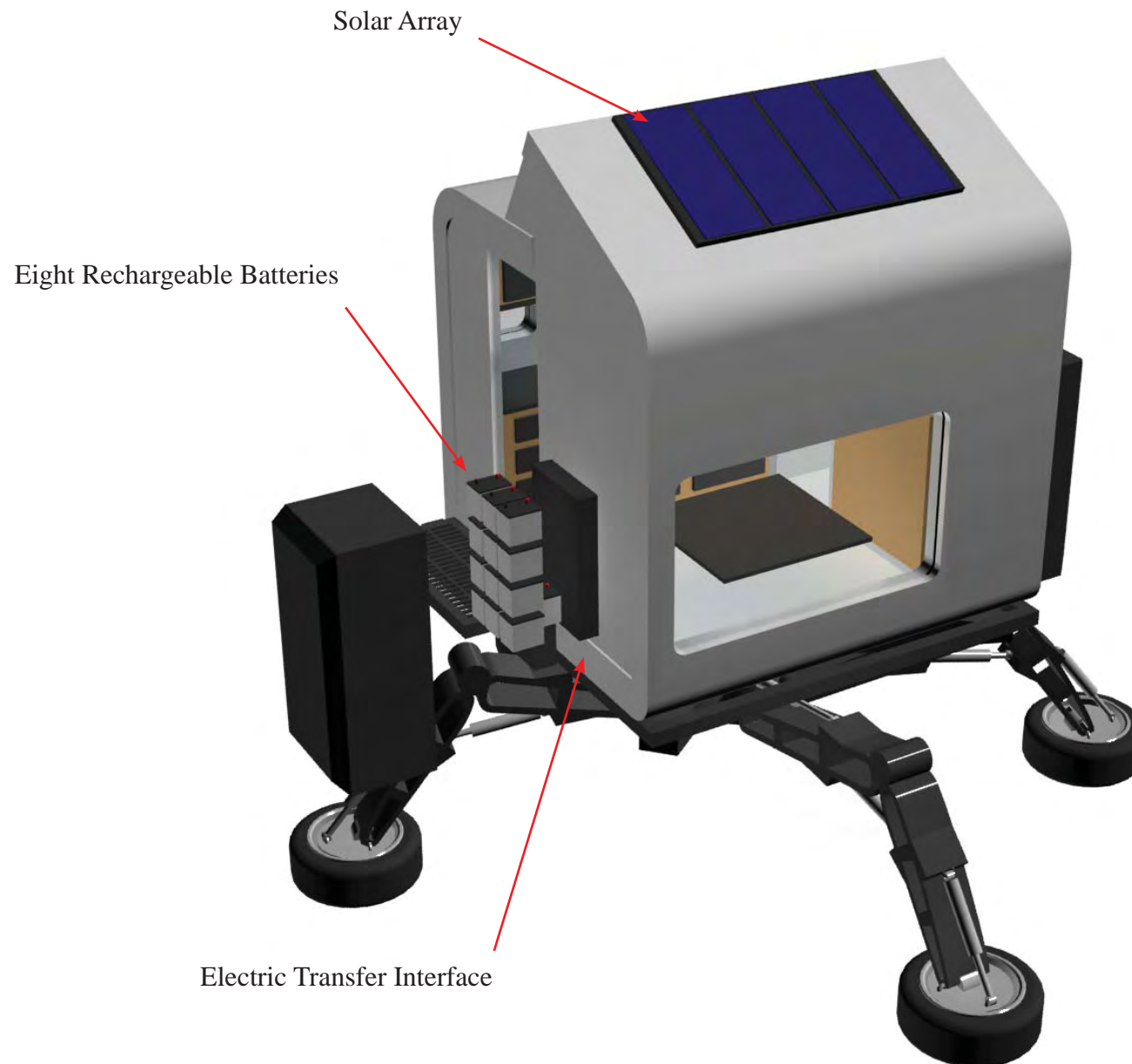
Charcoal Water Filter

8 Gallon Storage Tank



The atmospheric water generator is a fairly new type of water reclamation system that extracts water out of the air we breathe and collects it. Standard atmospheric water generation units can generate up to 8 gallons of water in one day. Many of today's atmospheric water generation units are found in office water coolers. These water coolers eliminate the need for water delivery or those large water cooler bottles. These units have been created by even larger scales in Australia to provide millions of gallons of drinking water. The only other necessary piece besides the condenser is a UV filter and a charcoal filter.

Solar Power Option



The mobile living unit has a PV solar array that can be attached to the roof or to a quadruped base. The quadruped base has the ability to pivot and orient itself in any direction for the sun for maximum solar collection. The base of the unit holds the electric transfer interface and eight rechargeable batteries that can power the unit's normal functions for about 12 days without any sun.

[STRABISMAL_EXISTENCE]



Rack folded up.

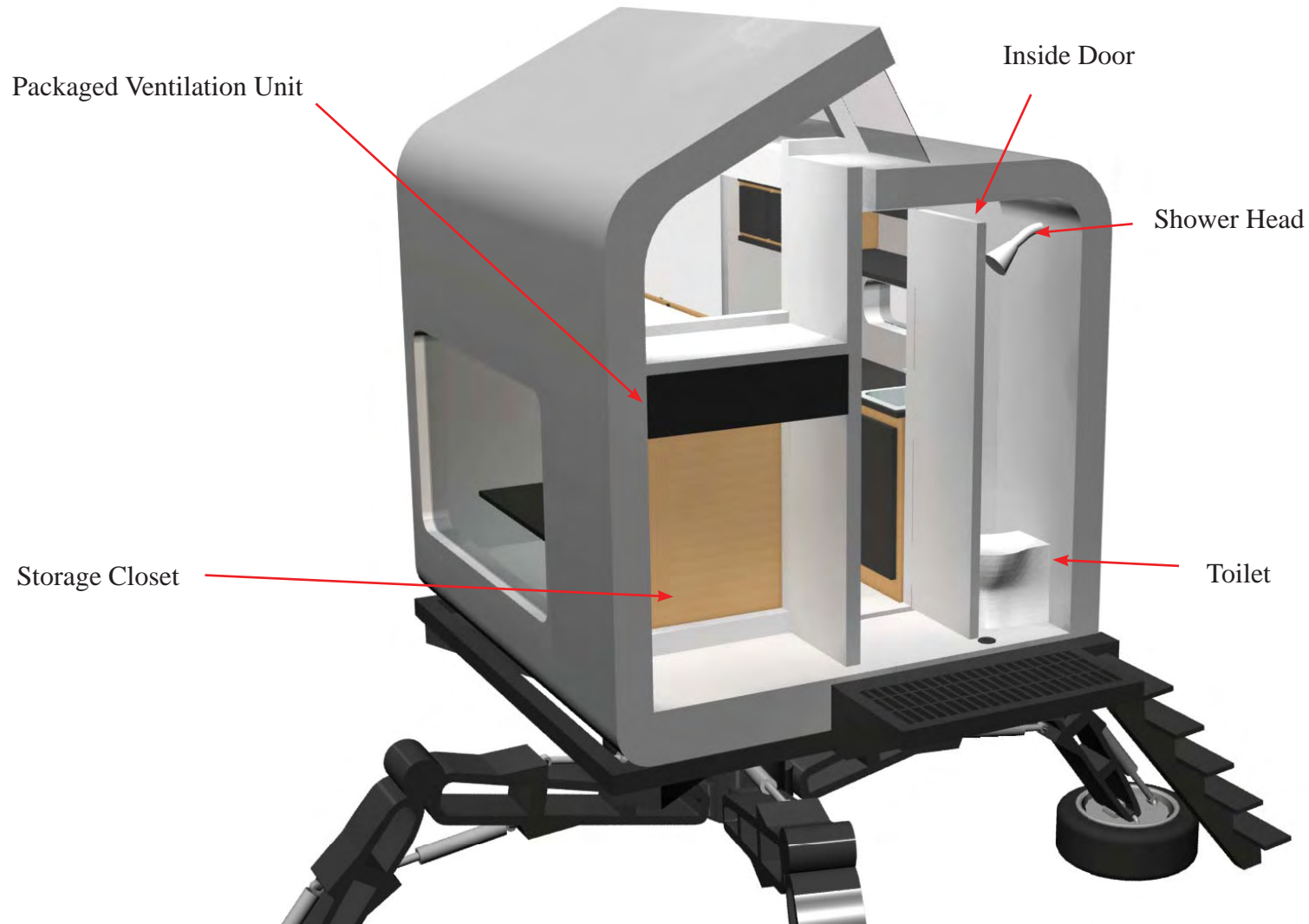


Rack folded down.



Rack with weatherproof bins on it.

With storage being a commodity in the mobile living unit there may be a need extra storage space. On the exterior on the back side of the living unit there is a foldout unit next to where the solar batteries are stored. This can be folded out and several weatherproof bins could be tied down to this foldout rack.



[STRABISMAL_EXISTENCE]

The entry of the living unit is also where the bathroom is. The inside door of the unit when open closes off the bathroom fixtures from view when entering the living unit. When both doors are closed it acts as an air lock. From this view we can also see the storage area and the package ventilation unit.

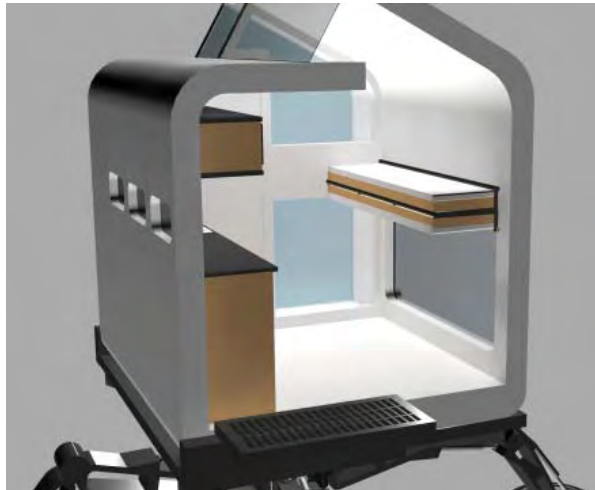
Fold-out Bed Open



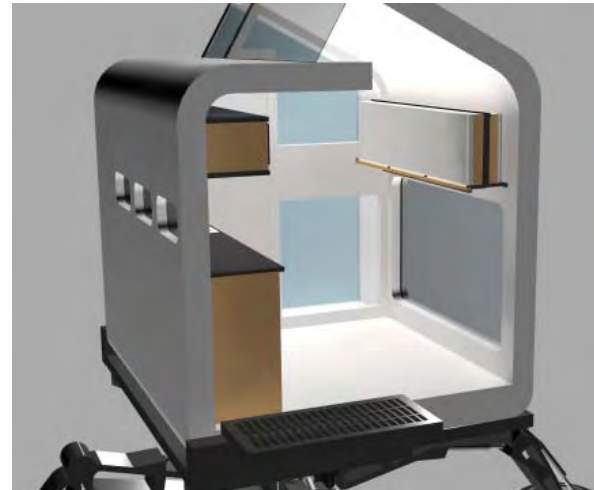
Ladder Closed

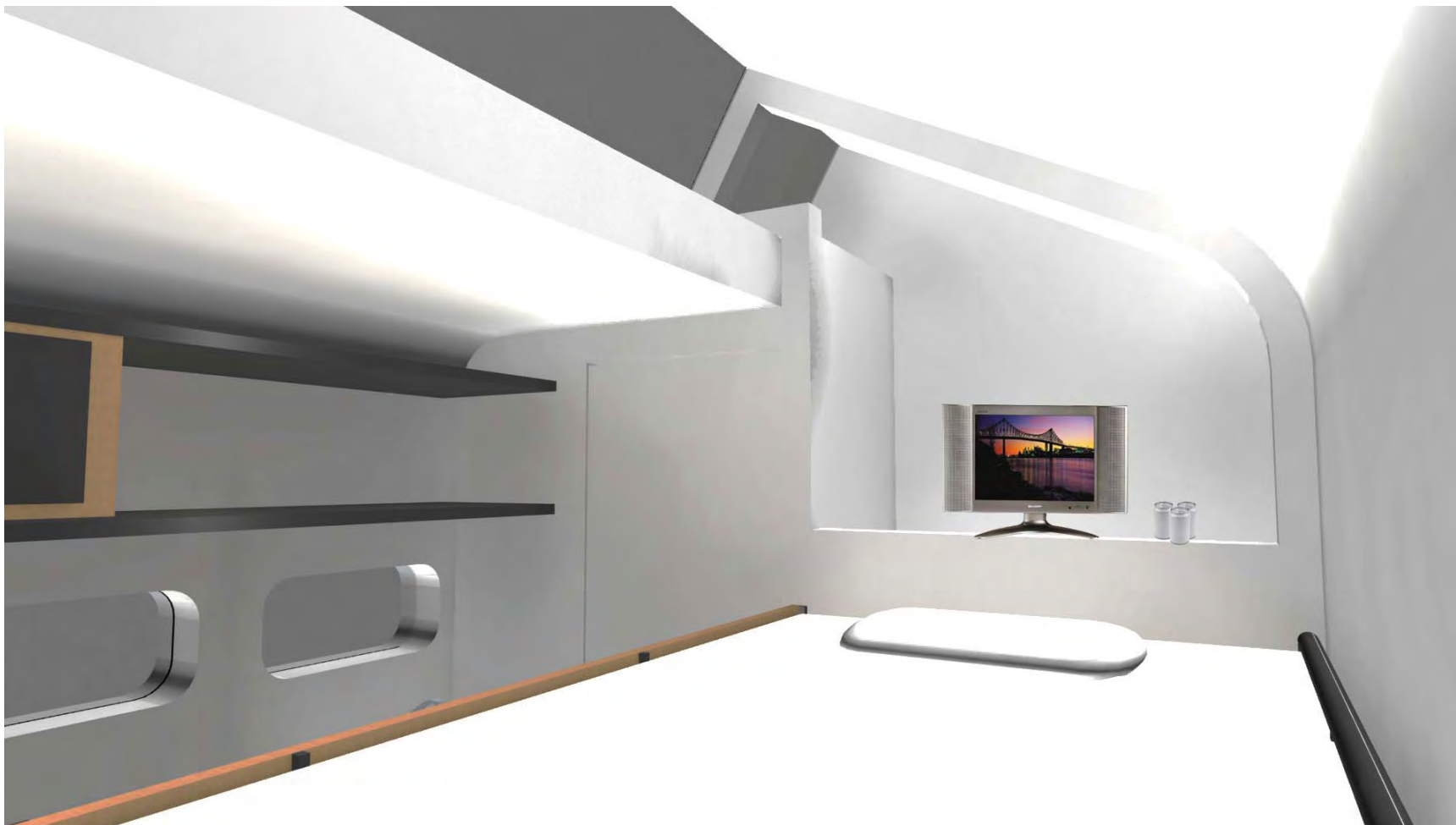


Bed Folded



Bed Folded Away

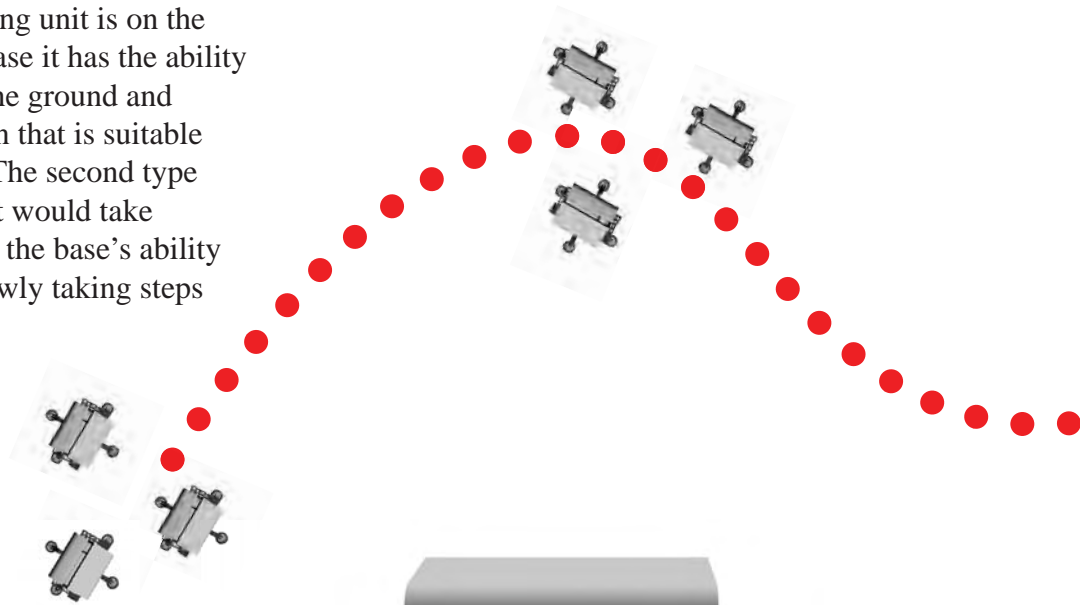


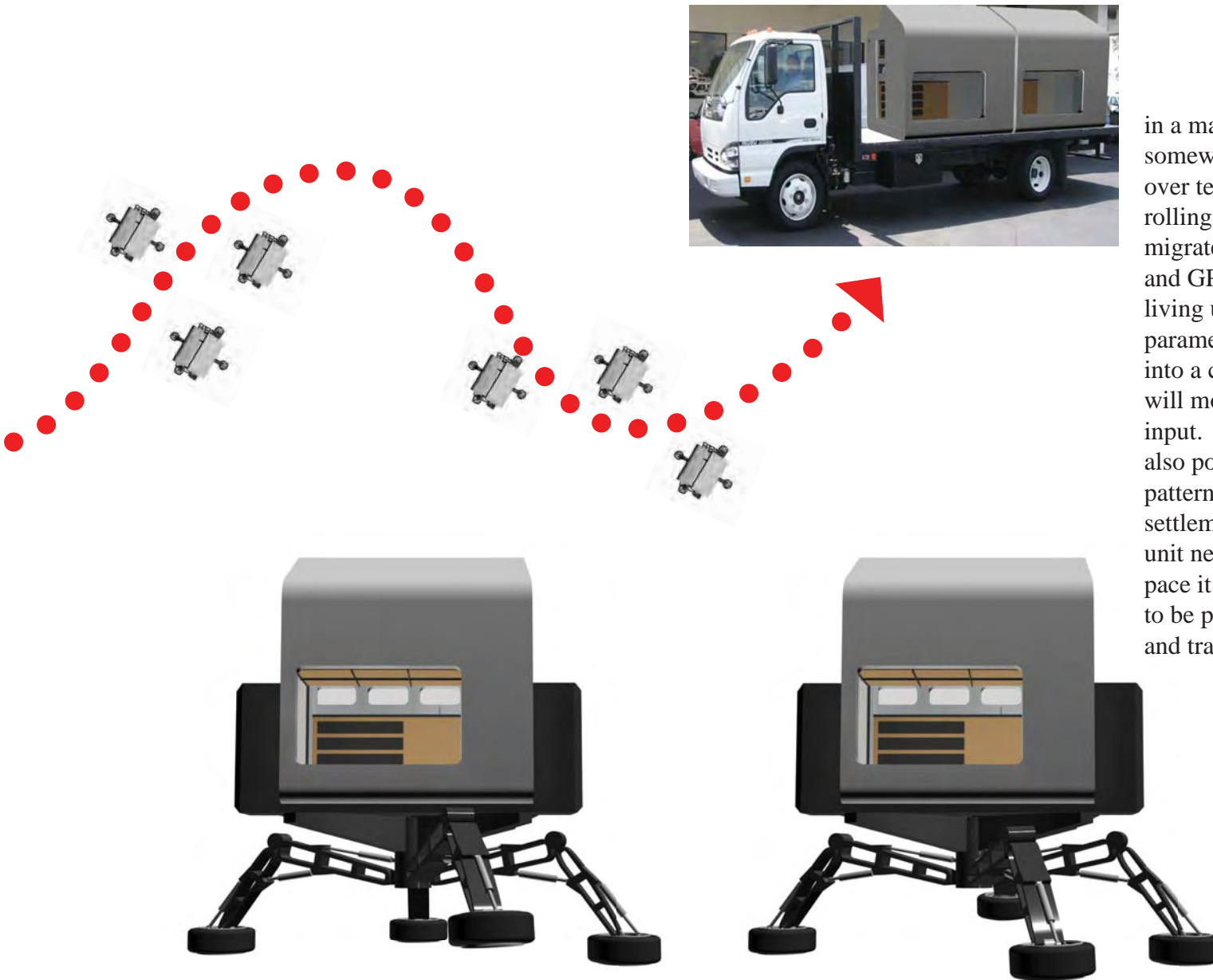


View of Interior from Bed



Migration of the living unit can be achieved in several ways. Once the living unit is on the quadruped base it has the ability to lower to the ground and roll on terrain that is suitable for rolling. The second type of movement would take advantage of the base's ability to walk. Slowly taking steps





in a manner to keep the living unit somewhat level, the base can walk over terrain that is not suitable for rolling on wheels. The ability to migrate is controlled by a computer and GPS satellites. The user of the living unit can input the desired parameters for living conditions into a computer and the living unit will move and adjust to the person's input. With this technology it is also possible to follow migration patterns of animals or past settlement patterns. If the living unit needs to move at a more rapid pace it can make accommodations to be picked up by a flatbed truck and transported by highway.

[STRABISMAL_EXISTENCE]

Conclusion

Strabismal Existence was a great experience for me. The topic of how a person exists proposed many interesting discussions, and led to significant research that helped me expand my thoughts and skills as an architect. The process forced me to push new frontiers within myself that I never knew were there. My final review was a positive one and the critics saw the potential of my thought process and this project. Some things were left unresolved for example a detailed instruction of dismantling and putting together the studio module along with the exact process that hanging living unit from the wall of the module. These two parts of my project I believe are very challenging for one person to handle and would take some extra time, exploration, and real world testing to finish. Another thing I would liked to have done is actually build the small living unit module. Although from the thesis standpoint, I feel fullfilled that I was allowed to explore a type of architecture that has always been interesting to me. To date I feel like I have a much better understanding of what goes into designing something of this nature along with its history and practical uses in today's society. The subject of portable architecture has always interested me and I think it will still interest me in the future. This design problem I decided to tackle has given me new insight into design and also has taught me a lot of things I never knew how to do. For me this is the most rewarding part of the experience.

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