

Introspective Landscape:

Usonian House Redux

Project Description

Project Summary:

This project will be a contemporary reevaluation of Frank Lloyd Wright's Usonian house, looking at the needs and wants of the potential homeowner and current housing market today.

Case Statement:

The project will be about bringing owning a home within the reach of many individuals previously unable to afford it. Like Wright's Usonian houses, the project will evaluate the needs of the homeowner and maintain affordable costs through low material costs and innovative construction methods, as well as incorporating highly energy efficient strategies in order to maintain low operating costs.

Project Definition:

The project will be developed for two reasons:

1) Every citizen has the right to own a home that is designed to meet their specific needs.

It has been and continues to be an American tradition that homeownership is a measure of financial success. In our current economic climate, like in the times during and immediately following the Great Depression, owning a home was beyond the reach of many individuals with the desire to do so, and the ability and intent to make payment on loans. Frank Lloyd Wright's intention with the Usonian houses was to make owning a home attainable to those Americans.

2) A healthy housing market is a central component for economic recovery.

The financial crisis effectively started with the housing crisis, and it will not end until we find a way to resolve the housing crisis. Since the beginning of the financial crisis in 2007 more than 6 million homes have been lost to foreclosure, and 4 million more are at some stage of the foreclosure process.

Goals and Guiding Principles

Project Goals

- 1) Place affordable, well designed home ownership within the reach of the average income earner
- 2) Incorporate energy-effecient design strategies as a way to maintain low operation and maintenance costs
- 3) Provide stimulus to economy by increasing the amount of individuals owning homes which will foster growth to the housing market

In the current economic climate it is difficult for many individuals to obtain funding for a home mortgage. The typical American single family home is bloated in size and not affordable to the average individual family. By maintaining low construction costs though the selection of low cost materials and by utilizing highly efficient and cost-effective construction methods such as pre-fabricated elements, home ownership can once again be accessible to the average income earner.

Many times low cost homes come at the price of quality design. This project will incorporate comfort and aesthetic design as an integral requirement in the overall development of the building in order to provide the homeowner with a high-quality living invironment both interior and exterior, thereby proposing a simple and eloquent solution to a complex architectural problem.

At the center of the economic crisis in which we find ourselves is the housing crisis. The only way to bring the housing market out of the slump it is in is to get more people owning homes with solid mortgages that are actually affordable in the long run. This project will provide potential home buyers with a home that is affordable both in the short and long term.

A long American tradition of hard work to elevate economic and social status continue to be a driving force behind American's sense of fulfillment in working hard. And the reality is that only a relatively small percentage of the population is content living in densely crowded cities in confined apartments. People will move outside the city and own homes. The goal of this project is not necessarily to simply facilitate this, but to provide responsible citizens a responsible option in selecting a home to purchase.

Driving Parameters

Values Americans Live By:

Control of Time. Time is, for the average American, of utmost importance. To the foreign visitor, Americans seem to be more concerned with getting things accomplished on time (according to a predetermined schedule) than they are with developing deep interpersonal relations. Schedules, for the American, are meant to be planned and then followed in the smallest detail.

Competition/ Free Enterprise. Americans believe that competition brings out the best in any individual. They assert that it challenges or forces each person to produce the very best that is humanly possible. Americans, valuing competition, have devised an economic system to go with it—free enterprise. Americans feel strongly that a highly competitive economy will bring out the best in its people.

Materialness/ Aquiesitiveness. By any standard, Americans are materialistic. This means that they value and collect more material objects than most people would ever dream of owning. It also means they give higher priority to obtaining, maintaining and protecting their material objects than they do in developing and enjoying interpersonal relationships.

Equality/ Egalitarianism. Equality is, for Americans, one of their most cherished values. This concept is so important for Americans that they have even given it a religious basis. They say all people have been “created equal.” Most Americans believe that all people have an equal opportunity to succeed in life.

Control Over Environment. In the United States, people consider it normal and right that Man should control Nature, rather than the other way around. More specifically, people believe every single individual should have control over whatever in the environment might potentially affect him or her.

Privacy. The word “privacy” does not even exist in many languages. If it does, it is likely to have a strongly negative connotation, suggesting loneliness or isolation from the group. In the United States, privacy is not only seen as a very positive condition, but it is also viewed as a requirement that all humans would find e qually necessary, desirable and satisfying.

Future Orientation. Valuing the future and the improvements Americans are sure the future will bring means that they devalue that past and are, to a large extent, unconscious of the present. Even a happy present goes largely unnoticed because, happy as it may be, Americans have traditionally been hopeful that the future would bring even greater happiness. Almost all energy is directed toward realizing that better future.

Action/ Work Orientation. “Don’t just stand there,” goes a typical bit of American advice, “do something!” Americans routinely plan and schedule an extremely active day. Any relaxation must be limited in time, pre-planned, and aimed at “recreating” their ability to work harder and more productively once the recreation is over.

Self-Help Control. Americans pride themselves in having been born poor and, through their own sacrifice and hard work, having climbed the difficult ladder of success to whatever level they have achieved—all by themselves. The American social system has, of course, made it possible for Americans to move, relatively easily, up the social ladder.

Informality. If you come from a more formal society, you will likely find Americans to be extremely informal, and will probably feel that they are even disrespectful of those in authority. Americans are one of the most informal and casual people in the world.

Driving Parameters

Individual. Americans think they are more individualist in their thoughts and actions than, in fact, they are. They resist being thought of as representatives of a homogenous group, whatever the group. They join groups, but somehow believe they're just a little different, just a little unique, just a little special, from other members of the same group. And they tend to leave groups as easily as they enter them.

Change. In the American mind, change is seen as an indisputably good condition. Change is strongly linked to development, improvement, progress, and growth. Many older, more traditional cultures consider change as a disruptive, destructive force, to be avoided if at all possible.

Practicality + Efficiency. Americans have a reputation of being an extremely realistic, practical and efficient people. The practical consideration is likely to be given highest priority in making any important decision in the United States. Americans pride themselves in not being very philosophically or theoretically oriented.


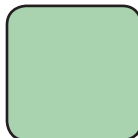








Directness, Openness + Honesty. Americans consider anything other than the most direct and open approach to be dishonest and insincere and will quickly lose confidence in and distrust anyone who hints at what is intended rather than saying it outright. Moreover, anyone who, in the United States, chooses to use an intermediary to deliver that message will also be considered manipulative and untrustworthy.

Driving Parameters



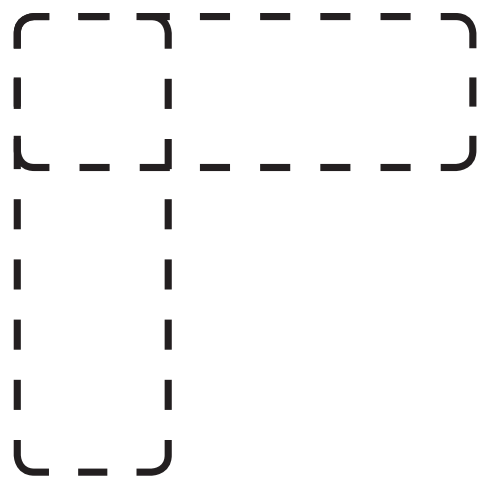
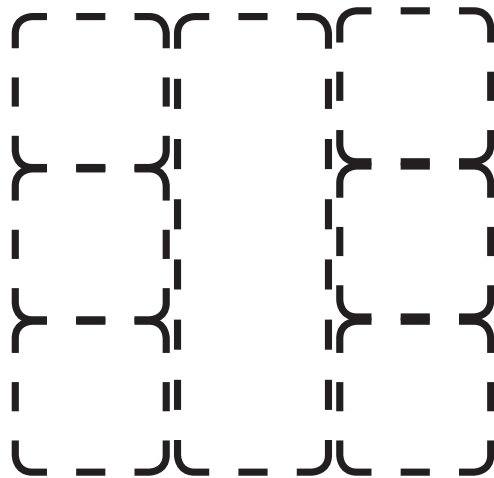
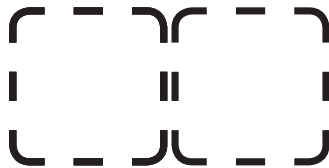
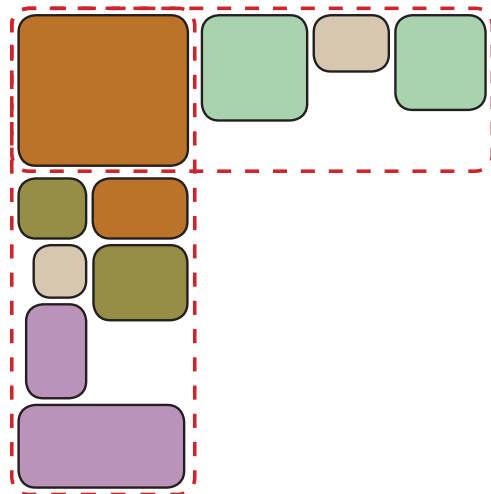
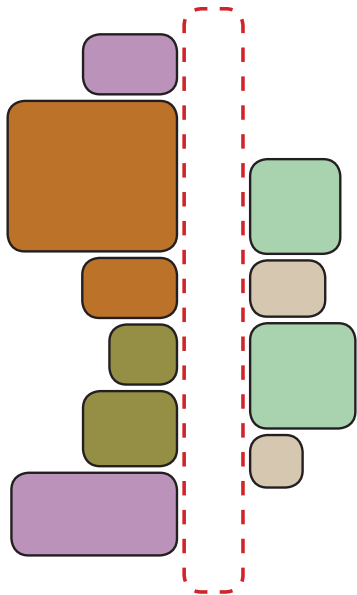
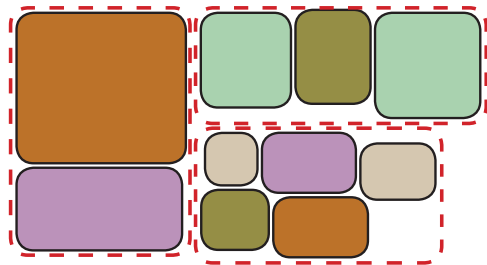
Physical Parameters

Program Inventory

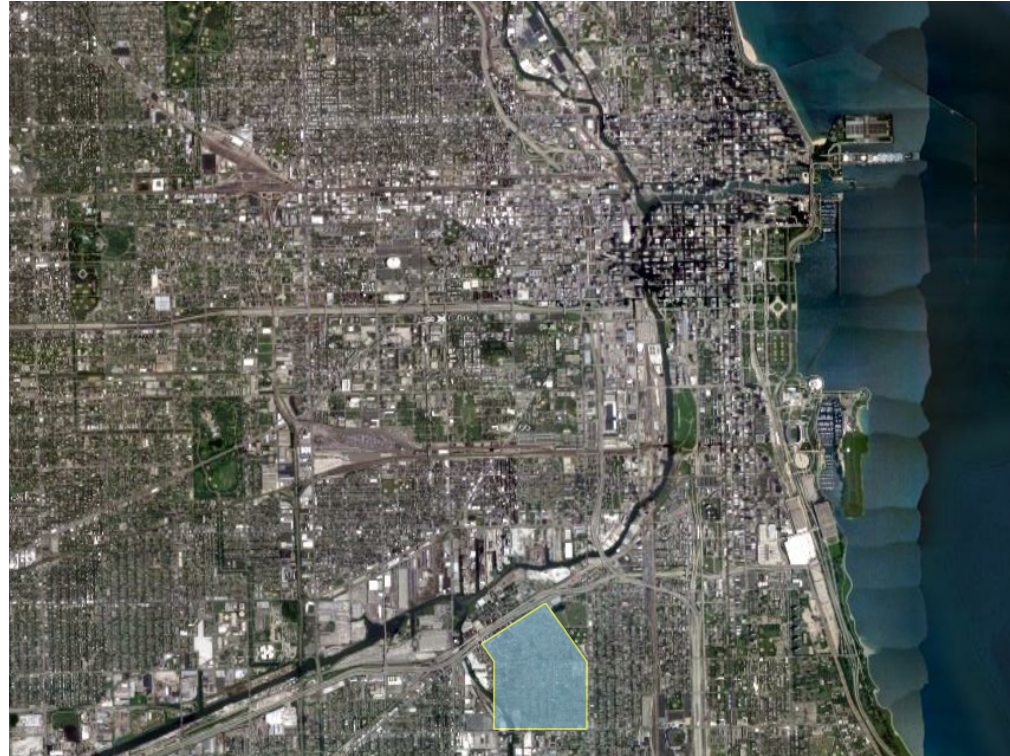
	Area (sf)	Dimensions				
Primary Living Space						
Bedroom	144	12'x12'	 Bedroom	 Master Bedroom	 Bathroom	 Master Bathroom
Bedroom	144	12'x12'				
Bathroom	36	6'x6'				
Master Bathroom	54	6'x9'				
Common Space						
Living Room	144	12'x12'	 Living Room	 Dining Room		
Dining Room	72	6'x12'				
Support Space						
Entry	9	3'x3'	 Entry	 Kitchen	 Study	 Garage
Kitchen	144	12'x12'				
Study	144	12'x12'				
Garage	336	16'x21'				
Total		702				
Circulation		90				

Physical Parameters

Organizational Parameters



Site Parameters



Site Selection Criteria:

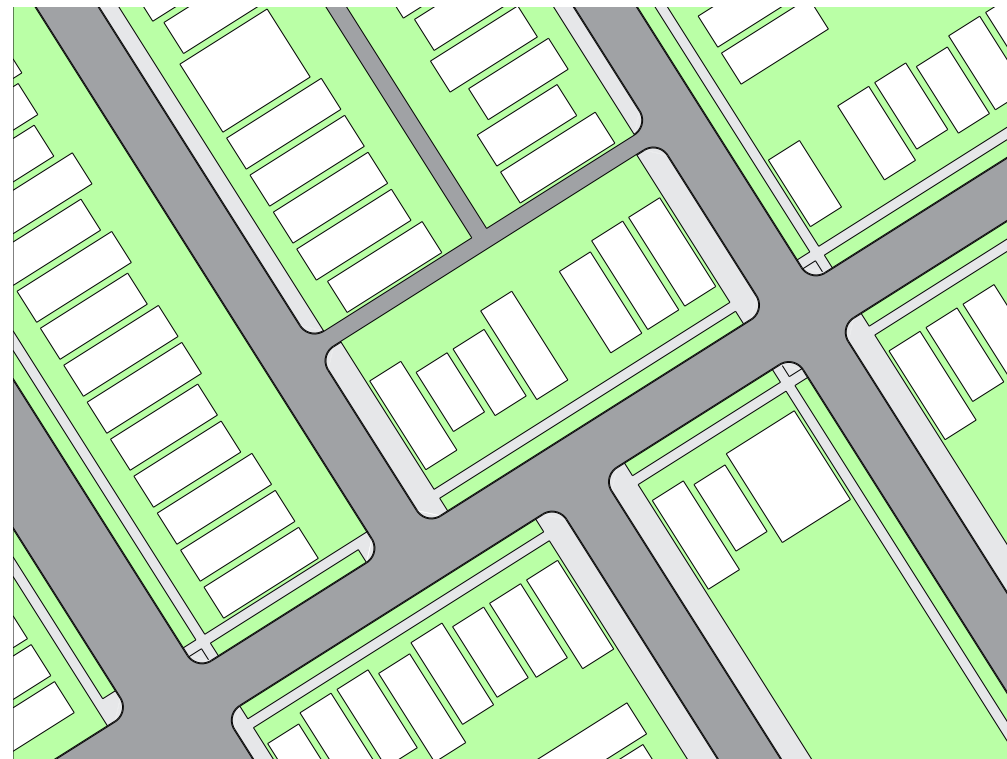
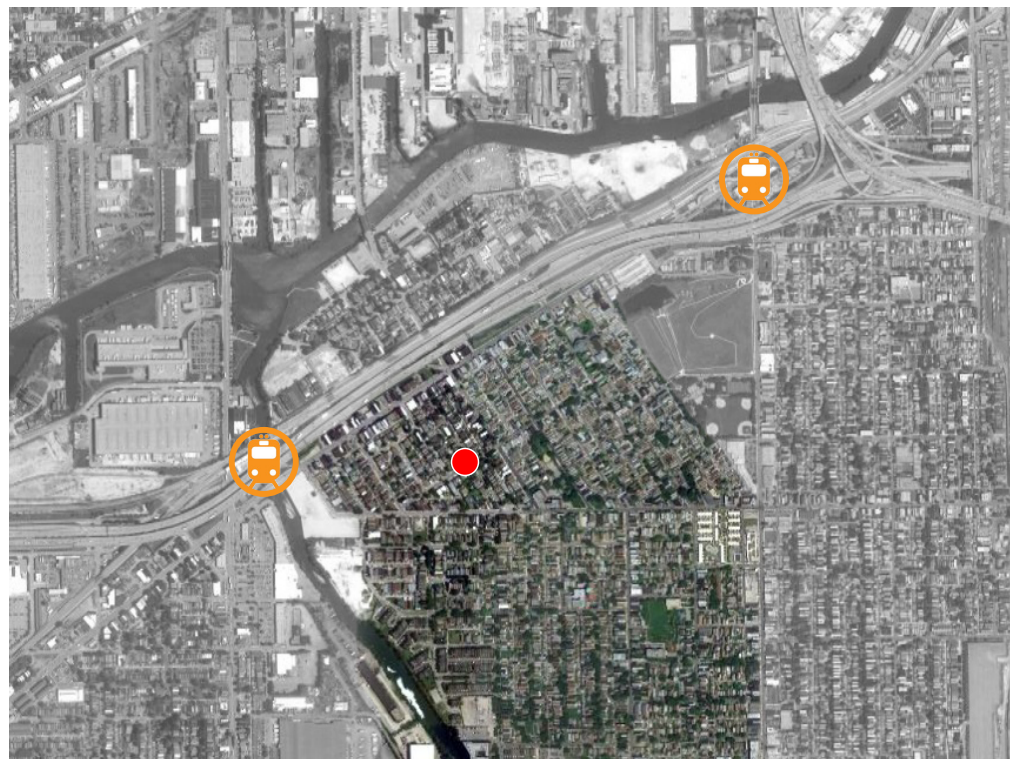
Ideally, this project will be adaptable to any site, and by varying specific layout and scheme elements could be made to accommodate the particular site. Certain elements may be considered when selecting a site such as:

- Proximity to mass transit to allow convenient employment of transit systems.

- Proximity to major roadways to accommodate maximum accessibility

- Accessibility to facilities such as grocery retail stores so as to cut down on travel time and both economic and environmental impact from vehicle emissions.

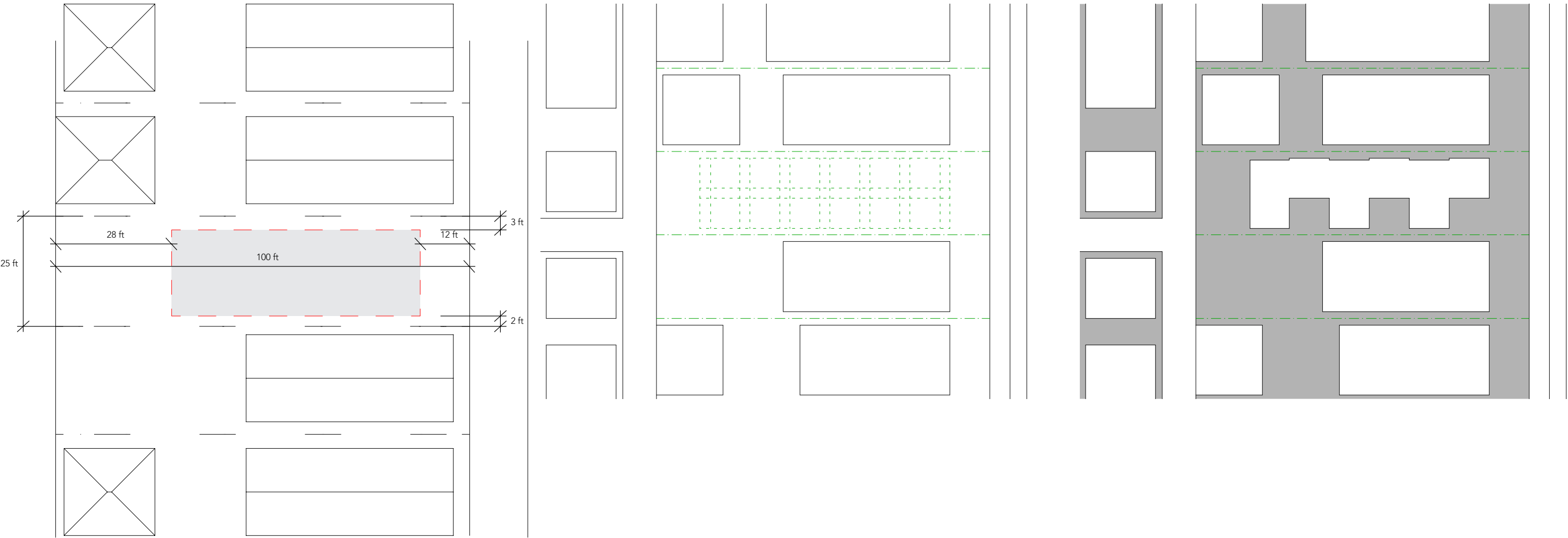
Bridgeport was chosen as the site neighborhood for the project because Bridgeport has a history of being a working-class neighborhood and because its building typology, consisting of single-story and two-story single family homes, two and three-flat buildings, and low rise apartment buildings is consistent with the project building type.



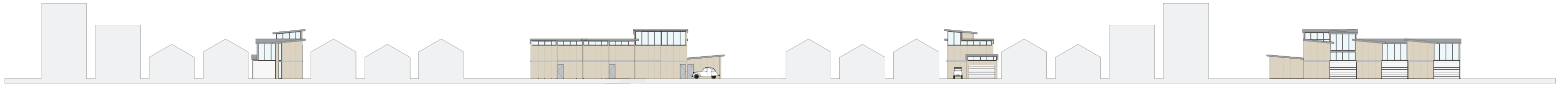
Site Parameters

Site Organization

The specific site is a standard Chicago 25' x 125' lot zoned RS-4, which allows for single family and multi-level, multi-family dwellings. Zoning requires minimum 2 foot setbacks for sideyards, 12 foot front yard setback, and 28 foot rear yard setback dependant on the specific size of the site. An ergonomic grid consisting of three feet and nine feet divides the site and is the organizing system by which the building is layed out. Circulation is layed out on the three foot divisions. Rooms sizes are based on the nine foot module, which can be augmented by combining nine foot and three foot divisions creating a 12 foot division. This division system can be easily adapted to various site sizes making the plan for the house flexible enough to be implemented on differing lot sizes in various contexts.



Building Implementation



Organization Strategy

The building consists of three separate units on the same lot, a variation from the typical Chicago three-flat except that, rather than the three units being stacked one on top of the other, they are ordered linearly one after the other. The primary advantage of this arrangement is that each unit is allowed access to the ground floor, and to one of the three designated courtyard areas. On the ground level are a bathroom, the kitchen/dining room, and a flexible space that is shown in three arrangements: as a study/sitting room, as a third bedroom, and as a living room. The second floor is occupied by the second bedroom, full bathroom, and master bedroom. The layout of each unit is very economic, making the most of small areas, and is designed in such a way that through the character and interaction of each space creates the perception of more expansive space. The master bedroom in the third unit is elevated by 1/2 level so that the living room space becomes a 1 1/2 story high space to create a more elegant celebration of the main congregation space of the house.

Building Implementation

Ground Level



Building Implementation

Second Level



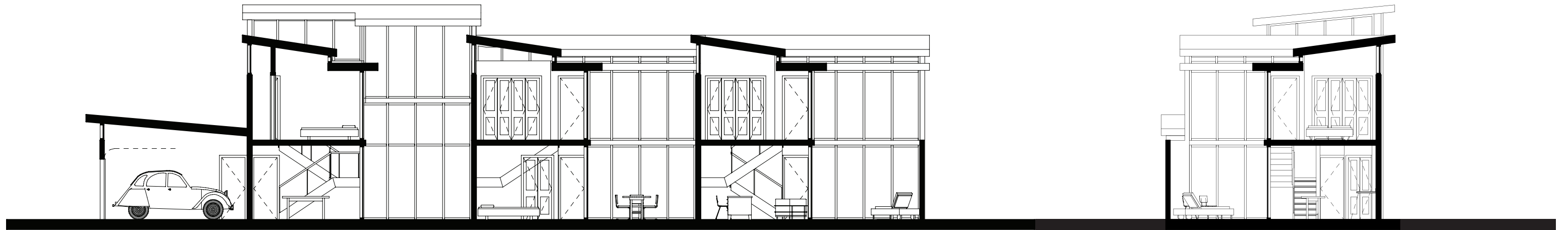
Building Implementation

Second Level Loft

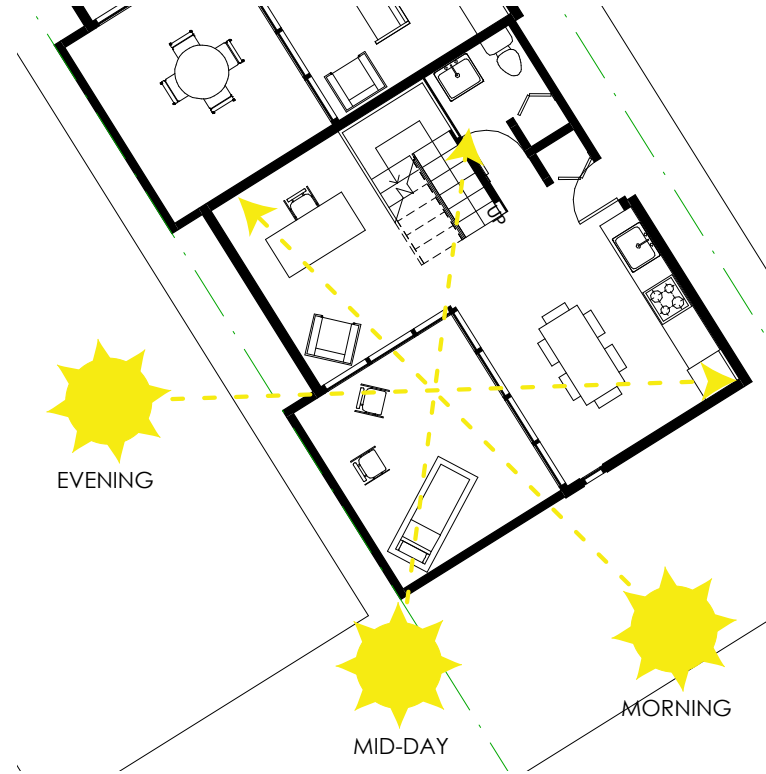
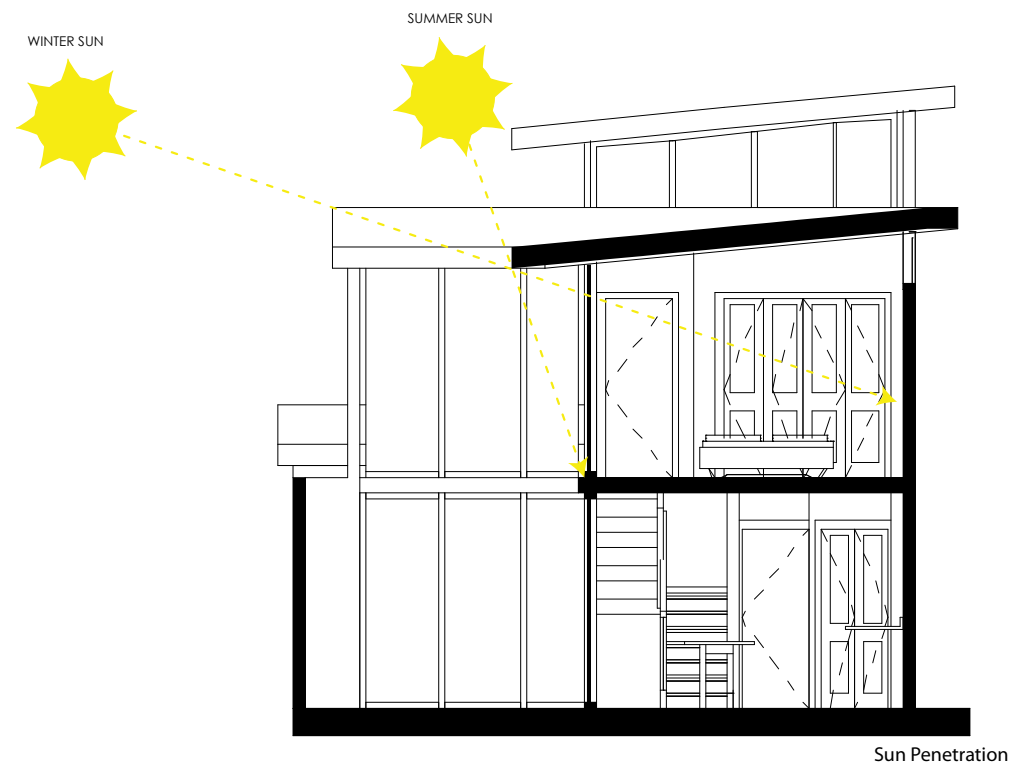


Building Implementation

Building Sections

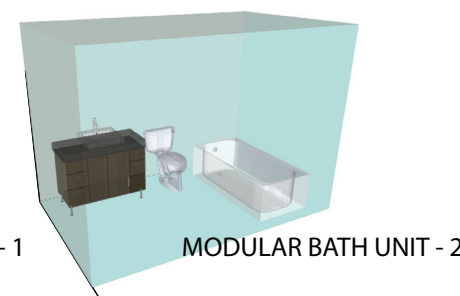
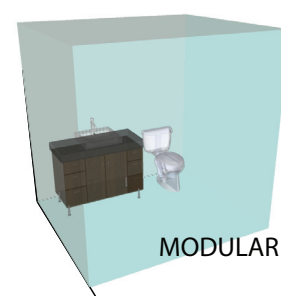
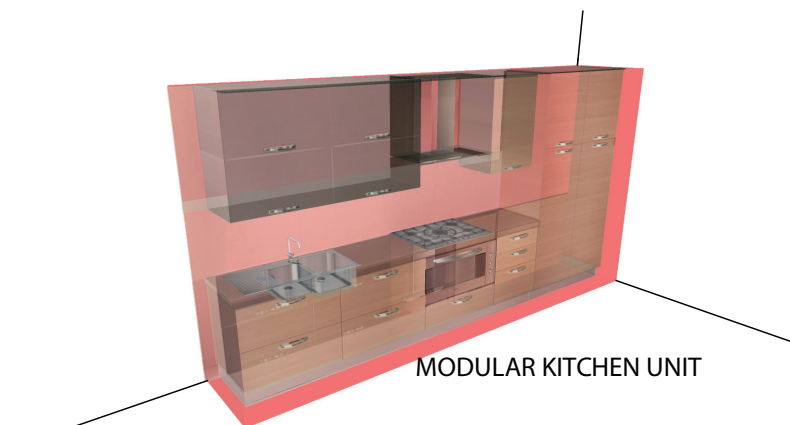
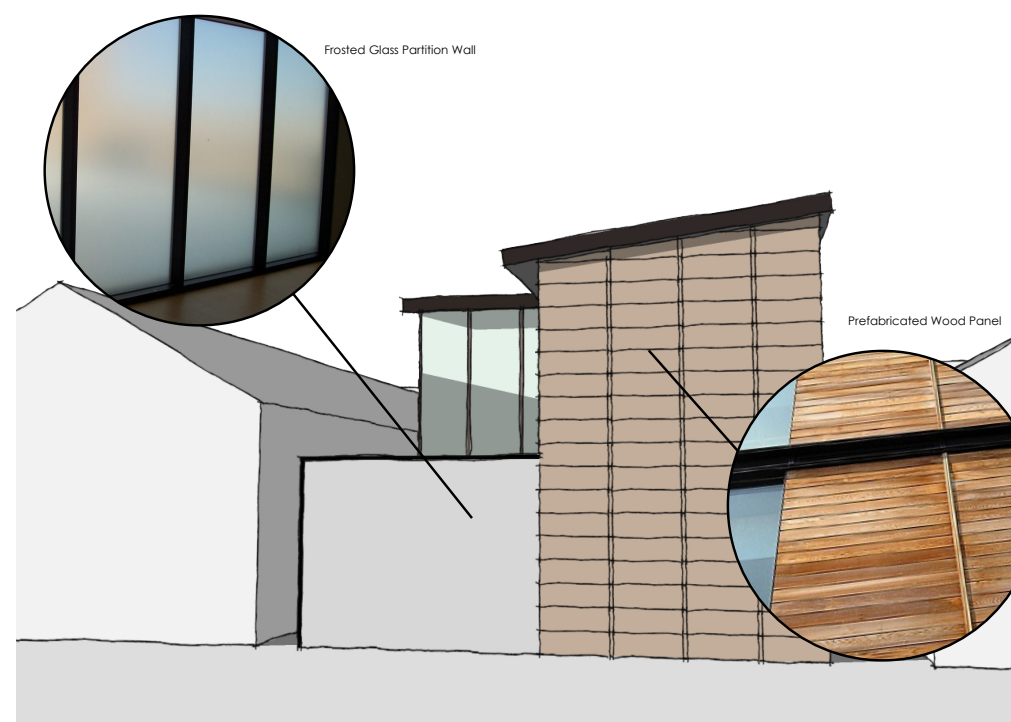


Building Implementation



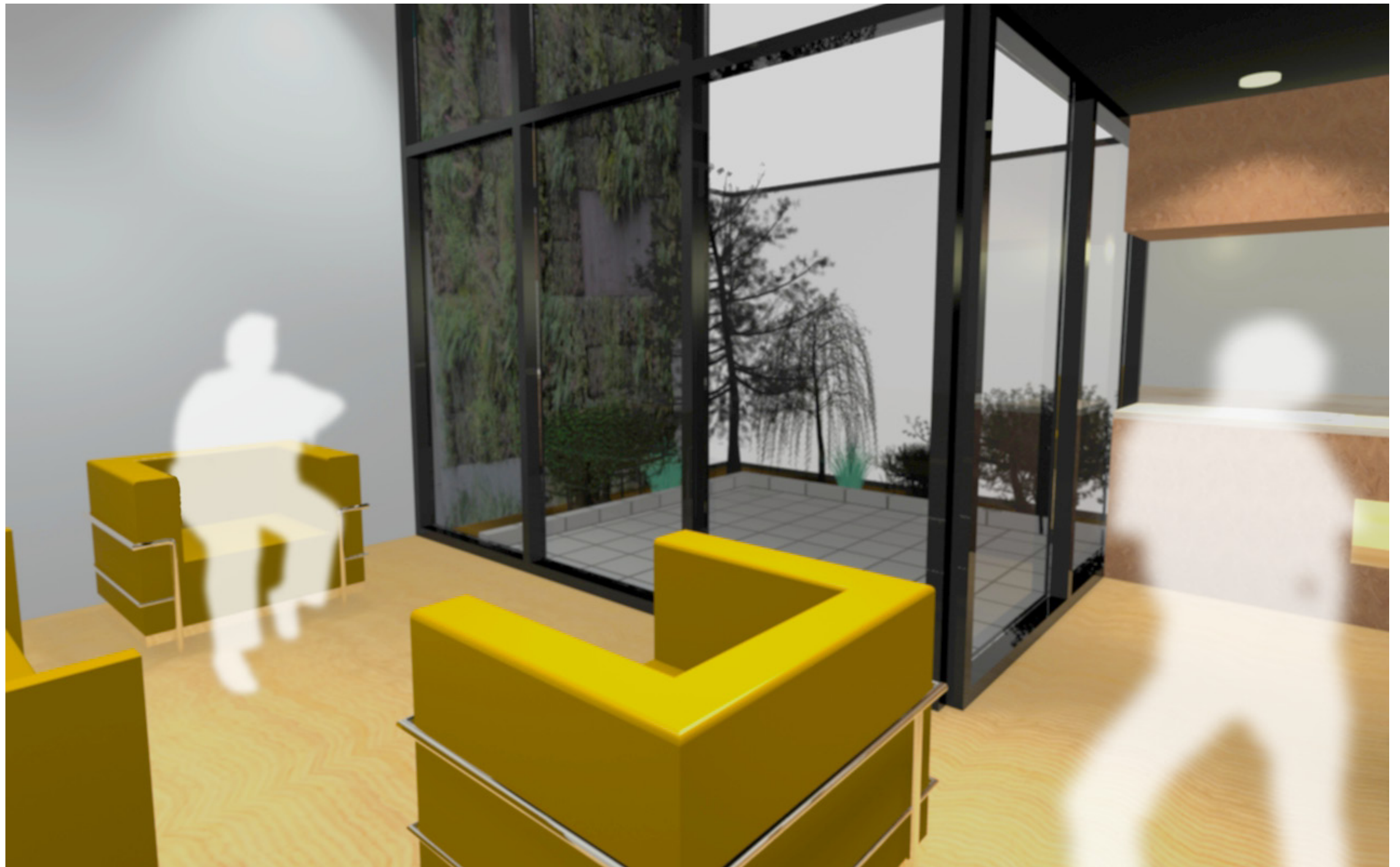
Building Systems

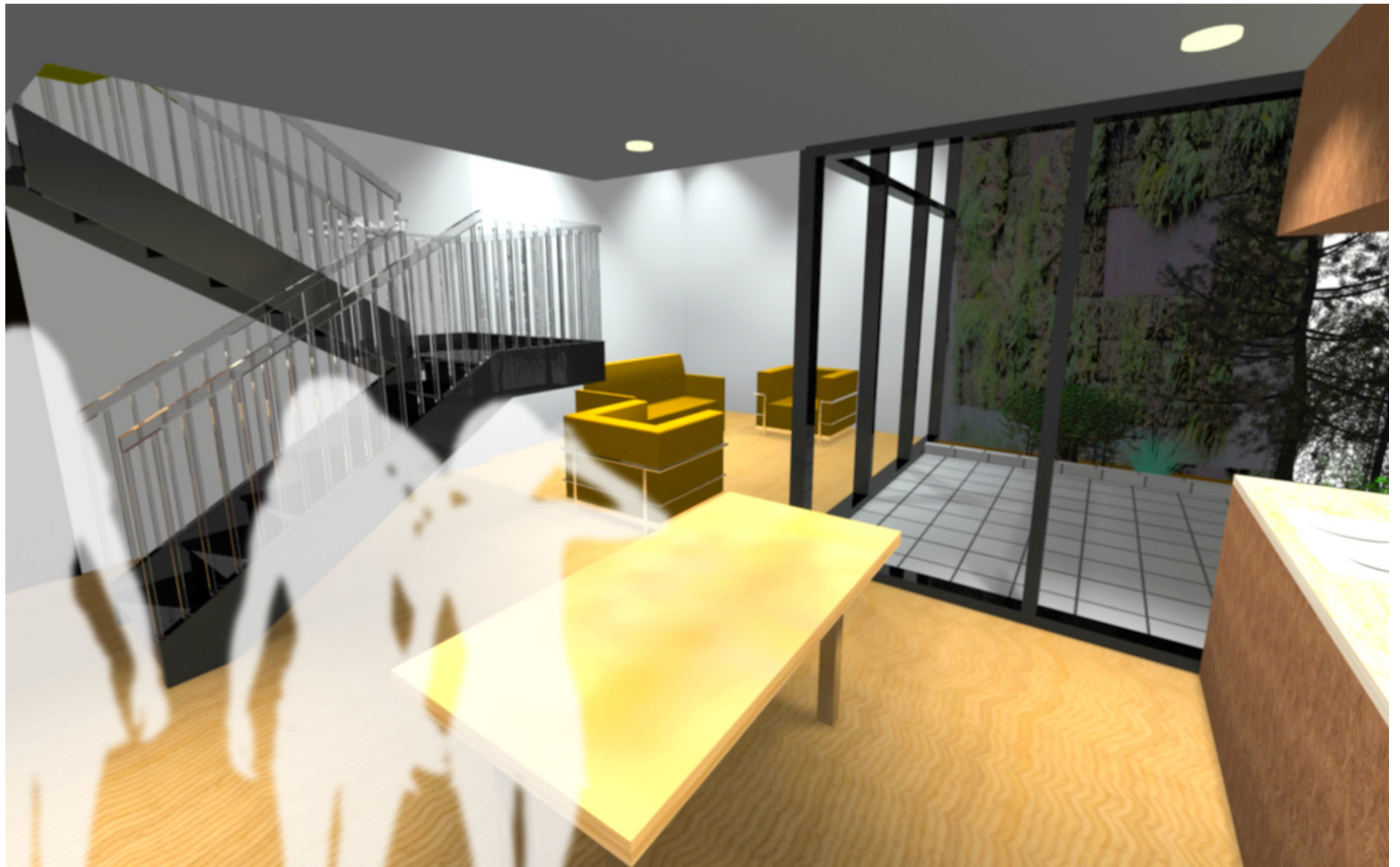
The courtyard areas are oriented on the southernmost corner of each unit in order to maximize solar exposure to the outdoor areas. The inside layout and design of the roof lines of the house takes sun angles into account. The roof lines block sun in summer months to minimize solar heat gain, and maximizes sun penetration in the winter months.



Execution

The construction process is a hybrid between traditional stick built methods and prefabricated elements. Traditional stick built practices have been refined over time and proven economic. In order to cut down on the scale of on-site delivery, but still take advantage of the precision and efficiency of prefabrication, smaller module units such as kitchens and bathrooms will be fabricated and delivered to the site to be installed with a fork lift, eliminating the need for a crane to install large prefabricated units. The exterior of the house consists of panels that can be prefabricated according to the 3', 9', 12' organizing grid clad with wood boards reminiscent of Frank Lloyd Wright's ideas of integrating nature into our living environment.

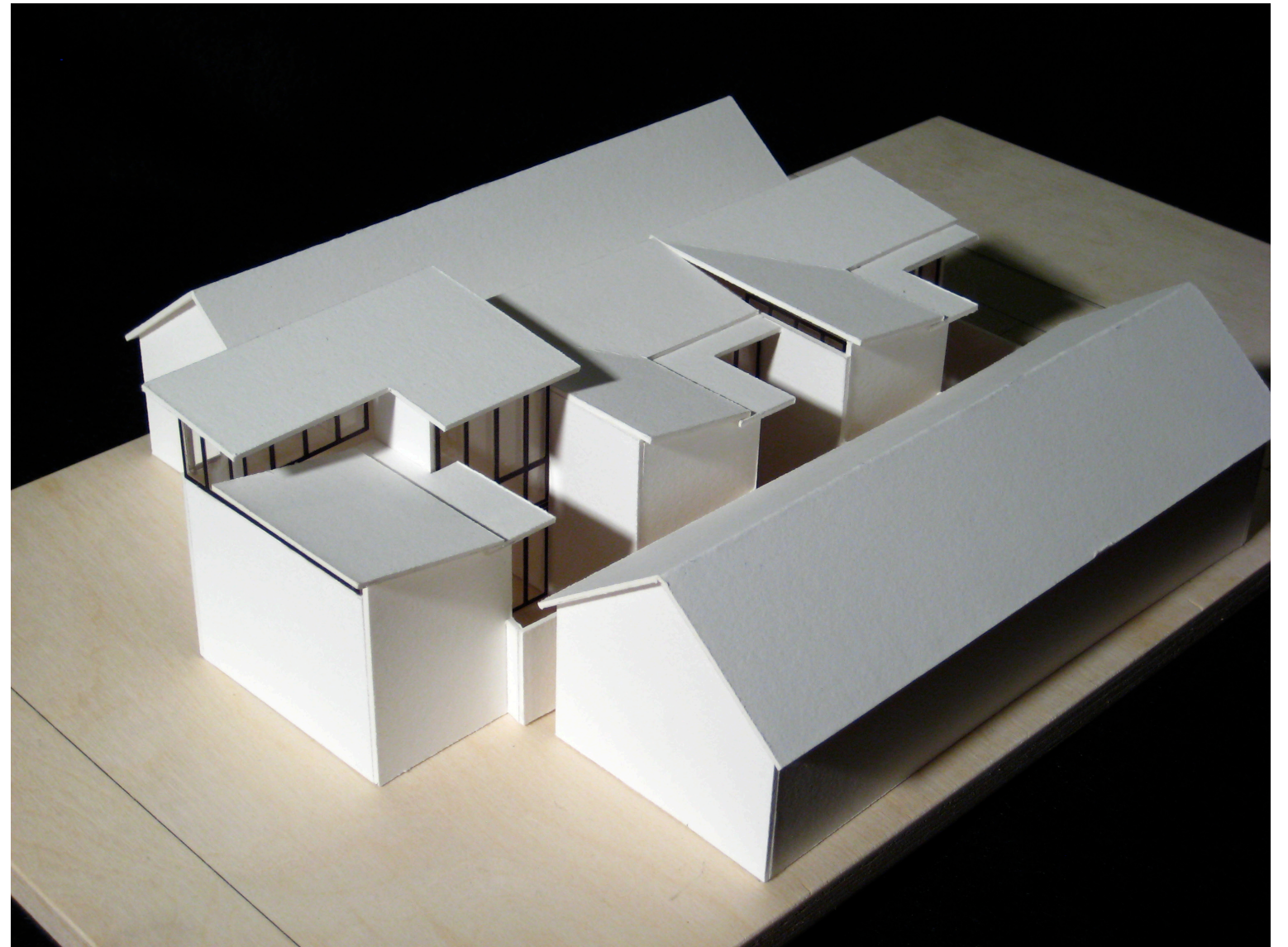
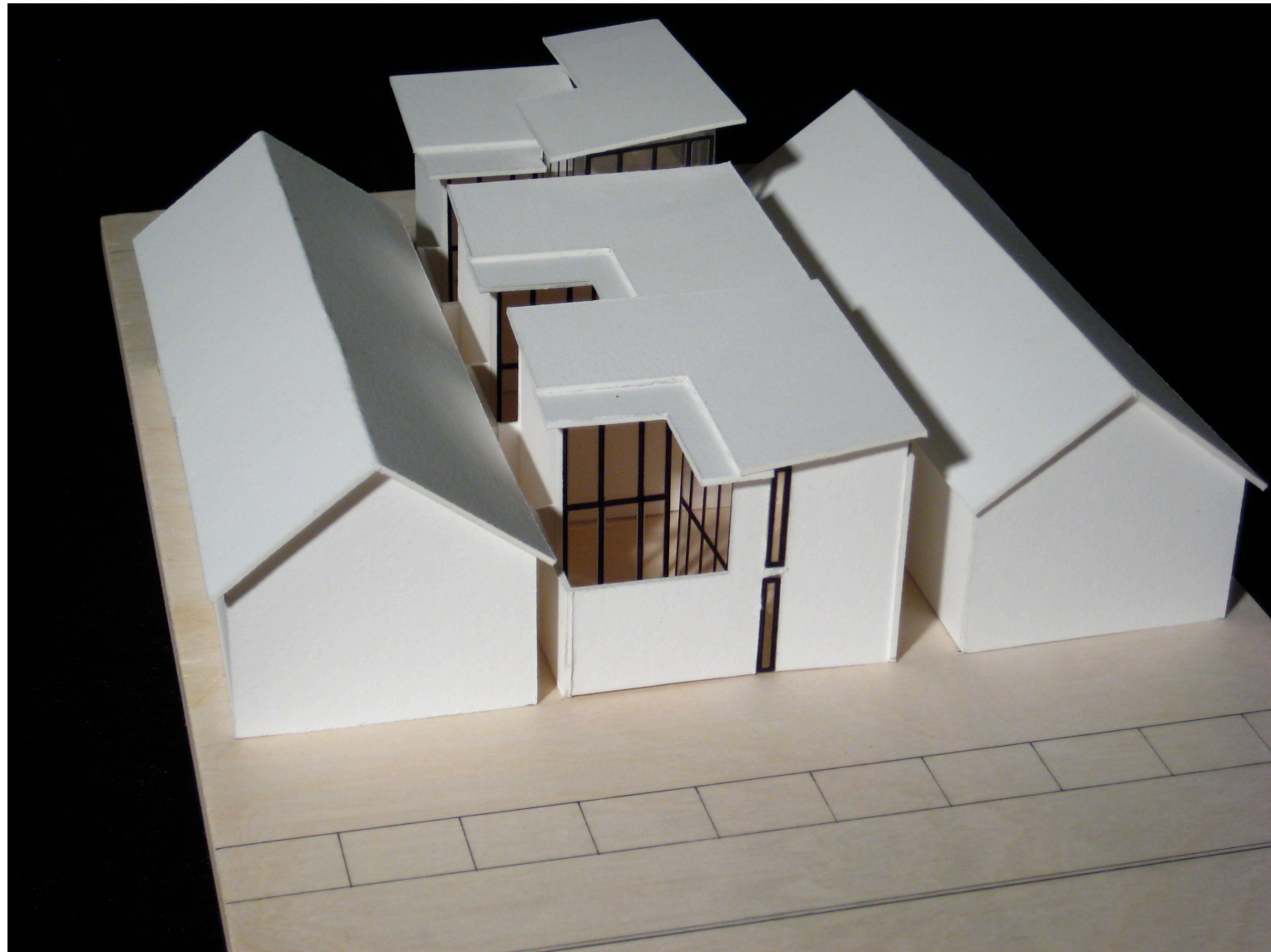












Case Study

Herbert Jacobs House

Location: Madison, WI

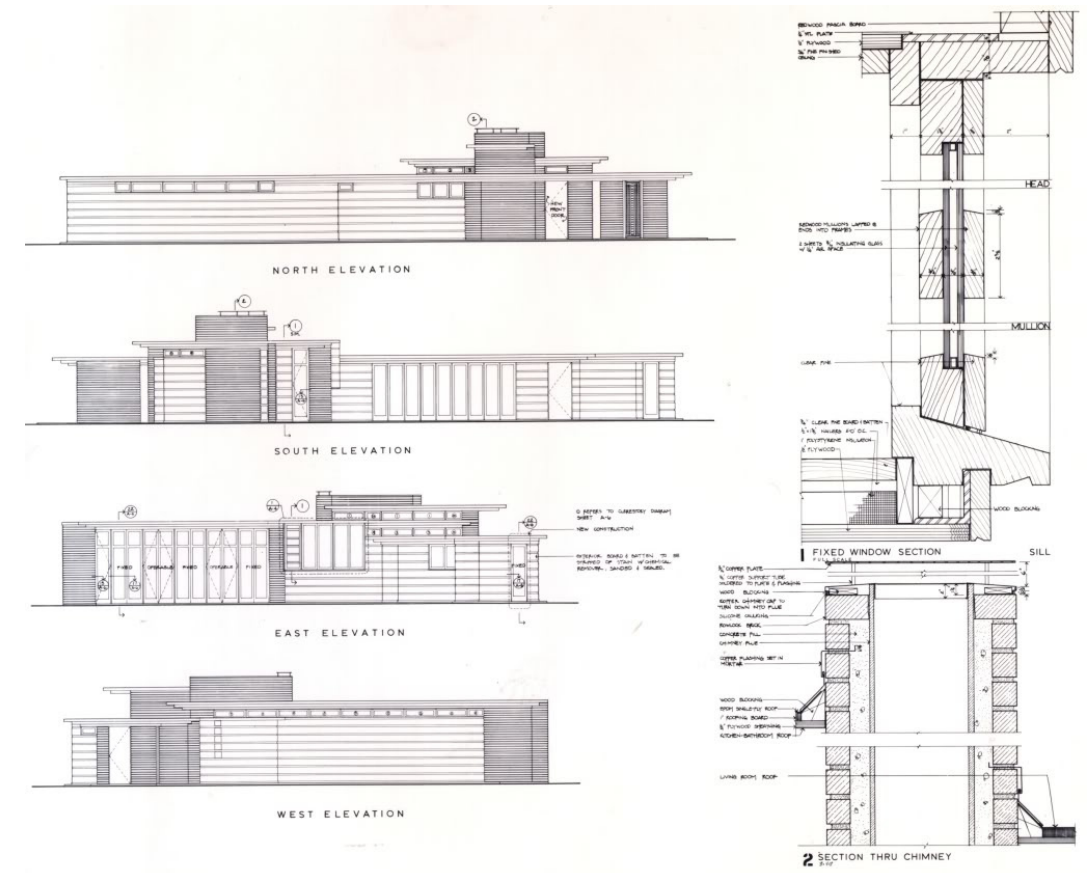
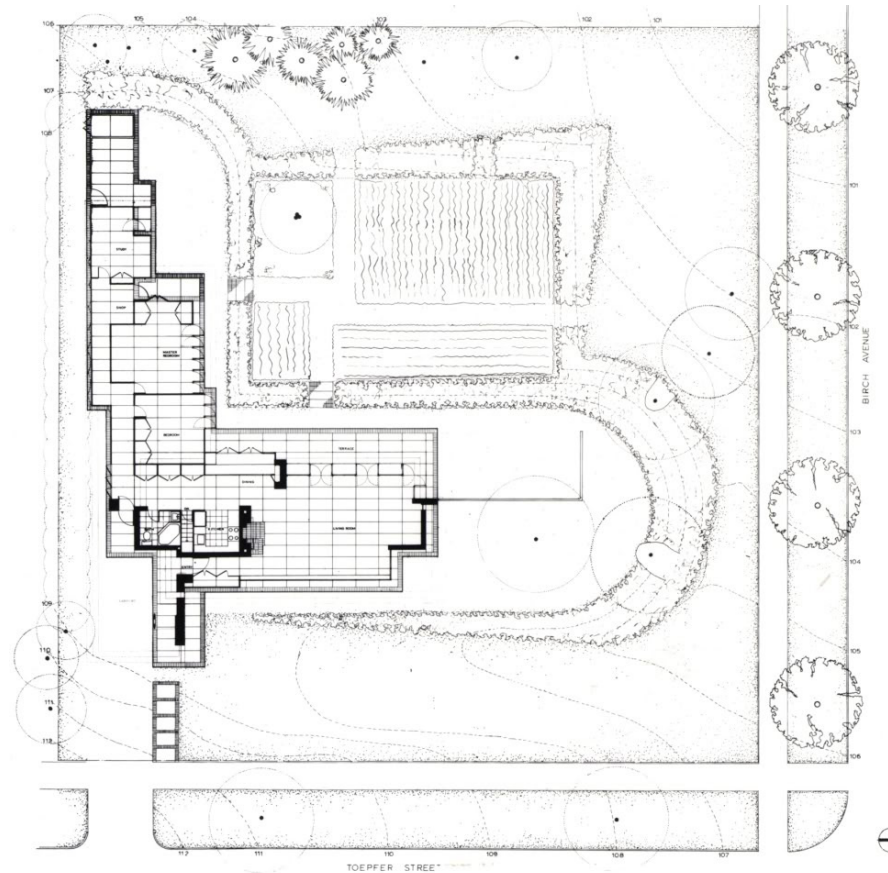
Architect: Frank Lloyd Wright

Year Completed: 1936

The First Jacobs is the purest and most famous application of Wright's Usonian concepts. The Usonian houses would relate directly to nature, emerging from the earth, as it were, unimpeded by a foundation, front porch, downspouts, protruding chimney, or distracting shrubbery. Surrounded by ample space, they should open up to the elements in contrast to traditional, white colonial boxes arbitrarily punctured with a scatter of windows and doors.

The materials of the Usonian house were to be recognized as nature's own: wood, stone, or baked clay in the form of bricks, and glass curtain walls, clerestories, and casement windows sheltered under overhanging soffits..

Aesthetically as well as structurally, the Usonian House was meant to introduce a new, modern standard of form following function in home building.



Case Study

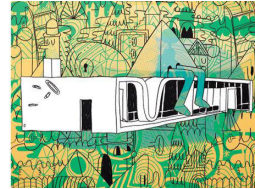
American House 08

Location: Bloomfield Hills, MI

Architect: William Massie

Year Completed: 2008

American House 08, is the first in a series of ten prefabricated houses designed and constructed by William E. Massie — the award-winning Architect-in-Residence and Head of the Architecture Department at Cranbrook Academy of Art. An all-white, superbly elegant, 2,500-square-foot modernist box, the steel-framed house, which was built in sections, is easily recognizable for its roof line that parabolically plunges at one point to form a dimple. By composing in real-time, Massie is able to negotiate between material and concept, relying on human reaction to the actual space and details. Utilizing computer-based fabrication technology for production, the house consists of a prefabricated steel frame, in-filled with manufactured structural panels all filtered through a process of digital fabrication.zz



Case Study

Usonian Red House

Location: Coshocton, OH

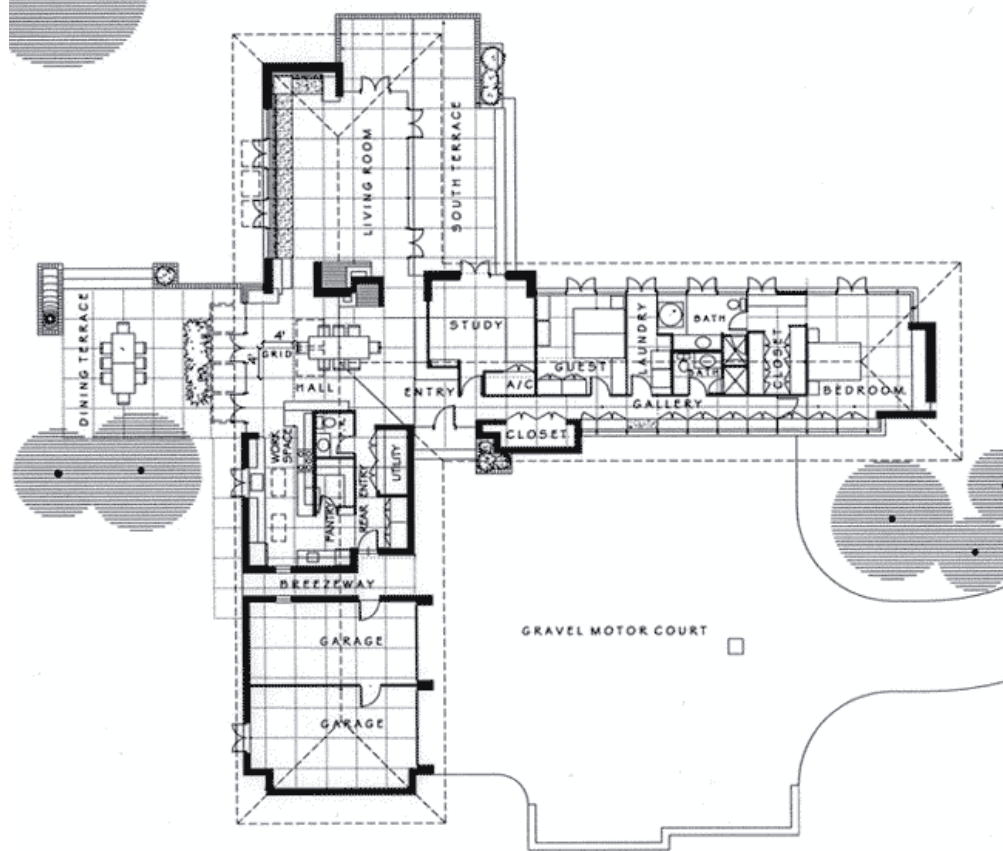
Architect: Thomas Tim Sutton

Year Completed: 2005

The Owner/Architect studied Wright's Usonian architecture for fifty years, beginning with visits to homes under construction and others nearing completion in the 1950's. For many years he desired to experience Usonian living, and in 2000 he began to design a modest Usonian home for his family. In 2002, construction began to re-create the Usonian experience. The house has a "T" shaped plan, with traditional Usonian rooms and spaces except for the inclusion of a separate dining space, moderately sized kitchen and two car garage.

-The actual enclosed space measures 2,520 Sq. ft inside of the exterior walls

-Construction took 22 months to complete



Bibliography

Jacobs, Herbert and Katherine. **Building With Frank Lloyd Wright: An Illustrated Memoir**

San Fransisco: Chronicle, 1978

This book documents the process in working with Frank Lloyd Wright in design and construction of the first Usonian house known as the Herbert Jacobs home.

Wright, Frank Lloyd, **A Fireproof House for \$5,000**

Ladies Home Journal, April 1907

This is the original article written by Frank Lloyd Wright in the Ladies Home Journal about the concept of the \$5,000 house, the precursor to the Usonian houses designed by Wright

Hay, David. **Massie Produced**

Dwell Magazine, Vol. 9, Issue 3. Feb. 2009

Article published in Dwell Magazine about Cranbrook Academy of Art's architect in resident William Massie, and his design for the American House 08, which is a residence designed and entirely prefabricated in Massie's studio using digital fabrication technologies.

Bennet, Larry; Smith, Janet L.; Wright, Patricia A. **Where Are Poor People To Live?: Transforming Public Housing Communities**

Armonk, NY. M.E. Sharp, 2006

Book dealing with the shortcomings and failures of public housing projects, and what the future holds for public housing now that the failed public housing projects, such as Cabrini Green, have been razed and new mixed-income developments have taken their place.

Lind, Carla. **Frank Lloyd Wright's Usonian Houses**

San Fransisco, Pomegranate Art, 1994

Sergeant, John. **Frank Lloyd Wright's Usonian Houses:the Case For Organic Architecture**

New York, Whitney Library of Design, 1976