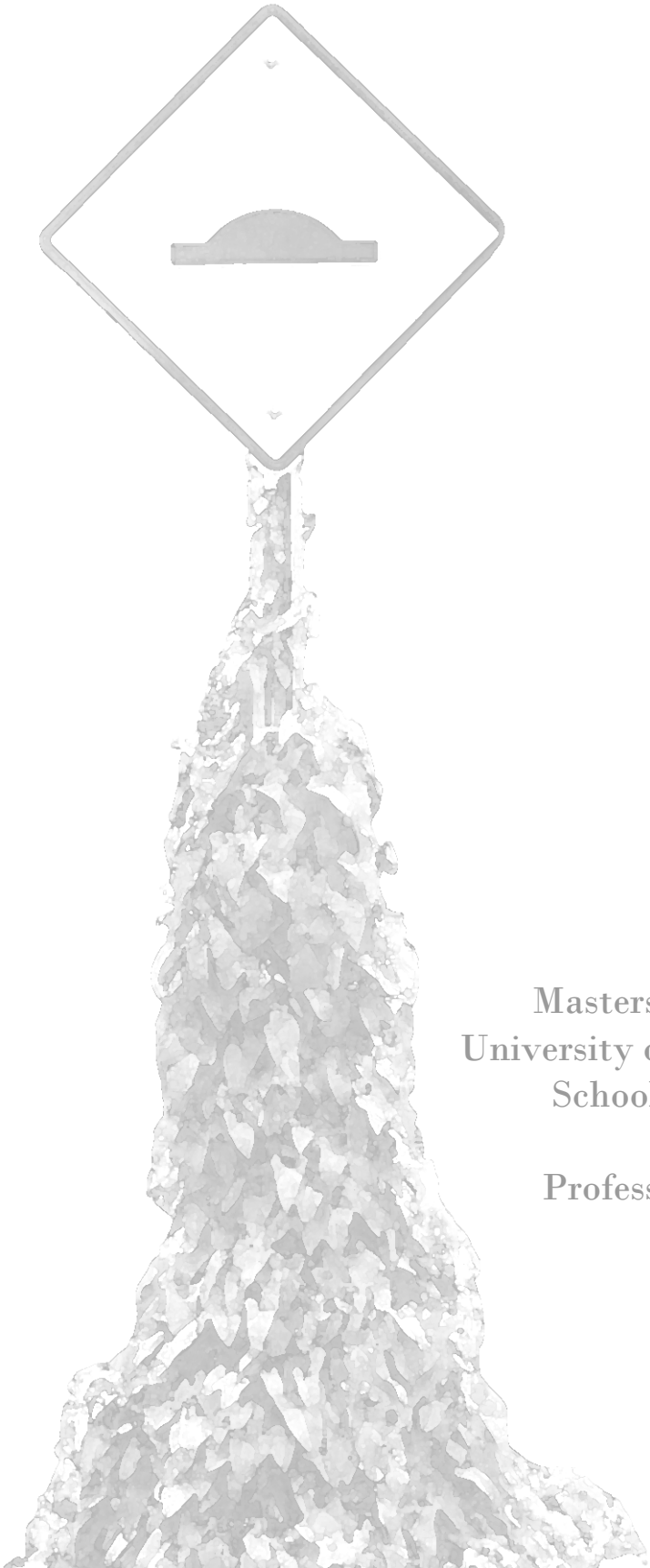
Humane Habitat

David Lenz



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Abstract

The 2008 financial crisis and housing market downturn shook the United States in such a profound way that many have drawn comparisons to the great depression of the 1930's. Although statistically not as bad, socially this economic downturn has had many of the same effects. In a time characterized by government bail outs, many American are starting to ask questions and face realizations they never thought they would. Questions about employment, housing, and health care have dominated the newspaper headlines and family dinner table conversations across the nation. Widespread concern about the affordability of family homes, transportation, education, healthcare, and even basic necessities like food, water, and heating have just recently exploded in to the greater American consciousness. However, here locally in Michigan and Detroit, as well as hundreds of other Midwestern manufacturing towns and cities, these concerns arose many years prior to this recession.

The dependence of our economy on the success of the automobile industry was never fully appreciated until we saw the decrease of national and global market share percentages and record lost prophets of the Big Three. Their failures greatly affected all of their supporting markets like, steel, carpeting, insulation, and product suppliers all across the nation. As plants began to close and jobs began being shipped oversees

it came as no surprise that surrounding neighborhoods saw the first signs of a recessions. Moving signs, foreclosure notices, and abandoned houses began to dot the urban neighborhood landscape. Once booming and economically powerful cities, like Detroit and Flint, have already seen these effects beginning in the early 1990's, it was just a matter of time until other manufacturing areas caught up.

Ultimately, however, this problem is more then just about statistics and social commentary. Manufacturing cities and towns across the United States have real issues to deal with. These issues have manifested themselves in the form of urban blight, shrinking cities, and a general loss of social structure and standing. Although many people view this as a governmental problem, these issues are very real architectural problems with real architectural solutions. Most people stop here. They view the solution to urban blight, shrinking cities, and loss of social structure as merely an architectonic solution of infill. What is forgotten? The human element.

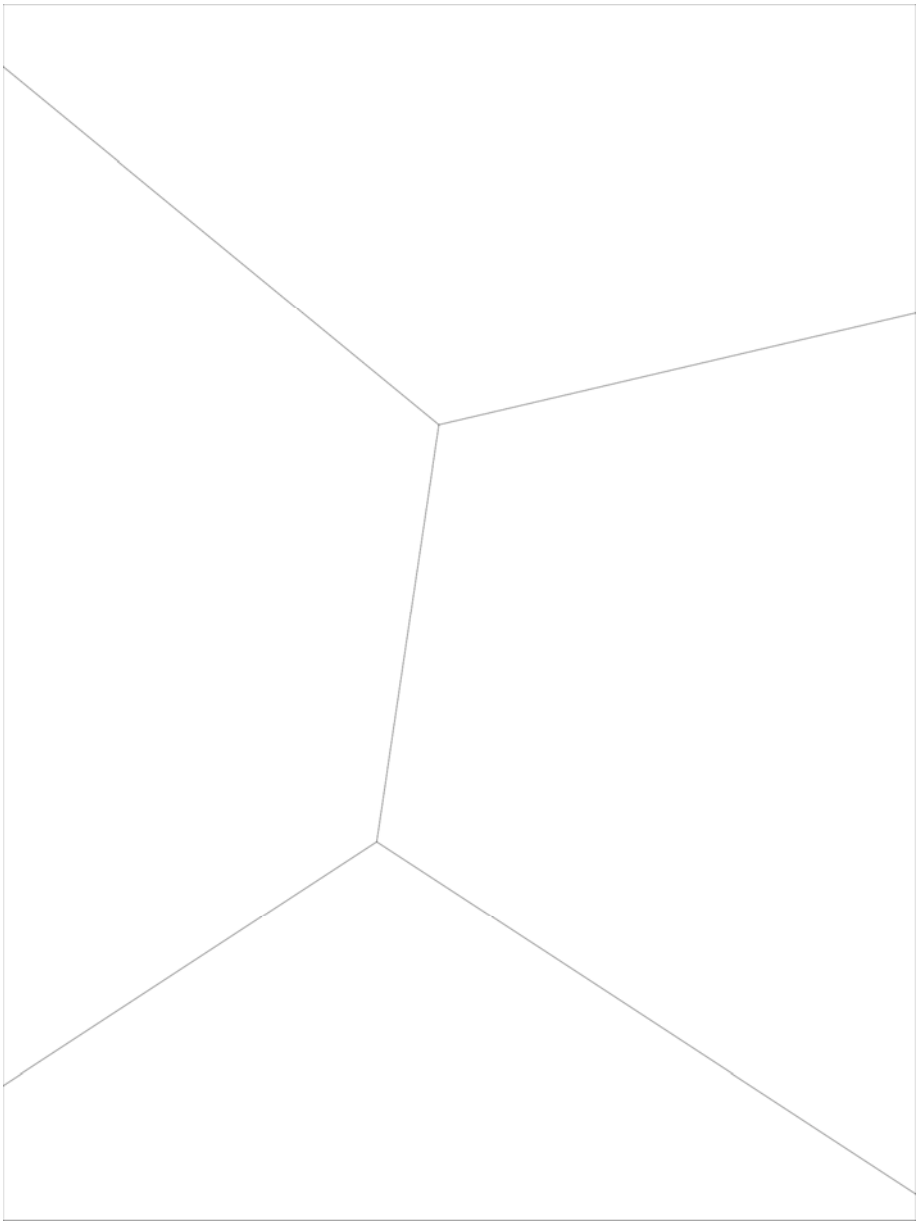
We can not forget as architects, and aspiring architects, that what we practice is a wholly humane profession. Architecture is more then just sculpture, idealism, and theory; it address human needs like habitat, identity and safety to name a few. A growing number of architects and architectural students are beginning to reanalyze the social role architecture has as it address the need for habitat, identity, and safety of the marginalized of society. Increasingly in this time, the marginalize

are no longer across international borders in countries far away; they are in our states, our cities, and even our backyards. As manufacturing cities have shut down across America a whole new segment of people, once part of the prosperous majority, are largely beginning to be ignored. As these people lose their jobs, in sever cases lose their homes, and eventually leave their neighborhoods, they leave behind a landscape dotted in abandonment and disrepair.

As these manufacturing cities and towns restructure and regain economic stability people will once again move back into their abandoned urban neighborhoods. My thesis attempts to address what role architecture will play as these once largely abandoned urban neighborhoods get repopulated. How does architecture provide habitat for these largely low income neighborhoods? How does architecture create or preserve an identity for these neighborhoods? How does architecture address the general well being of these neighborhoods?

Thesis Paper

Human*E* Habitat



"How do we love all the children of all species for all time?"
William McDonough
Cradle to Cradle

These words spoken by William McDonough in his highly influential book, Cradle to Cradle, resonate with almost all people concerned with sustainability. In a way it has become a rallying cry for advocates for a healthier world, the essence of what it means to be sustainable. Over the past decade the term sustainable has come to mean many things; green architecture, doing less bad, lowering carbon footprint…the list goes on. The intent behind these different iterations fundamentally gets back to one aspect of sustainability, human impact on the world through different mediums. The varying medium can have a technological, commercial, architectural, economical, or even a political overtone. With out a doubt, concentrating on sustainability as it relates to each of these separately has its merits and is a worthy undertaking for anyone. Improving how our world operates can only have positive influences on our society. But just doing this is not enough. I challenge you to look deeper at what William McDonough means by "loving all the children of all species for all time." As much as this is about sustainable technologies and practices, it is every bit as much about how our society needs to be sustainable on a humane level; social justice in itself is a sustainable practice. To only concentrate on the economic, commercial, or environmental

aspect of sustainability would be to leave out the very subject it affects and hopes to help: humanity.

What connection, if any, does sustainability have to social justice? As stated previously, many people have an idea of what sustainability is. It has many different forms and can be looked at through many different lenses. This being said, social justice needs to be defined in order to understand its connection to sustainability. John Rawls, one of the leading theorists on social justice in the twentieth century believes that, “"Each person possesses an inviolability founded on justice that even the welfare of society as a whole cannot override. For this reason justice denies that the loss of freedom for some is made right by a greater good shared by others" (Rawls). He holds that people have an inherent value that society cannot deny or suspend under any circumstance. If we accept that all people on the earth are human, and of the same human species, then to deny a sense of value to one person, or a group of persons, would be in essence the same as implying that humanity itself has no value. Social justice then, is the belief that all people are inherently the same and as such each person has the same value as the next; if it is acceptable to deny and with hold value to one person for any reason, then it is equally acceptable to deny and with hold value to all people.

This still gets back to the question of “what does social justice have to with sustainability?” Looking at William

McDonough's belief of loving all children of all species for all time we can see that he implies a sense of value on humanity. This sense of value is the foundation of justice. It has been said that, "Any society, any nation, is judged on the basis of how it treats its weakest members—the last, the least, the littlest" (Mahony). Made in reference to abortion, Cardinal Roger Mahony's statement still holds true to all aspects of society. How we treat those that are the least among us is a reflection upon our society. If society places little value on humanity, whether that is the poor, elderly, sick, dying, unborn, or homeless, then at what point does that society begin to die; at what point is this society no longer sustainable? Under these terms a successful society is one that cares for itself, especially the ones in need of the most care. Ultimately, therefore, social justice is an integral part of a sustainable society.

The practice of social justice manifests itself in many different ways. Typically we see these as church groups, non-profit groups, schools, and in some cases influential individual people. Organizations like the Red Cross, Goodwill, and Amnesty International represent a huge segment of national and international organizations whose mission is committed to social justice world wide. We can see this by looking at Amnesty International's mission statement, "Our mission is to conduct research and generate action to prevent and end grave abuses of human rights and to demand justice for those whose rights have been violated" (11). Companies like these often

offer a large amount of support to a large amount of people. In a sense they act as 'blanket' organizations, handling many different needs by as many people as possible as fast as possible. Offering a more specific approach to social justice, regional and community based programs address more specific needs to a more precise cliental base. Organizations like Urban Development Corporation, Ashley's Angels Organization, and Judson Center are a few Metro-Detroit organizations committed to helping those within their communities. By focusing on a very specific group of people in a very specific area, these social justice organizations are better able to handle and deal with more specific issues. They act not as a 'blanket' organization, but rather as a 'hat and mitten' organization; providing help in a very specific manner tailored to the needs of those they help.

Understanding that social justice plays an integral role into a sustainable human community, we must ask the question, how does this apply to architecture? Amy Virshup writes, ""In three years, Habitat for Humanity is going to be the largest builder of affordable housing, while architects sit around debating the merits of deconstructionism' He was exaggerating a bit, but the point is well taken: the architecture profession lags behind community groups in its vision for housing America" (Virshup). Social justice issues like caring for the poor, homeless, and providing adequate housing are areas which architecture can address. A population of people without adequate housing could not

under any circumstance be considered sustainable. Not only is it an unhealthy way to live, but it devalues human life. Habitat for Humanity, like the Red Cross, Goodwill and Amnesty International, is a 'blanket' organization trying to help as many people as possible as fast as it can. It accomplishes this through its use of standardized plans, materials, and construction techniques. This approach offers their users quality, well built housing at a fraction of the cost of similar non-Habitat for Humanity houses. This reduction in price is due to a variety of things, but ultimately rests upon the donated labor of volunteers and mandatory labor of its benefactors. By requiring the users to help build the house and provide "sweat equity" they ensure that the users will care for and maintain the house. The theory goes: if you worked to make it then you will work to maintain it. On a more fundamental level the requirement to work instills within the end users a sense of pride in their home and ultimately offers a sense of value to the community. In a way they are living the "American Dream", working hard to move up in society.

While organizations like Habitat for Humanity take an approach similar to large scale development, other organizations and individuals are taking a more personal approach to the situation. Programs like Rural Studio, BaSiC Initiative, and URBANbuild are beginning to surface across America. These programs, primarily extensions of colleges and universities, use their curriculum to not only educate its students about the value of social justice in

architecture, but also to take a hands on approach to helping answer the call of inadequate housing. Unlike programs like Habitat for Humanity though, these programs approach the situation in a radically different way. Amy Landesberg explains,

"A clean, dry house with indoor plubing by Habitat for Humanity is decent. Decent that is, if you overlook the Habitat definitions of social conformity, and that in urban settings of considerable density it insists on the traditional single-family house. To date, Habitat has build or renovated one hundred and fifty thousand houses worldwide, a number the Rural Studio will never approach, and countless lives have benefitted. But Habitat houses, like most stock housing, are woefully void of architecture. The Habitat house is not the archetypal essential house, it's the lowest common denominator" (Landesberg)

As aspiring architects, and as architects, the profession should not accept such a low standard of housing as the solution for such a great problem. Essentially wagging his finger at the profession, people like Samuel Mockbee have stood up and implored upon his fellows to act as responsible architects and address the social injustices facing our society with a degree of compassion and high design. Rural Studio, began by Samuel Mockbee in the early 1990s, does just this by addressing the inadequate housing situation facing the poor communities in Hale County Alabama. Believing, "Everyone, rich or poor, deserves a shelter for the soul" (Dean), Samuel Mockbee set out with the hope of not only

transforming the souls of Hale County's poorest but also that of his students. His hands on approach brought the realities of the millions of disadvantaged into the studios and hearts of his school and students. It is through his design inspiration that Mockbee has left the greatest impact on his studio. His use of familiar shapes and materials in the rural landscape become the foundations for his designs. Although, in their final product the buildings appear foreign to the landscape, he and his studio are able to physical, visually, and spiritually connect them back to the community. This connection, through material choice, artistic interpretation, and through community involvement establishes a bond back to the community. His architectural pieces are not his, but rather they fully become his clients; houses and buildings which they cannot only call their own but ones they feel are their own. Amy Virshup explains this, "If many
people with design houses feel the burden of living up to them, Rural Studio clients have no such anxiety. At the Bryants' house, the wide porch is crammed with plastic troughs and buckets filled with turtles and water lilies. An old roller-top washing machine leans against one wall, while
a deepfreeeze filled with turtle meat and catfish stands nearby" (Vishrup). A real sense of ownership over architecture brings with it a notion of inherent value and worth; and it is through this sense that Rural Studio is successfully addressing social injustices in Hale County.

Before forming BaSiC Initiative formally in 1995, Sergio Palleroni began his

mission of addressing social injustices through architecture in the early 1980s. Initially concerned with migrant communities of Central Mexico he later expanded his interest to include many different marginalized societies as he moved around the country. Recently, Sergio Palleroni and his studio BaSiC Initiative have expanded their program internationally undertaking projects in remote locals like Ladakh India, located in the high remote Indian Himalaya. From its meager beginning to its international recognition, BaSiC Initiative's method and mission has remained the same. It is through the studio's work that Sergio Palleroni hopes to "draw upon the unique relationship of communities to their environment, finding solutions that embrace appropriate technologies while reinforcing local values to spur self-initiated development" (13). Programs, like that of Hogar Del Viento in Cuidad Obregon, Mexico, demonstrate BaSiC Initiatives' design philosophy as it pertains to social justice. The goal of this project was to develop a successfully repeatable ecologically friendly housing type. By using local and traditional building materials and methods, BaSiC Initiative gave the Yaqui people homes that they could easily identify with and easily reproduce. Paying attention to cultural needs, such as an importance on extended family and the need for family public space, the Hogar Del Viento project successfully represents what social justice architecture is all about: Designing architecture for people that can be readily adapted and made their

own thus creating a sense of value and self respect. Serigo Palleroni best sums this up, "When you offer a good idea, it catches on. But the community has to feel like it's their own" (13)

Similar to Rural Studio, URBANbuild began as a program trying to address decrepit housing facing inner city neighborhoods of New Orleans. After Hurricane Katrina, however, their mission changed from a slow catalyst approach to an urgent design build process in order to meet immediate needs of Katrina's victims. Taking an equally hands on approach, like Rural Studio, URBANbuild saw the opportunity to address social injustices while at the same time imparting a new urban contemporary vernacular for New Orleans. While many of the urban neighborhoods need to be rebuilt, this studio has seized the opportunity to rebuild it in an architecturally expressive way, opting to avoid modularized and standardized houses so common in such situations. It is their belief that by analyzing and remaining sensitive to the community they can incorporate better designs for a community lacking any community spirit or identity. Of all the horrible things Hurricane Katrina did to New Orleans, it opened an opportunity to rebuild parts of the city that had been forgotten and neglected by society; not just physically neglected but socially neglected. While URBANbuild offers the promise of a new urban housing vernacular, it has already brought attention to and began answering many social plights facing these neighborhoods. To quote Tulane School of

Architecture Dean Kenneth Shwartz, "Tulane students are designing and building with the highest aspirations of beauty, sustainability, and social justice. It is heartening to see how these students have combined their activism with the foundation of a strong design curriculum. Through their applied research and action, they are pushing and pulling the profession in ways that only tangible engagement can" (12).

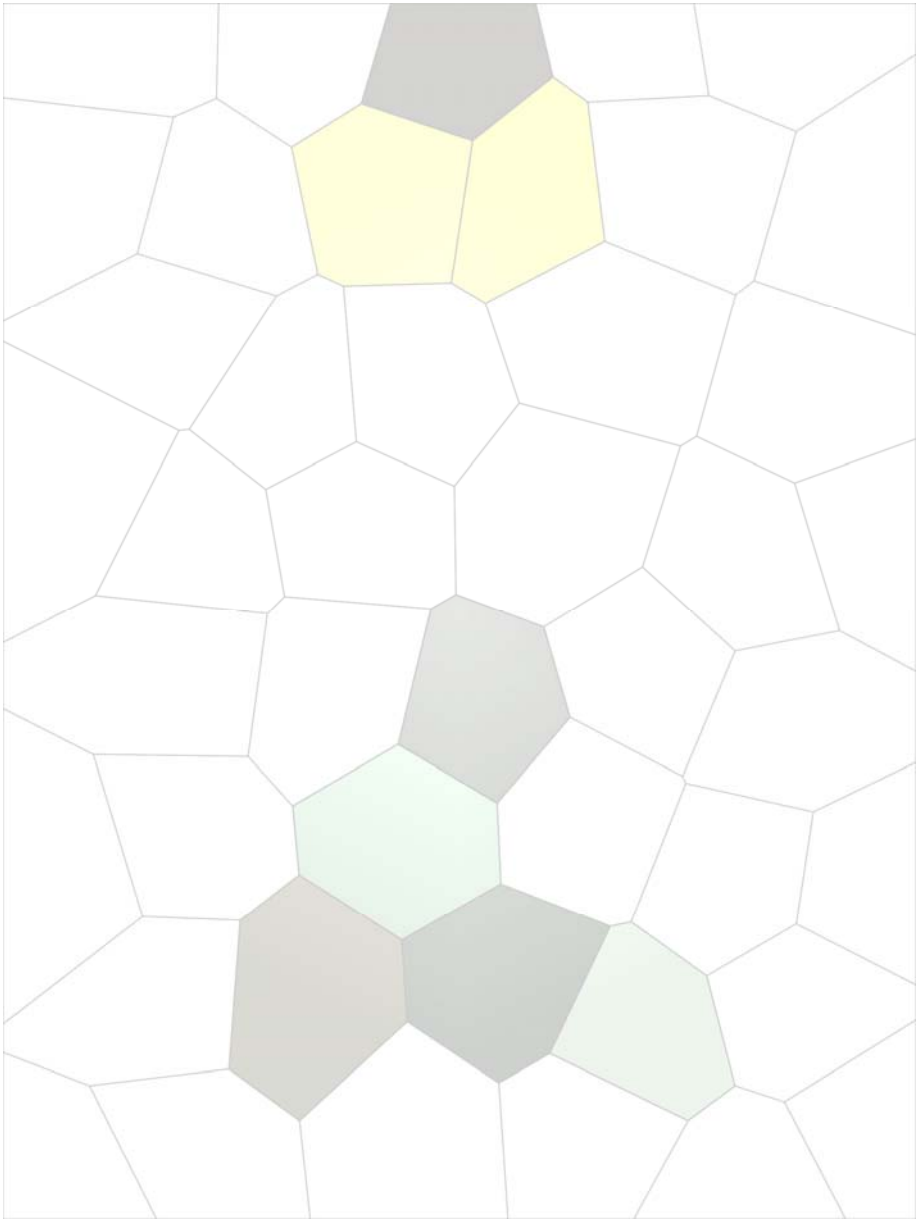
These three programs share on major similarity, site specific design. As many pundits have argued, this does not render itself to quick wide spread implementation. This, however, is not the intent behind programs like Rural Studio, BaSiC Initiative, and URBANbuild. Through their approach of intimately understanding the culture of those they help, they are able to give these people the best possible architecture to meet their specific needs. This sentiment, in turn, gives their residents a unique relationship with their new house. Similar to a new home buyer constructing a new house, these people feel a special attachment to their home; it is not just a place to live in but a reflection of their beliefs and values. Reacting and design for a specific cultural identity instills within these residents a sense of pride, ownership, and net worth; quintessential elements of a sustainable community.

Using social justice programs like Rural Studio, BaSiC Initiative, and URBANbuild, architecture can better and more effectively address social justice issues such as inadequate housing. Using Lansing, Mi as the site for this study, it offers this

thesis the opportunity to explore what housing may begin to look like in an urban context. Lansing, similar to many manufacturing cities in the mid-west, is facing urban issues like decentralization, loss of population, and a loss of economic base (15). These issues, already prevalent prior to the 2008-2009 recession, have increasingly become areas of great concern for city governments and its residents. Through a reanalyzation of its current architectural condition, this thesis study can provide input into a new urban vernacular. Using other architectural social justice programs as the basis for this thesis, I hope to address issues of inadequate housing, most commonly centralized around old abandoned manufacturing centers. The loss of a sense community due to the loss of jobs and stiff housing market has resulted in communities losing their identity and further falling into a state of disrepair. By understand current social conditions and interpreting them through an architectural application, a renewed sense of hope and value can help to spur future growth and prosperity. It should be the goal of architecture to "not only have a warm, dry house, but to have a warm, dry house with a spirit to it" (16)

Humane Habitat

Samuel Mockbee
Sergio Palleroni
URBANbuild



Humane Habitat

Samuel Mockbee

On the banks of the Black Warrior River in Hale County Alabama, assuming you would drive through this part of the country, you would find an assortment of contemporary buildings ranging from modest homes to open air community structures and even an award winning chapel. This section of Alabama belongs to the infamous "Black Belt" region; originally named because of its thin layer of black top soil but is now understood as a demographic term due to the large proportion of freed slave descendents. Throughout the decades time has stood still for most of the "Black Belt" region, but most noticeably in Hale County, the poorest county of Alabama (Virshup 72). It is here that, in 1993, Samuel Mockbee and D.K. Ruth established a truly remarkable studio, the famous Rural Studio.

Drawing on his experience as a designer in the 1980s, Mockbee guided his students in their design, challenging them to see uses for materials typically regarded as trash and asking them to focus on the beauty of all things, including the clients, as inspiration for their design. It is no wonder that the studio's work greatly reflected that of their professor. Samuel Mockbee's charisma and energy for what he believed in, "architecture of decency", naturally has rubbed off onto his students. This

Samuel Mockbee

"architecture of decency" is rooted in southern culture, drawing on its mythical and controversial past. The pastoral backdrop of Alabama, indeed much of the south, in which Samuel Mockbee immersed himself and his students garners with it images of a past repeatedly romanticized and often vilified. Dotting this landscape are remnants of Victorian plantation homes, decaying farm houses and barns, rotting shanties and shacks, and the omnipresent mobile home (Dean 8).

It is, perhaps, through this juxtaposition that Mockbee found his greatest influence, and one that he hoped to impress upon his students and the architecture community as a whole. His own personal history with the tensions facing southern culture, one of romanticism and equally one of great regret, seems to have found expression through his architecture. The exaggerated roof lines, choice of building material, and even building layout all seem to hint at a nagging tension within Mockbee's consciousness. Truly, through his unorthodox use of materials and shapes he eloquently surmised southern culture while pointing to his future for it—"architecture of decency".

It is not merely, as Lori Ryker states it, "…the architecture of Mockbee Coker is a celebration of the commonplace, even as it exemplifies the highest aspirations of high-art culture, in a gentle and almost mystical

mix" (Ryker 24). Although stylistically this may hold true, on a fundamental level more is at work in Mockbee's design. Through his private architecture practice and Rural Studio, he addressed the social situation facing Alabama's poorest counties; and he did this through others in the hopes that they will carry out his mission. Mockbee's studio gives design, at no charge, to those whom architecture would never normally touch. His students design and build houses, chapels, community centers, baseball parks, and a host of other building for the sole benefit and use of their rural communities. Their designs, and ultimately the final built product, give something to these communities which history has taken from them, dignity and a sense of self. Ironically it is through trash that the Rural Studio helps those who society has largely treated as trash. The materials, forms, designs, and even the studio become a sort of social commentary.

Samuel Mockbee and his Rural Studio attempt to address the blight facing the poor of the "Black Belt" Region in Alabama through architecture and design. He has recognized that by drawing from an area's historical, social, and architectural landscape, he can create architecture which not only functions well but architecture which his clients can claim ownership over. His use of familiar materials (traditional and nontraditional), and predominate shapes of

Samuel Mockbee

the area, although wild and alien at first glance, are the cornerstone of his design process and ultimately create buildings which people can relate to. In this way architecture is so much more then just high design, it is"architecture of decency".

"students create something wonderful—architecturally, socially, politically, environmentally, esthetically. That's the mission of the Rural Studio. And once they've tasted that, it's forever there. It may go dormant for a wile, but at least they've experienced and created something that they're not going to forget" (Dean 13).

Humane Habitat
Sergio Palleroni

In 1995 Sergio Palleroni, along with two other colleagues, helped to form BaSiC Initiative, continuing a tradition that began nine years prior. Rooted in its mission to help the poor indigenous farmers of central Mexico, Palleroni has expanded the studios scope in a somewhat unique way. Instead of just looking for the worlds poorest of the poor to help, he has challenged his students, initially at the University of Washington but later at the University of Texas, to look closer to home and find those among us that need attention. It is primarily through his outreach programs to the local community and those of central Mexico that he is making his greatest impact: providing great design which the community can emulate to become self sufficient.

One such project, indeed the studios first local outreach program, took on the plight of migrant farm workers in Washington state. Palleroni and his studio sought to design and develop housing for migrant workers that could be reproduced in a weekend with a very small budget. The ensuing project, Maldonado Farm, provided an excellent outlet to study and move forward with this program. After many setbacks the studio showed how a waste material, hay bale, could be used to provide

Sergio Palleroni

a comfortable housing environment at very little cost. The studio showed how a cheap and readily available material could be used on a mass scale, thus addressing the social needs of a migrant community. The hay bale technology allowed for a housing type that could be easily reproduced at an inexpensive cost, but also done so in a matter of days. Ultimately this became the cornerstone for BaSiC Initiative, easily replicable design which a community could adopt.

"When you offer a good idea, it catches on. But the community has to feel like it's their own" (13). These words by Sergio Palleroni best describe his approach towards social justice oriented architecture. He understands that if architecture truly wants to make a difference, it cannot be force fed to clients, but rather, adopted by them. Architecture can only be successful if its users embrace it; it is this idea that BaSiC Initiative strives to accomplish. One such project that exemplifies this approach is the Hogar Del Viento project in Cuidad Obregon, Mexico. Partnering with PROVAY, a group of 40 studio participants designed and built two small homes for a typical Yaqui Indian family. The project's goal was to provide culturally appropriate ecological and economic housing which could be used as a sustainable housing prototype. With a large portion of the projects budget directed towards concrete foundations, the studio relied on traditional

Sergio Palleroni

building technology (adobe) to construct the homes. Because the Yaqui people traditionally build in this manner, it makes the prototype easily repeatable and culturally appropriate for its users.

Following in the footsteps of this project, Sergio Palleroni and his studio undertook the task of addressing housing needs in the recently devastated areas of Hurricane Katrina effected areas of Louisiana. As Palleroni puts it, "We work in places that lack decent housing, community facilities, and the ability to help themselves" (13). This specific project, Shed Design, tackles the issue of emergency housing through a design based on BGF (Building Goodness Foundation) housing standards. Using locally salvaged materials, the shed reflects the character of its community while utilizing sustainable building materials to create a better alternative to FEMA trailers.

Sergio Palleroni's idea of social justice in architecture extends to his understanding of sustainable communities. By addressing the needs of informal squatter communities of Mexico, he hopes to shed light on the social needs of maintaining the dignity of these people. Understanding the importance of the social characteristics cooking has for the community, BaSiC Initiative designed three solar kitchen prototypes to provide areas of community as well as free heat for cooking. Using bicycle parts and small vanity mirrors for the

reflective dish, the studio retrofitted a current community school into a new sustainable community center. The building utilizes solar energy for cooking, heating, hot water, day lighting, as well as incorporates a grey water filtration system and rain water catchment. This project rethinks not only the energy needs of a kitchen but also its use of light and water. Providing a building which requires no additional input of energy allows for the poor squatter communities to have basic necessities, like clean water and energy for cooking. This project provides a place for the marginalized to be accepted and not forgotten by the larger community.

Humane Habitat

URBANbuild Studio

URBANbuild, a studio of Tulane University in New Orleans, Louisiana, got off to a bright start in August of 2005. The University, School of Architecture, professors and students all held high aspirations of addressing the deteriorating inner-city neighborhoods of New Orleans. It was their intent to provide these areas with some sense of progress and value through a design build studio. However, only a few weeks into its inception, URBANbuild faced its first, and possibly most catastrophic, setback; Hurricane Katrina. The faculty and students now faced the immediate problems of water damage, drastically reduced population, and a loss of any sense of community. The design build studio seized this unfortunate event and used it as an opportunity to play a first hand role in the rebuilding of New Orleans. Through the hard work of its faculty and students, the studio's mission is to redefine a new contemporary vernacular for New Orleans while focusing on the poor urban neighborhoods of the city (6).

To address the issues facing post-Katrina New Orleans, URBANbuild has designed and built 4 housing projects to date. It is through these housing projects that they hope to reestablish the neighborhoods hardest hit by the resulting

floods of hurricane Katrina. The studio has recognized that the vitality of the larger city depends upon the success of its neighborhoods, even those outside of the historic and picturesque districts (6).

To best provide a new and appropriate vernacular for these neighborhoods the studio analyzes the current architecture in the area, common building materials and techniques, and neighborhood activities which their buildings need to address (6). Through this investigation the studio has come to realize that architecture addresses not only architectonic needs, but also cultural and social issues facing different groups of people. The studio began asking questions like, "What does 'affordable' mean in post-Katrina New Orleans?", "What does 'sustainable' mean in a city below sea level?" and "what should a 'new' house, one specifically designed for this urban, social, economic, and climatic context look like?" (Maginn 31)

While each of the four complete URBANbuild projects addresses different issues facing their immediate sites, they all tackle various larger architectural issues facing New Orleans and issues that arise in an urban context. Matters of sustainability, architectural historical context, new building techniques, and standard building techniques become the individual

architectural focus of each individual project.

URBANbuild 01: "explores the transitional relationship of public to private space in connection to the streetscape and addresses issues of programmatic adaptability, elevation from ground in response to flooding, and maintaining the relationship of the dwelling to the public street life that is typical of New Orleans housing typologies. The 1,370 square foot house is a 3 bedroom, 2 bath, single family residence. The house is a wood framed structure on masonry piers and includes living, dining, and kitchen space, off street parking, and a private rear yard." (6)

URBANbuild 02: "is a modern variation of the historic Camelback housing type found throughout New Orleans. This 1320 sf house provides efficiency in plan and the ability to expand the scheme to take advantage of a larger lot. The house is formed by two folding metal walls which contain the living spaces, entry, and porches. This house takes advantage of its corner lot by engaging the two street elevations, utilizing a perimeter of porches. Built with panelized steel stud walls, URBANbuild 02 is an exploration of new building technologies and their potential in the process of rebuilding the city of New Orleans." (6)

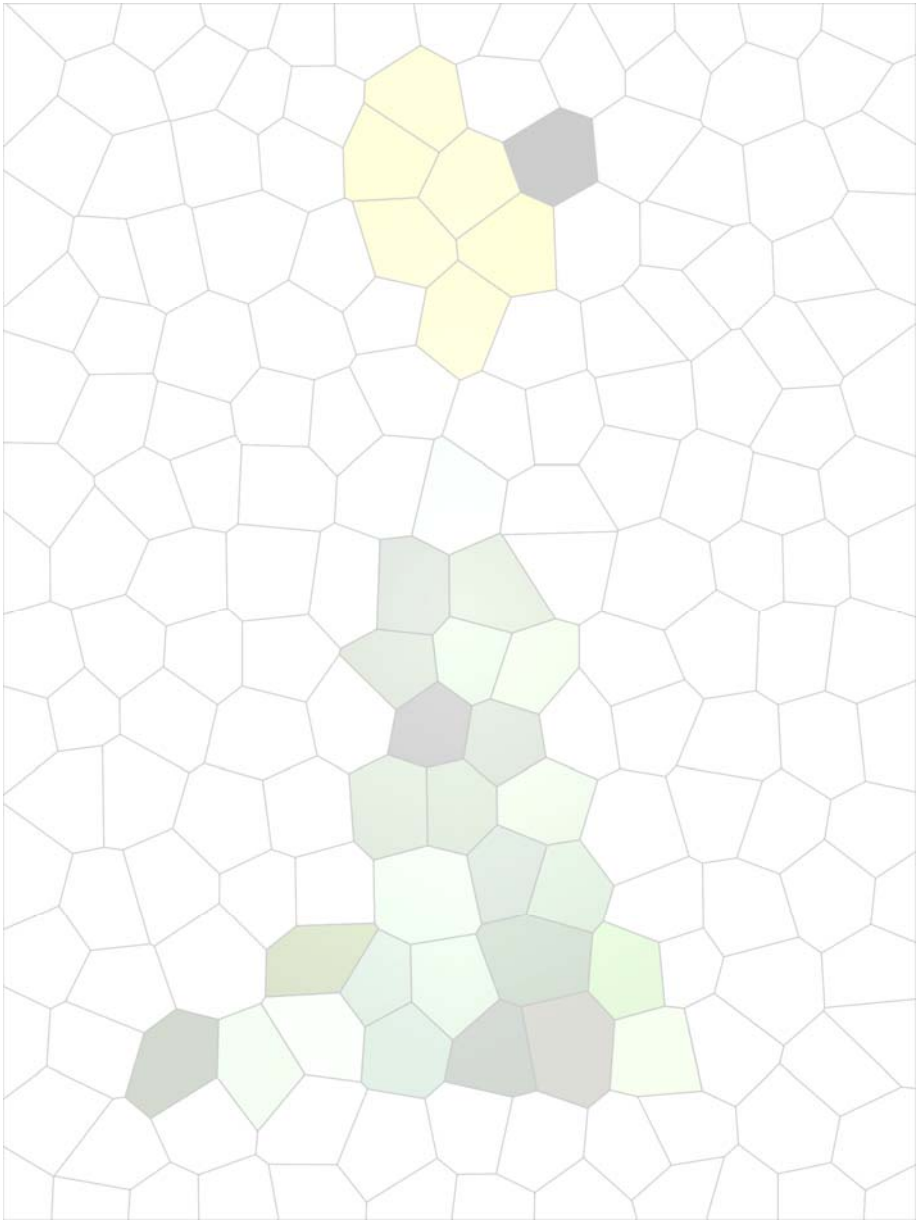
URBANbuild 03: "engages the street with adaptable public spaces on the ground

floor; private spaces are raised off the ground and protected from the street. The folding of a corrugated metal plane unifies the upper and lower levels while creating a clear definition of public and private elements. The house is constructed of Structural Insulated Panels, and features 3 bedrooms, 2 baths, and includes living, dining, and kitchen space as well as a private yard and generous deck/porch space." (6)

URBANbuild 04: "explores the relationship of public and private spaces in connection to the streetscape. With a focus on sustainability, URBANbuild 4 endeavors to meet or exceed LEED certification standards. The house takes advantage of its corner lot through fenestration and porches, engaging the house with the neighborhood while simultaneously providing privacy for the homeowner. The screening system allows the homeowner to adjust the transparency of the façade in relation to light and visual connection to the street. Built using traditional wood frame construction, the house is 1,200 sq. ft. and features 3 bedrooms, 2 baths, as well as a living room, kitchen, dining area, and private garden." (6)

Site Implication

Historical Context



Site Implication

Historical Context

As Mockbee, Palleroni, and URBANbuild have demonstrated, understanding the local environment, its culture, and its socio-economic makeup are essential to providing culturally relevant architecture. By looking at a site's history, architecture can gain a better understanding of its clients, their needs, and their environment. This understanding is essential in providing architecture that truly responds to its users. In this way, the site provides a basis for design, one in which grows out of the clients specific needs.

Lansing, Michigan grew out of relative insignificance to a leader in varying fields ranging from education, politics, industry, and healthcare. The City's story begins rather precariously with its founding by two brothers from Lansing, New York. In 1835 they sold plots of land from the fictitious city of Biddle City (located in present day REO Town), predominately under water for most of the year to unsuspecting residents of their home town. Nearly twelve years later the settlement of 20 people, those that remained from the original scam, became the home of the state capitol. Within months the "city" began to grow along three points of the Grand River: "Lower Village", present day Old Town; "Upper Village", present day REO Town;

Historical Context

and "Middle Village" present day downtown Lansing. Within two years the city had grown to nearly 3,000 residents and by 1905 it would become the birthplace of automobiles in the United States, forever changing the course of Lansing and greatly affecting its future. As the car industry grew in Lansing, so to did auxiliary businesses needed to support the burgeoning automobile manufacturing industry. Stamping, metal fabrication, part manufacturing, and logistical warehousing sprang up around the surrounding area. Neighborhoods grew around these industries providing workers with houses with a close proximity to work.

The Baker-Donora Neighborhood in REO Town is no exception to this economic and cultural trend of growing industrial centers. Located to the north of the neighborhood, the John Bean Building provided an economic center for the neighborhood residents. Originally manufacturing automobile parts, this prominent building helped to forge the neighborhoods social and cultural characteristics. As the foundation of the neighborhood, many of the residents worked high and low skilled trades with in the building. The steady jobs, with their high pay and great benefits, bestowed on many of the families a great opportunity to live in a relatively high standard of living as compared to the norms of the rest of the

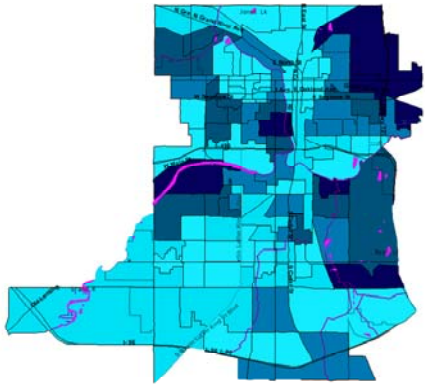
country. As such, many of the neighborhoods residents enjoyed the benefits of a excellent school system, strong community support, and stable home environments. Subsequently, however, as the economics of the car industry changed, so to did the needs of the John Bean Building. With new manufacturing technology and a reduced work load, many residents of the Baker-Donora Neighborhood began to loose their jobs. The negative effects would not be realized for quite some time, the decentralization of the automobile industry took many years to unfold, but its realities on the cultural and social impacts of the neighborhood would become present with each passing year. By the 1980s the Baker-Donora Neighborhood would be in complete decline. IT soon grew a reputation as one of the hardest neighborhoods to live in. Drugs, prostitution, and gang activity would soon proliferate the once picturesque manufacturing boom neighborhood. As a sign of its disinvestment by the mid 1990s over 70% of the neighborhood would be rental homes and would be targeted by the local municipal government as a priority for revitalization. Today the neighborhood has seen a slight improvement of its image. Much of this is due to the work of nonprofits in the area in conjunction with the neighborhood center.

Historical Context

Currently the Baker Donora Neighborhood is still considered a low income neighborhood. The average home value has hovered around $38,000 for the past ten years; although, it is expected to sharply decrease due to the economic conditions of late 2008 through early 2010. When compared to the greater Lansing Area, this neighborhood's medium family income falls well below the average at a meager $14,000. It should come as no surprise that this area also has one of the lowest averages for the percentage of population with a bachelor degree or higher: 11.6%. As mentioned earlier the percentage of renter population, typically a good sign indicating the economic health of a neighborhood, was at an all time high of over 70% in the 1990's it has fallen to a still unacceptable 50%. Recently the neighborhood has teamed with the Greater Lansing Housing Coalition in order to improve their image, both physical and perceived. The GLHC is an organization devoted to helping low/moderate income families buy and maintain houses. To date, 15 houses have been given face lifts and resold in an attempt to help revitalize the area.

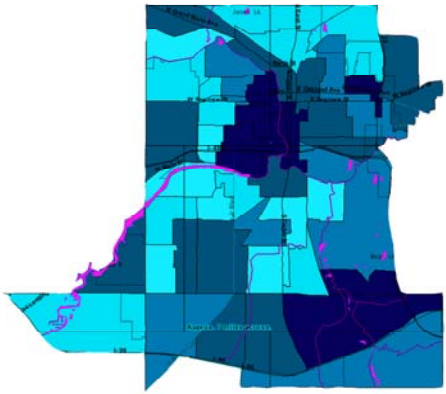
Percent of Population with Bachelor Degree or Higher

2.5 - 11.6
12.4 - 19.8
21.5 - 30.3
32.1 - 43.4
50.0 - 70.6



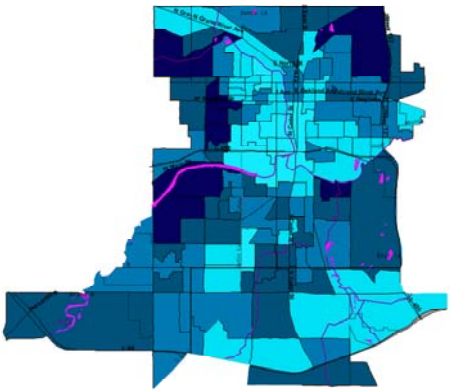
Percent of Population Which Rents Houses

4.2 - 16.5
19.3 - 27.3
32.2 - 37.8
42.6 - 59.7
71.2 - 100



Medium Family Income

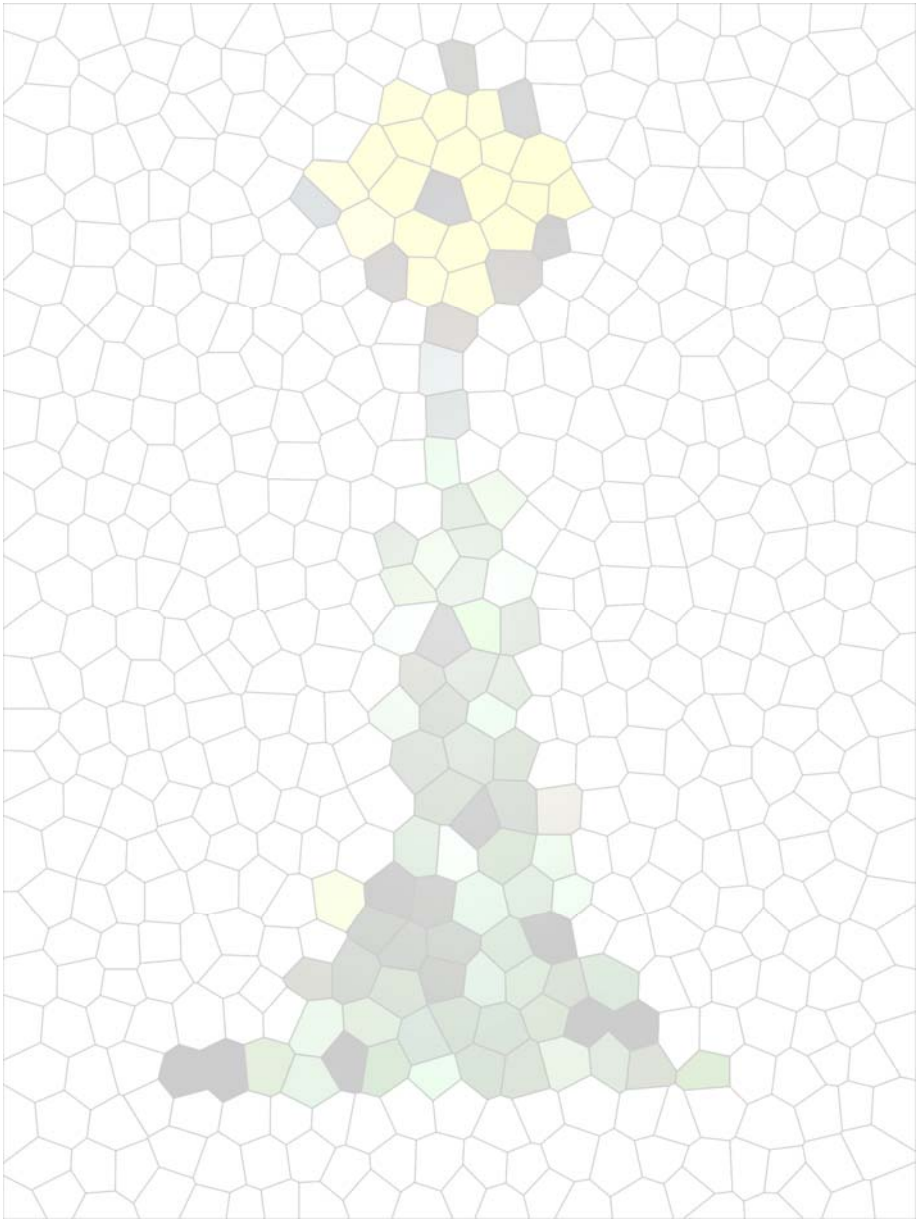
11,940 - 14,523
25,609 - 32,880
34,248 - 40,811
42,426 - 51,124
53,802 - 70,082



David Lenz

Human Habitat

American Houses
Architectural Characteristics



David Lenz

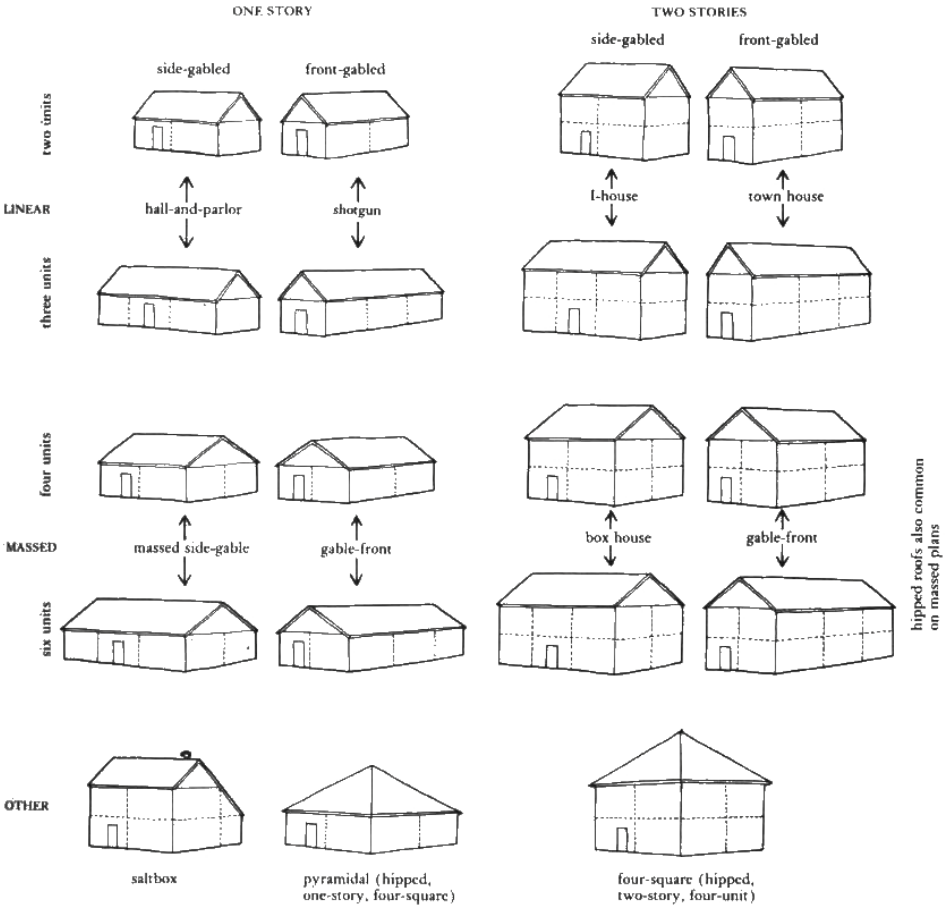
Human Habitat
American Houses

When looking at the human habitat, many different aspects of our built environment come to mind. Things like our urban centers, suburbs, rural communities, and even at a micro level our work places, play places, and living places all contribute to our collective human habitat. Just as Samuel Mockbee, Sergio Palleroni, and URBANbuild have focused on housing, it is our basic need for shelter which drives our human habitat. The cover of Marc-Antoine Laugier's *Essay on Architecture* famously depicts the age old question of when does a structure become more then just a place of shelter (*The Primitive Hut*)? If our human habitat is defined by our different cultures, traditions, and beliefs; then it follows that our architecture must reflect that if our built environment is to be more then just a primitive hut and actively participate in our human habitat.

When looking at housing of the many different cultures of the world we can see that a wide variety of approaches have been taken when addressing the transformation of the primitive hut into architecture. In much of the United States, our housing has developed as a direct result of our colonial past. The traditional folk houses of Western Europe became the basis for our architectural development of housing. Four

American Houses

basic house types sprang up in the early American colonies; hall-and-pallor, shotgun, I-house, and the town house. These archetypes are characterized by their one unit deep plans and were either side gabled or front gabled in elevation. Due to America's harsh climates in the north a massed plan soon became the preferred basic shape for house floor plans. The massed plan is a two unit deep plan allowing for a greater retaining of heat in the winter months. The massed plan was thus applied to the previous four archetypes and became known as; massed side/front gable, side/front gabled box house, saltbox, and four square. These basic shapes are used with many varying housing styles, but in some instances a specific style tends to characterize one of the four main shapes. For instance, Georgian style houses are principally box house and salt box in shape; stick style typically massed gabled-front in shape; Prairie style usually four square in shape; and Adam style mostly massed gable-front in shape. For this reason, shape becomes very important when looking at American houses as they contribute to our human habitat. Because most lack architectural detailing, their shapes and plan are used to define their character and how they relate to the greater architectural environment.


ONE STORY
TWO STORIES
side-gabled
front-gabled
side-gabled
front-gabled
two units
LINEAR
hall-and-parlor
shotgun
I-house
town house
three units
four units
MASSED
massed side-gable
gable-front
box house
gable-front
six units
hipped roofs also common on massed plans
OTHER
saltbox
pyramidal (hipped, one-story, four-square)
four-square (hipped, two-story, four-unit)

Human Habitat
Architectural Characteristics

In order to design culturally relevant architecture it is necessary to look at the current architectural characteristics of a site. REO Town, growing predominately with the success of Oldsmobile and General Motors, holds with in it a variety of architectural styles, both residentially and commercially. This thesis focuses on the residential aspect of architecture and as such, a quick walk through the neighborhoods will give a fairly accurate picture of the architectural characteristics of the area. It becomes evident, very quickly, the quality of design as it relates the proximity of the downtown REO area and river front. The further away from these positive features, the less architectural detail is expressed with in this urban neighborhood. Not surprisingly there is a relationship between social context and architectural expression. Areas of lower social standing are predominately made up of lower quality architecture, where as areas of higher social standing are predominately made up of higher quality architecture.

Although the quality of architectural detailing varies greatly throughout the neighborhood, most of the buildings share similar shapes: massed front-gabled, saltbox,

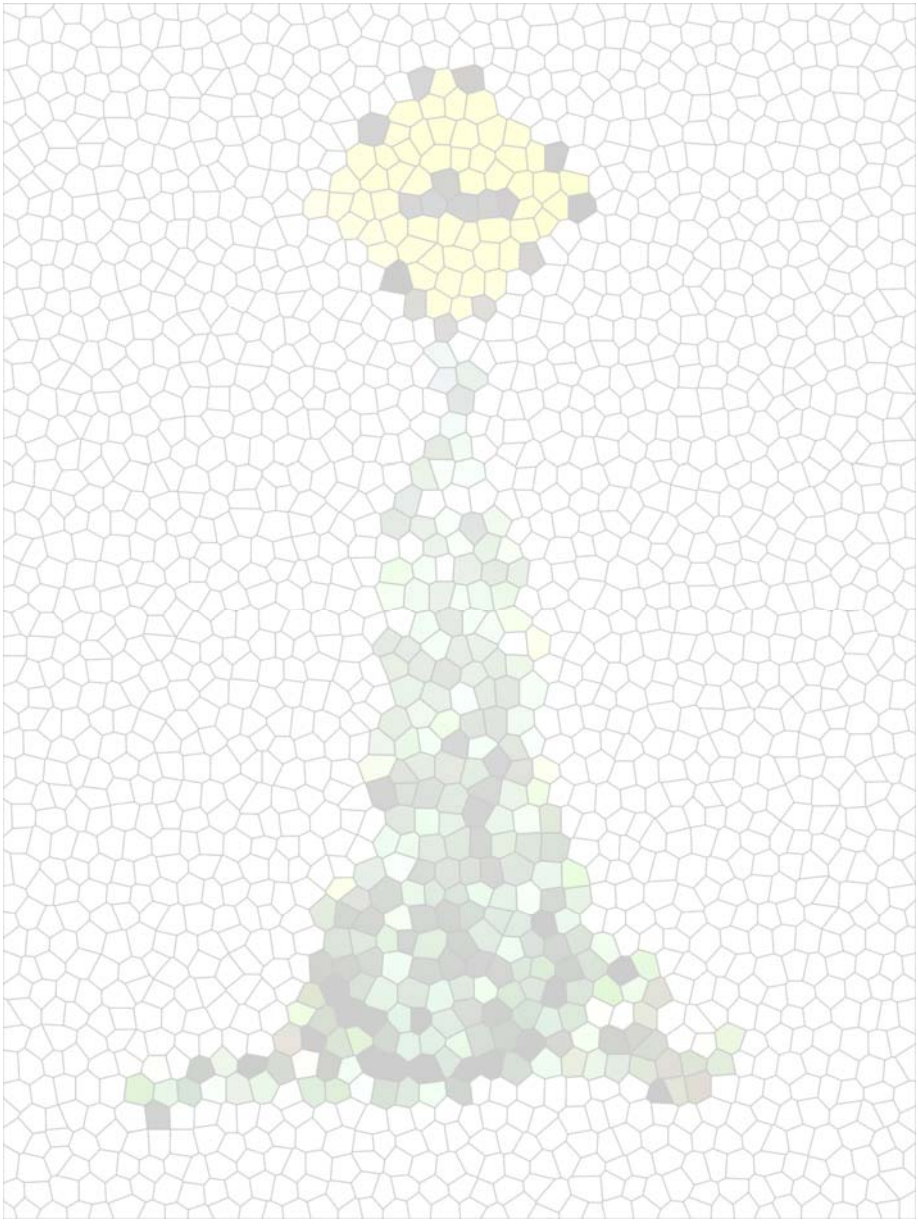
Architectural Characteristics

box house, and four-square. Most of these houses are front gabled, with the exception of the box house, which is primarily side gabled. Because of the time period in which this neighborhood was developed, many of the lower income houses were products of the mail order prefabricated housing market. Companies like Sears, Aladdin, and Montgomery Ward were able to sell prefabricated houses, of varying styles, at a relatively low cost. As these companies began writing loans the mail order housing industry boomed as millions of their products sprang up across the country. Most of the houses in REO Town, and specifically the Baker-Donora neighborhood, are mail order houses originally built in a craftsmen style. These houses would have typically been defined by low-pitched roofs, unenclosed eave overhangs, exposed roof rafters, false beams/braces, and full or partial width porches with roofs supported by tapered square columns.

Many of these defining characteristics have either been remodeled, replaced or removed altogether. However, as stated earlier, many of the remaining defining attributes can be found in the shape of the building or its main organizing features. For example the predominant shape of the massed front-gabled houses are

their porches (either covered or open). Although this can also be said of the four-square houses, their principle feature is their square shape and their plan. The plan of the four-square house is typically organized around four large rooms in each corner with centrally located circulation and utilitarian functions. The box house's main characteristic is its shape. None have entry porches and their openings are symmetrical throughout all the facades. Lastly the saltbox houses are typically defined by dormers on the second floor or attic spaces.

Architectural Studies



David Lenz

Humane-Human

Analyzing the site through drawing and modeling we can gain a better understanding of existing conditions. This knowledge renders with it the ability to better plan and effectively design solutions to fit within a certain context. These studies are the first steps to understanding the existing architectural site conditions. Through their analysis, an attempt was made to change elements of their design while retaining their overall character. This was done for a variety of reasons. Chief among them is the importance of vernacular architecture as it relates to acceptance by the community. As the precedent studies suggest, recognizable architecture allows communities to take ownership of it and consider it a valuable piece of their community. It is through these studies that by manipulating their current architecture to reflect a more contemporary style but also respond to and maintain certain vernacular characteristics we can learn what elements need to remain and what elements can be successfully modified.













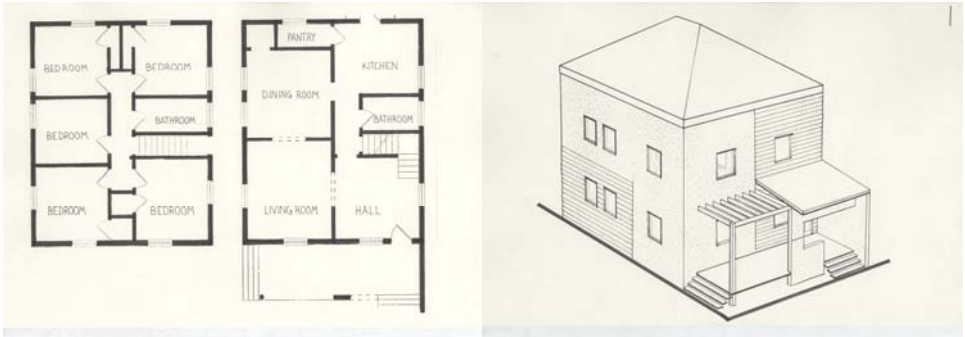


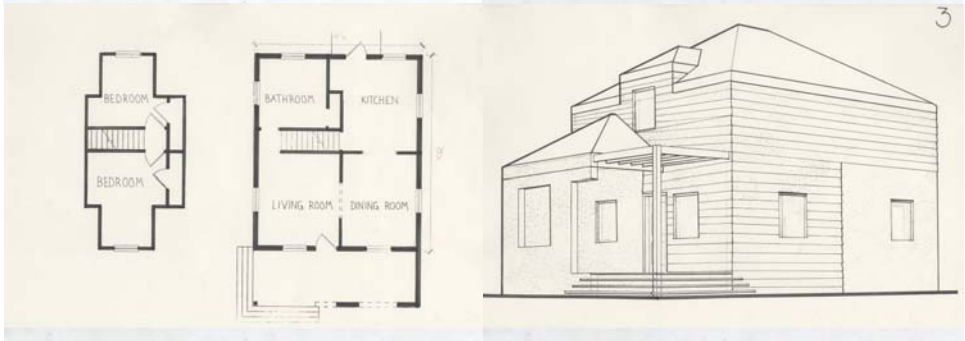
Initially, these studies may seem far fetched when considering what architecture is appropriate for a traditional urban neighborhood. However, these studies indicate the importance of certain roof lines, massing shapes, and even materiality. These aspects, and many more, all speak to the architectonics of the neighborhood; they read as a cohesive unit. Be recognizing what the important aspects are, we can draw from them and use them as basis for design. For example, if a gabled roof is a predominant characteristic of a neighborhood, then by emphasizing and using it as a main design element reaffirms its place in the area. This strategy can also be used to help emphasize cultural elements, like home and hearth. Ultimately, as the precedent studies suggest, a connection and celebration of people's culture through architecture helps to give and solidifies people's identity and sense of self worth. These studies help to demonstrate which architectonic elements can be expressed in order to enhance and bring to light cultural elements of a society, in this case the Baker-Donora neighborhood.

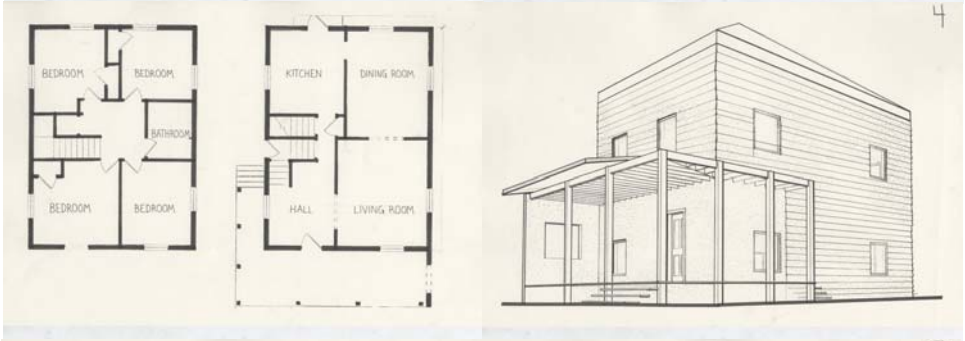
Humane-Human

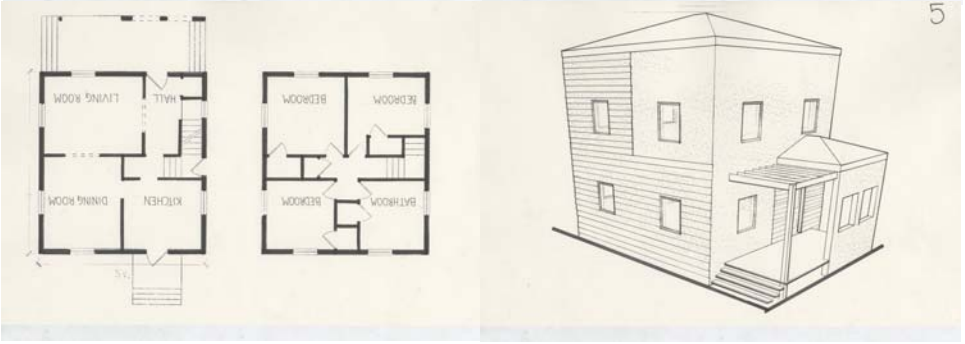
Just as studying the architectonics of an area can lead to design decisions, so can studying the architectural history of an area. As noted earlier the Baker-Donora neighborhood grew around the success of the auto industry of Lansing. The economic boom in the 1920s resulted in a huge output of car production. Naturally this increased production required a larger workforce to meet its needs. The question of housing for all these new workers, with money to spend, found an answer from pre-manufactured housing; or as it is commonly referred to, catalogue housing.

The following studies analyze important features of pre-manufactured housing. There was a predominant focus on the American four square house due to its preeminence in the Baker-Donora neighborhood. Through analyzing these studies we can determine what architectural elements; whether that is organizational elements, massing elements, fenestration elements…, are important to the formation of these homes.


BEDROOM
BEDROOM
BEDROOM
BATHROOM
BEDROOM
BEDROOM
PANTRY
KITCHEN
DINING ROOM
BATHROOM
LIVING ROOM
HALL
1


BEDROOM
BEDROOM
BATHROOM
KITCHEN
LIVING ROOM
DINING ROOM
3


BEDROOM
BEDROOM
BATHROOM
BEDROOM
BEDROOM
KITCHEN
DINING ROOM
HALL
LIVING ROOM
4

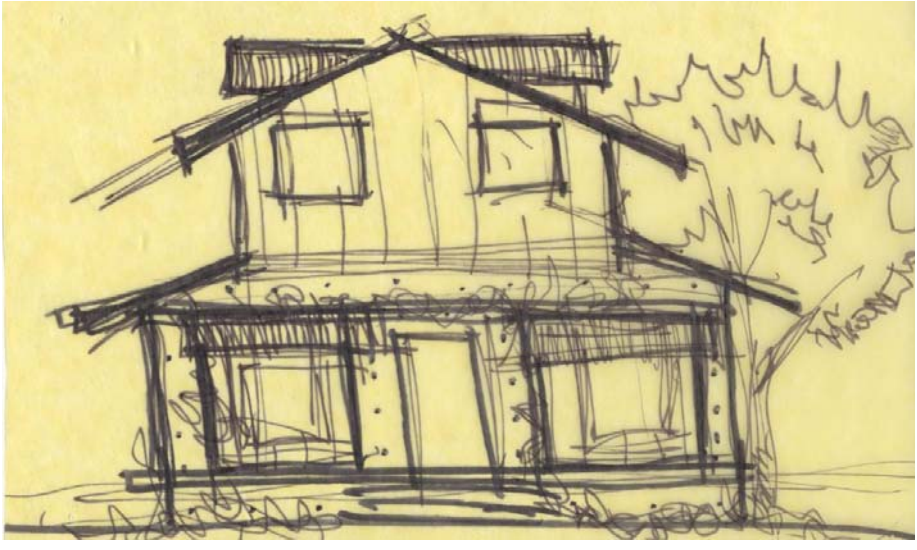

LIVING ROOM
HALL
KITCHEN
DINING ROOM
BEDROOM
BEDROOM
BEDROOM
BATHROOM
5

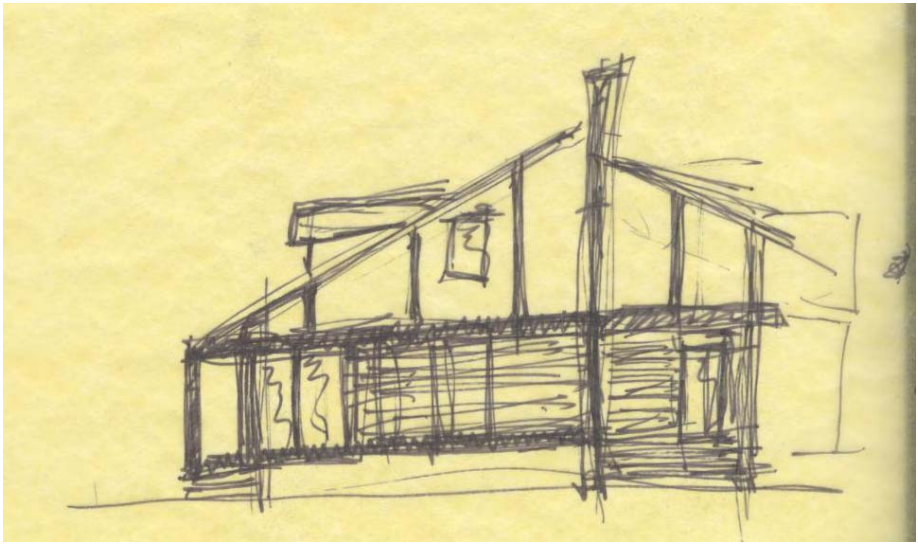
Humane-Human

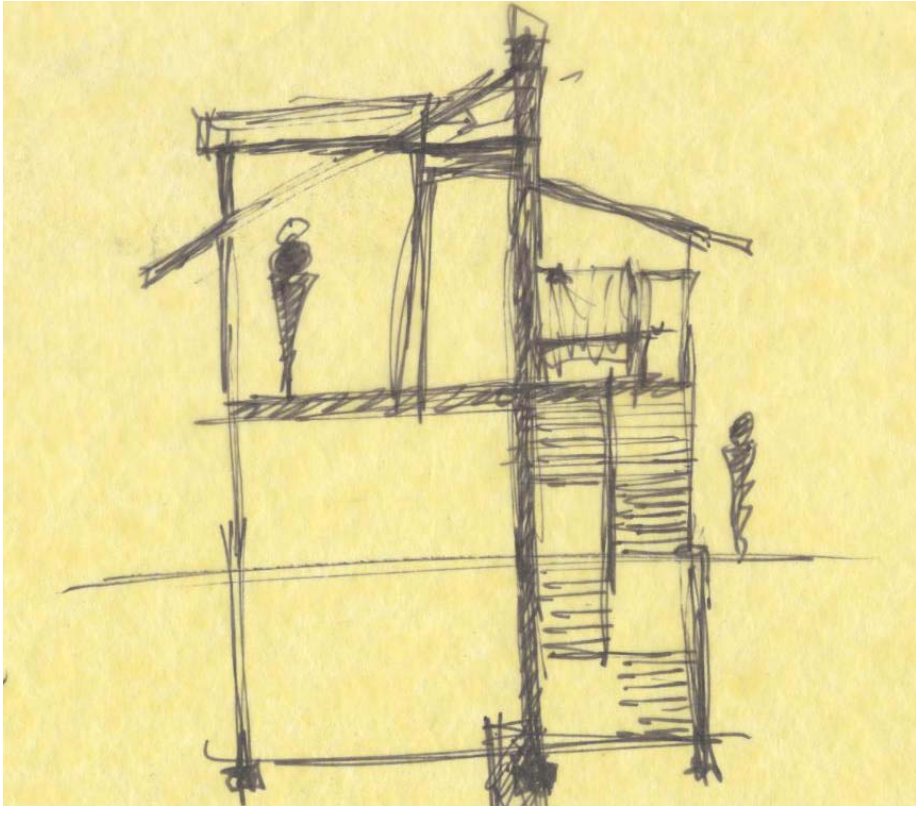
This previous study demonstrates two aspects of pre-manufactured housing: the importance of organization and symmetry. The four square house is organized in two ways, either around room quadrants or a circulation section. In each study a common structural system and cladding system was used to express these quadrants. Because these houses are intended for low income housing, a cheap and easily manufactured structural system was used: concrete panels. The reclaimed barn wood siding emphasizes the quadrants as well as denotes public and private spaces. Because of the harshness of the concrete the wood siding also helps to soften the façade and provide a more natural and humanistic feel.

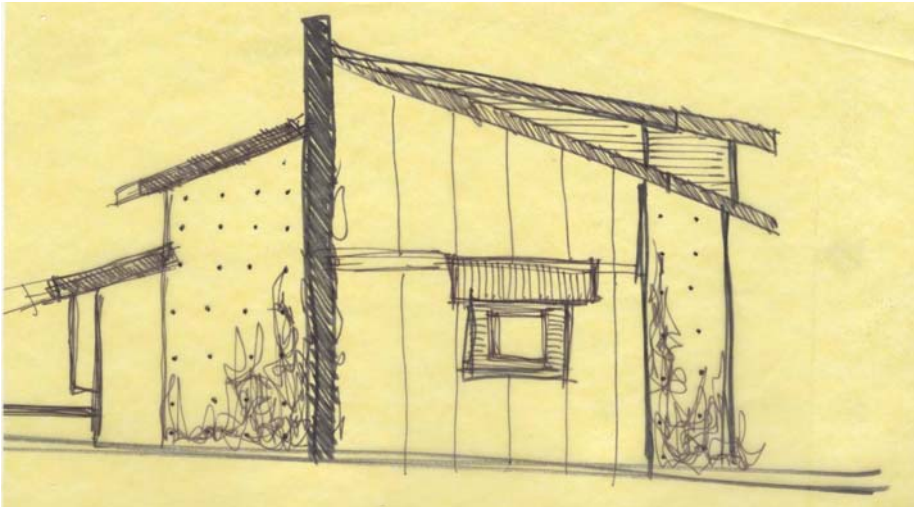
Seemingly a consequence of the organization, the symmetry of the layout as well as the fenestration all contribute to how the house presents itself. These elements lead to a traditional and austere presentation. This speaks to how the neighborhood originally viewed itself as well as the direction the neighborhood intended to go. Although these may not be true today, they still provide an ideal to live up to. These buildings were built with a beaux arts philosophy, a formal approach to architecture and planning helps to positively influence society towards greater "civility".

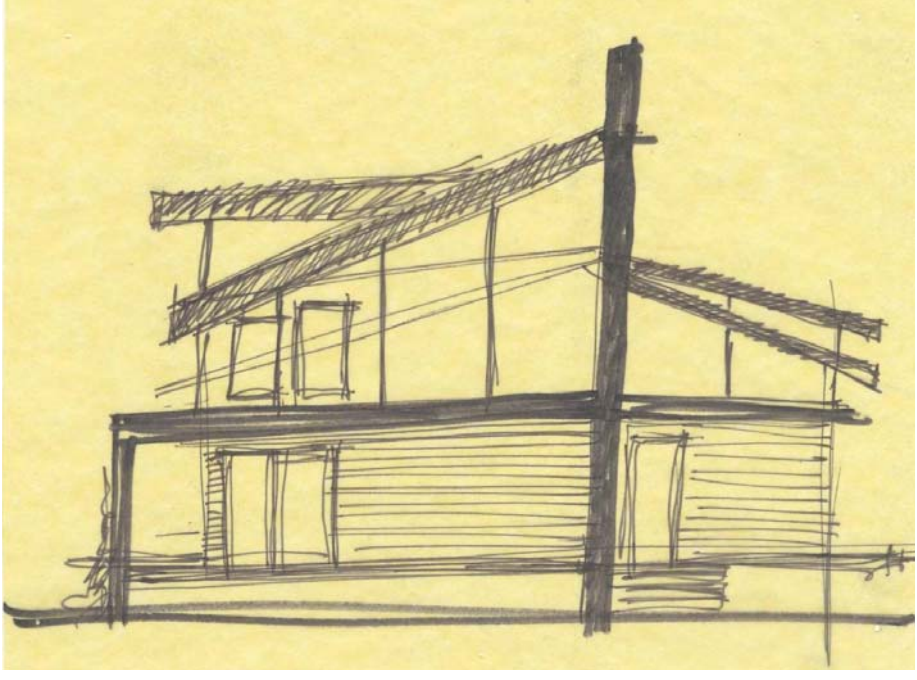
It should be noted, however, there is a drastic difference between the second study when compared to the first. Where as the second study primarily looks at organization and planning characteristics the first study focuses more on cultural characteristics of neighborhood buildings. The combination of these studies becomes paramount when relying on site to inform design. There is a necessity to draw upon both studies when considering an appropriate architectural expression for low income housing in the Baker-Donora neighborhood. The following drawings begin to illustrate the incorporation of the previous two studies.











David Lenz

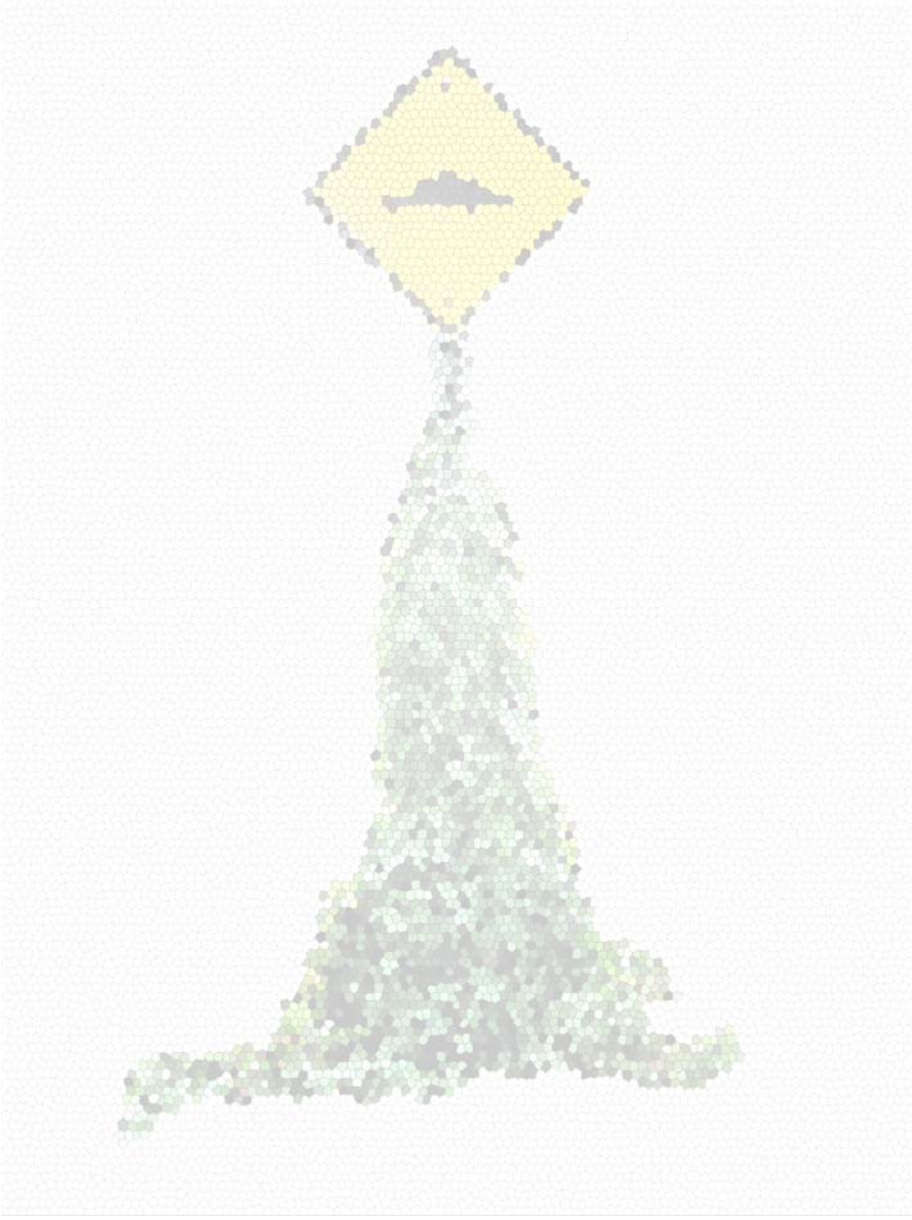
Humane-Human

These studies begin to look at the relationship between organizational aspects and culturally significant expressions. These iterations retain a concrete load bearing wall as a dividing element while drawing upon roof lines as an expression of home and hearth. Various cladding systems are used to denote public vs. private space as well as investigate the difference between hard and soft space. In different iterations wood is used to contrast harder elements and provide for a more natural humanistic feel. The materials are based upon common building materials as well as traditional materials used in the area.

Because these houses are intended for low income housing the economy and speed of a concrete panel system as a load bearing system provides many benefits. However their drawbacks, such as inflexibility in design and need for heavy equipment make it less then an ideal system for low income housing.

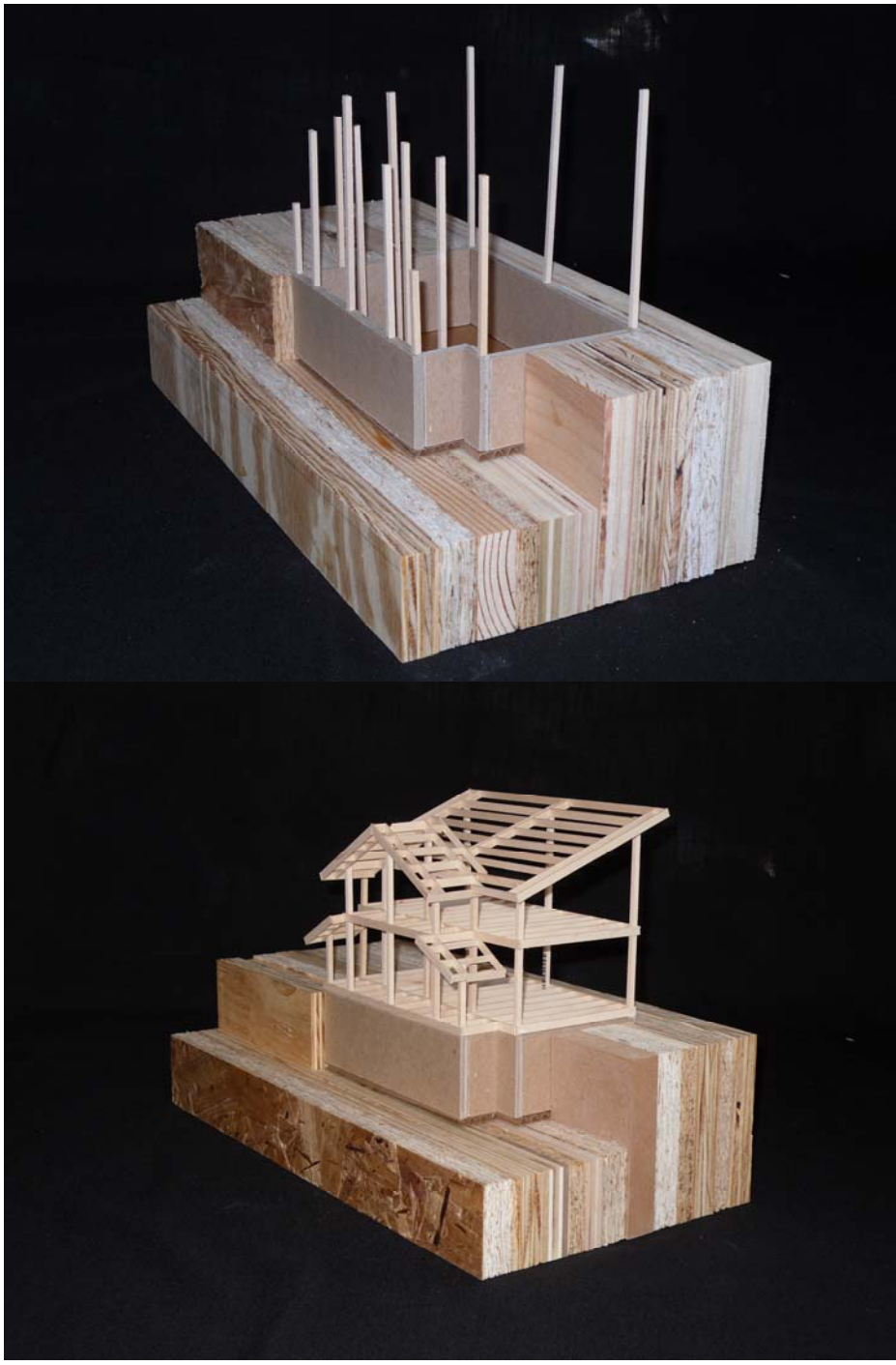
Differentiating roof slopes are used to define spaces on the interior as well as be expressed on the outside. The different slopes not only provide interest but create a hierarchy of interior space. Lager sloped spaces are used in high circulation and gathering space, thus denoting the importance of family life and public spaces. Private spaces are denoted by low sloping roofs. Due to their inherent nature they create more intimate spaces.

Humane Project



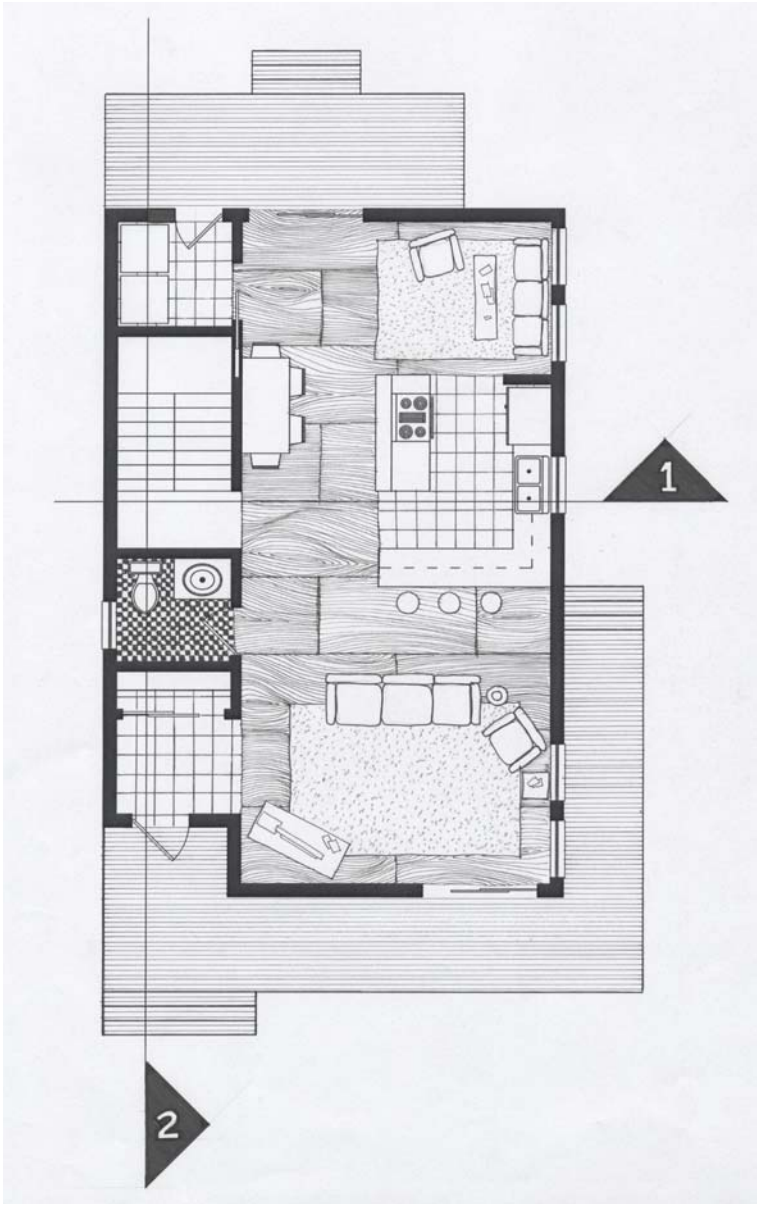
Humane Project

Upon analyzing the previous studies one major aspect became apparent, the need for flexibility in design and structure. Without it, it becomes very difficult to not only express important cultural aspects but also maintain an economy in layout and function. Tackling the structural system became paramount to the basis of a low income housing design. For this reason I settled on a recycled light gauge steel structural grid system. This system allows for two important features. First, there are no load bearing walls, which allows for flexibility in interior layout. Second, every component is cut to length in the manufacturing plant, which allows for quick easy construction. As this design is for low income housing, its potential to be adopted by habitat for humanity inherently makes it an economical system. There is intrinsic economy in mass production. The following images will demonstrate these points.



The previous sequence of images demonstrates the open plan and easy construction method. Each image represents the three basic construction points: foundation and post erection, structural grid layout, and insulation and fenestration close in. By the end of phase three construction can begin on the exterior and interior simultaneously. This allows for quicker project completion time.

The structural system is also used to dictate the organization of the floor plan. Circulation and utility spaces are separated from living spaces. Roof lines are used to express these two separate functions. The following images will demonstrate these points.



First floor Corner House.

Second floor Corner House

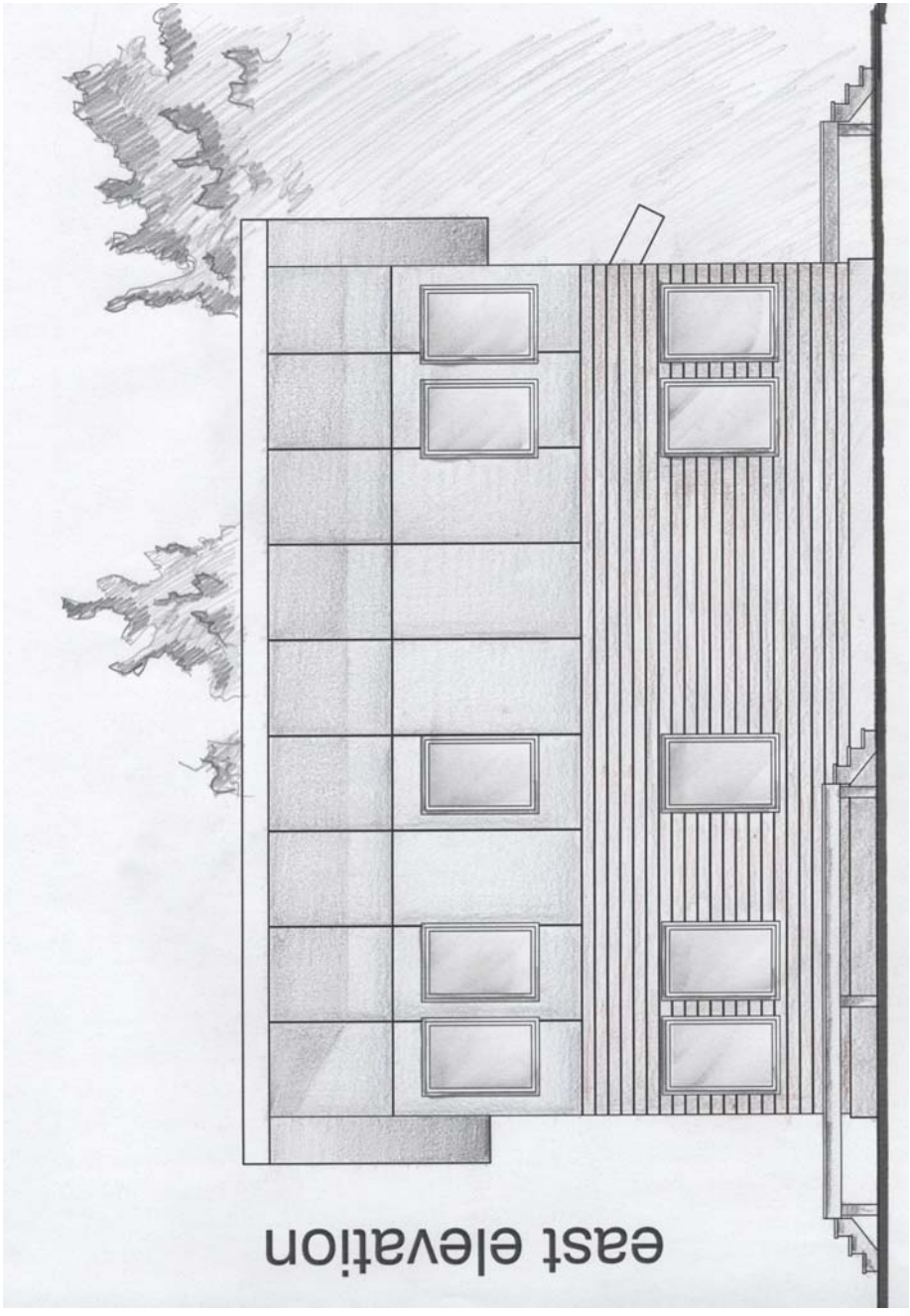
First floor Infill House

Second floor Infill House

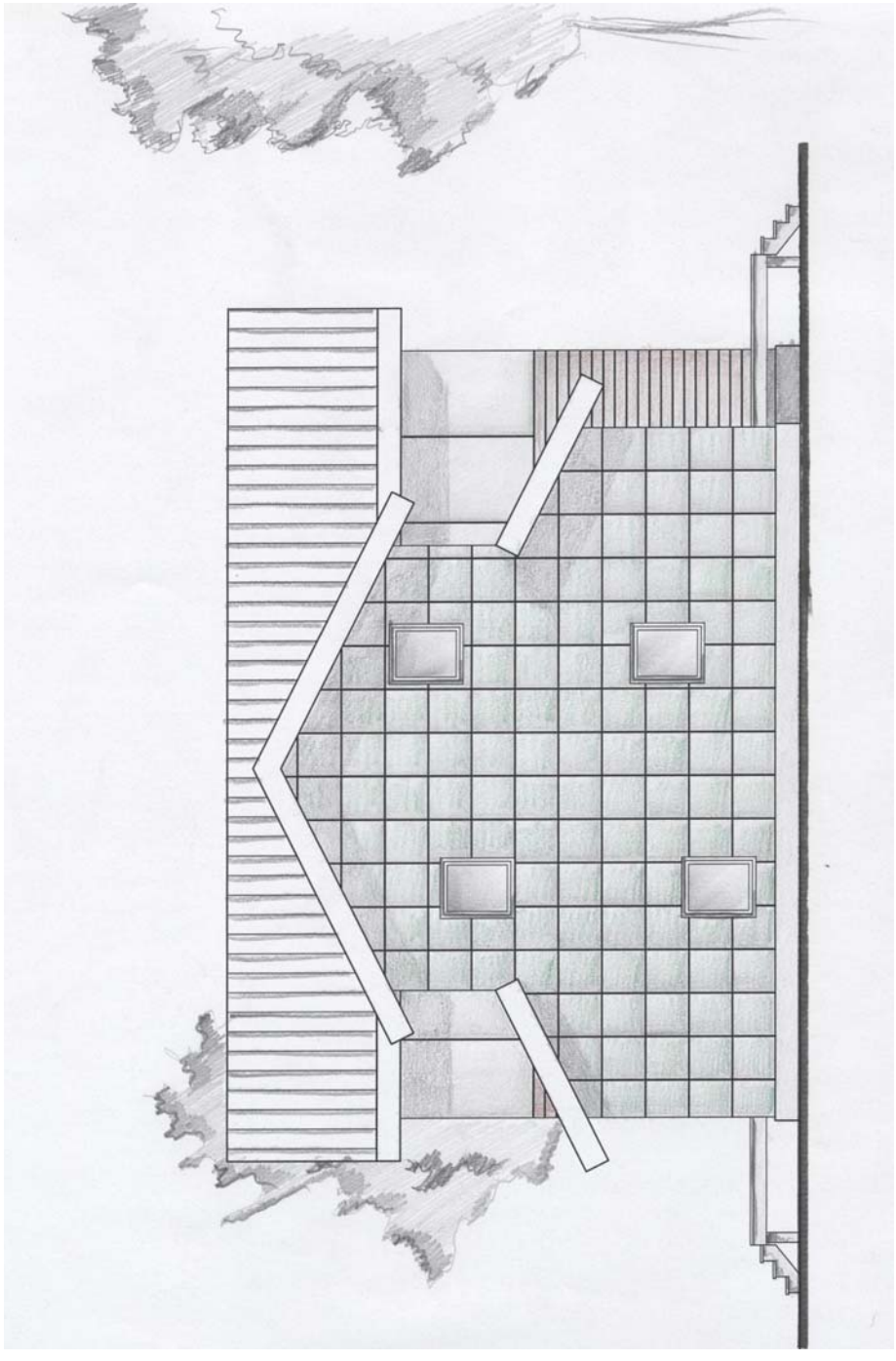
Humane Project

This architectural study addresses two different site conditions, a corner lot and an infill condition. Each house addresses these conditions through layout, fenestration, cladding, and roof lines.

The corner house's layout places public functions on the street sides of the house, thus addressing the public condition. A majority of the fenestration can also be found on the public facing sides of the house for this same reason. The main roof of the house also slopes up and out towards the corner. This creates an effect of the house opening up to the public. Different cladding systems are used to address the public and private condition of the house. Recycled barn siding is used on the first floor to evoke feelings of hospitality and welcoming. Two different patterns of metal siding are used on the second floor and circulation areas of the house. The larger metal siding on the second floor evokes a feeling of foreboding and protection for the private bedrooms with in; where as the smaller more regular metal siding on the circulation sector of the house represents the utility and functionality of the space within.


east elevation


south elevation

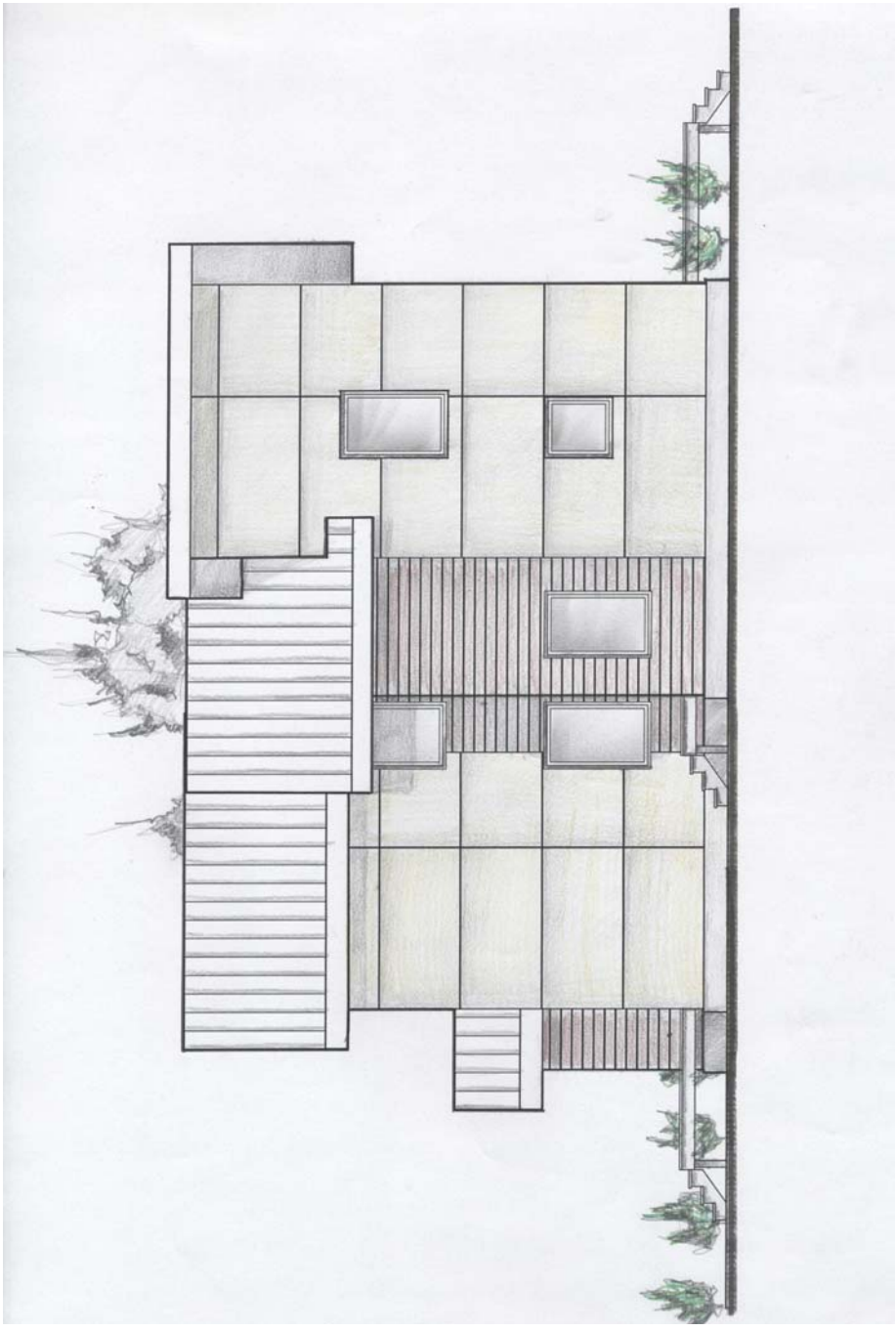


Humane Project

The infill house's layout places public functions on the two ends of the house. This allows the public functions to spill out over the front and back yard, addressing these public and semi-public spaces. Fenestration is also primarily located on these ends of the house for the same purpose. The middle of the house is dedicated to circulation and utility functions. This is expressed through the gabled roof. Where as the more public spaces are expressed with shed style roofs, the gabled roof over the circulation section evokes a feeling of inwardness and subtly.

Just as different cladding systems were used to express private and public spaces on the corner house, so to are they used for the same reason on the infill house. However, the cladding reflects the function of the interior space and not its relationship to the exterior. For example the circulation section of the house is clad in recycled barn siding representing the more public nature of this area of the house. The two ends of the house are clad in metal siding indicating the private aspects of these sections of the house. The juxtaposition of these two materials also reflects the juxtaposition of the two varying spaces within the house. The following images will demonstrate this idea.


east elevation



Humane Project

As the precedent studies suggest, for architecture to be accepted by its users it must come from them, their culture, and their history. Without taking these things into account then the architecture will fail as a successful addition to the built environment for its community.

These houses draw upon the history of the neighbor hood and its ideals of hearth and community as foundations for their design. The pre-manufactured nature of the buildings pays homage to the industrial past of the neighbor hood. The recycled materials demonstrate the ever changing dynamics of the neighborhood and its constant reuse for different cultures. Ultimately these homes speak to the individuality of the community and its need to be recognized as a vital part of our larger community. By investing in our downtrodden and caring for our neighbors our larger community will be strengthened. In the words of Samuel Mockbee,

> "It should be the goal of architecture to 'not only have a warm, dry house, but to have a warm, dry house with a spirit to it'"

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