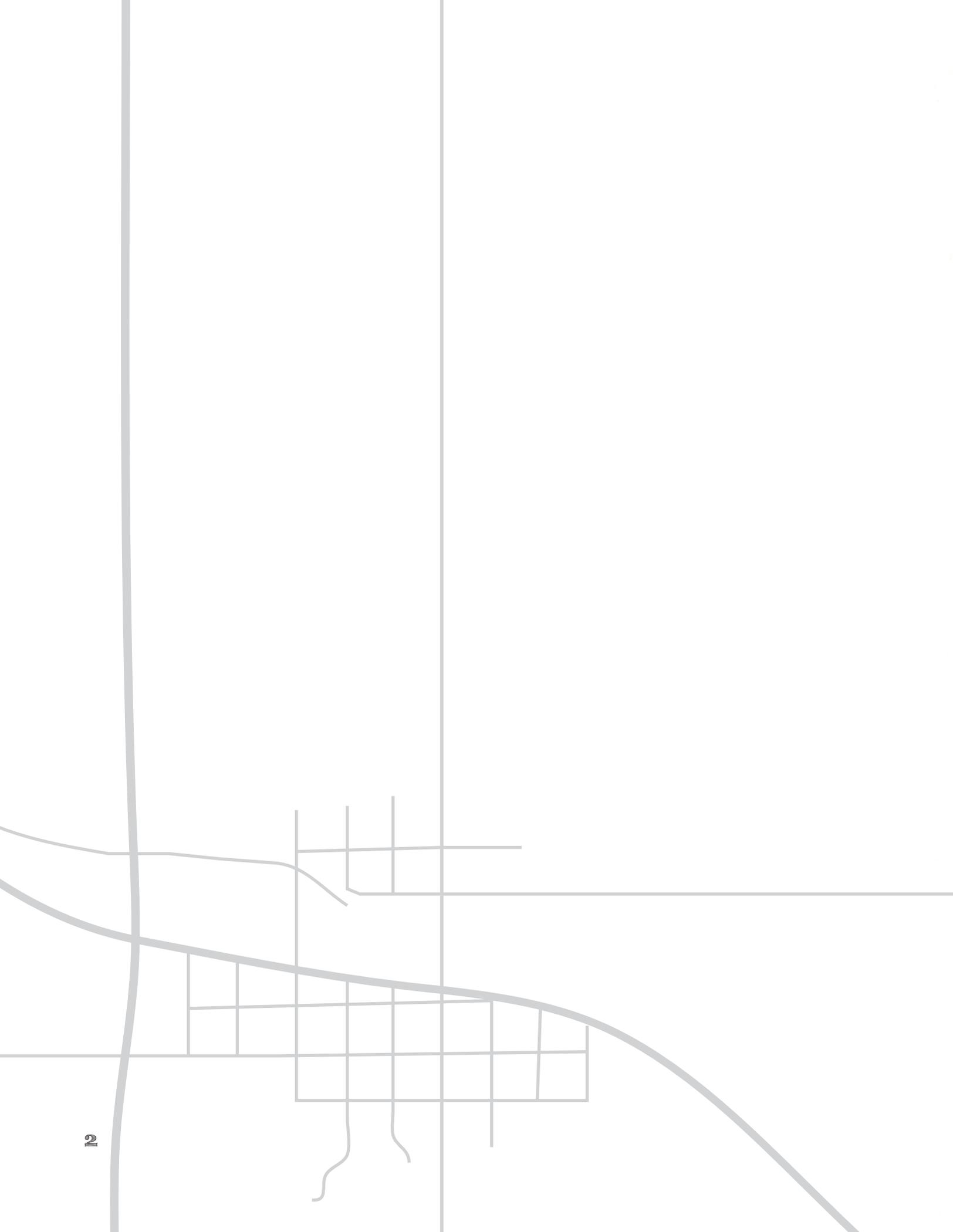
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growth through the past:
cooperation of the past, present,
& future in revitalizing
clarissa, minnesota

mallory johnson



21

**GROWTH THROUGH THE PAST:
COOPERATION OF THE PAST, PRESENT, & FUTURE
IN REVITALIZING CLARISSA, MINNESOTA**

**A Design Thesis Submitted to the Department of
Architecture and Landscape Architecture of
North Dakota State University**

by

Mallory Johnson

**In Partial Fulfillment of the Requirements for the
Degree of**

Master of Architecture

 5/7/2013

Steve C. Martens, Architect
Associate Professor
Thesis Primary Adviser

 May 8th, 2013

Mark Barnhouse
Thesis Committee Chair

**May 2013
Fargo, North Dakota**

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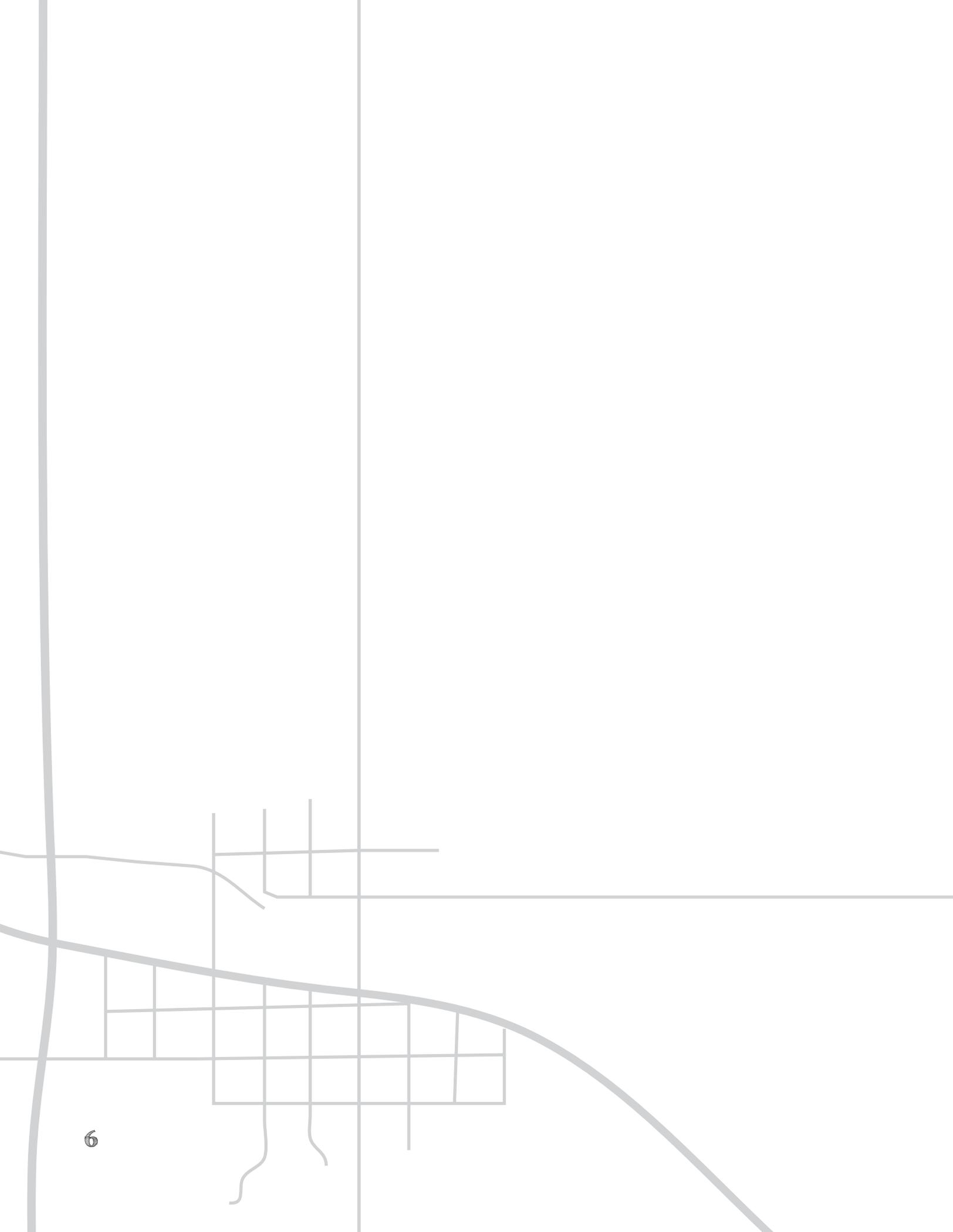
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problem statement

Can a piece of history be used as a catalyst for growth of a dying community?



ee

statement of intent

This thesis goes on to answer the question of whether a piece of the past can be used as a catalyst for growth in a small community. By adapting a current piece of architecture into a tool that can be used by the residents of Clarissa, MN. Linking the past, present, and future. By creating a place for members of the community to learn, gather, and experience.

abstract

typology

Adaptive re-use

claim

Through the use of architecture a piece of the forgotten past can be repurposed to create growth.

premises

The piece of history is used as the action of creating growth and re-establishing the sense of community.

By revitalizing a key piece of architecture in a community, the community not only comes together, but discovers more about themselves (Carlton-LaNey, Edwards, & Reid, 1999, p. 40).

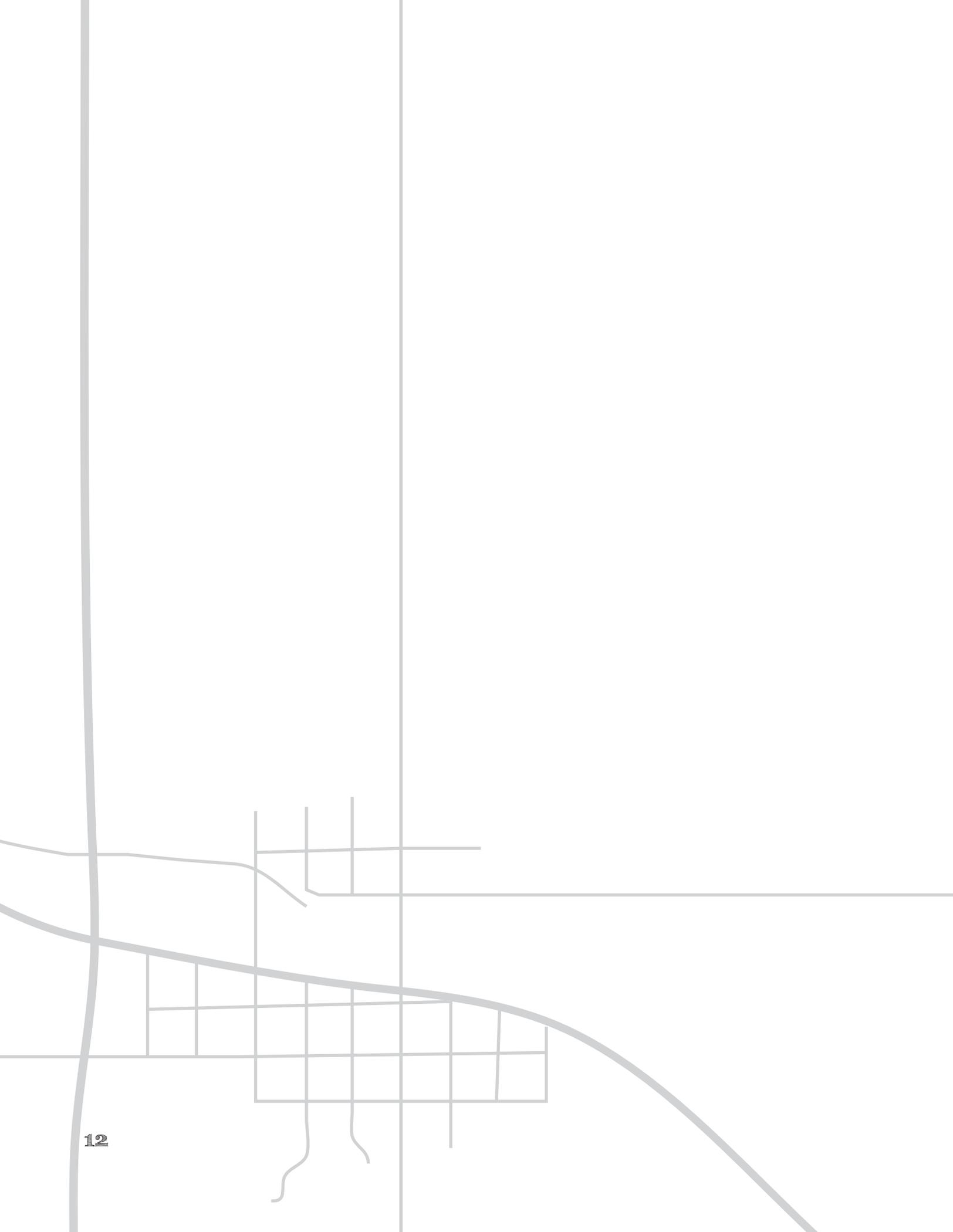
Architecture and design can be used as a tool to connect the community.

**theoretical/
unifying idea**

Through the process of revitalizing, this thesis will generate growth economically, relationally, and socially. With the intent for of self-sustaining actions for generations.

justification

I believe that there is a need to use what is already there and available to the community of Clarissa. By doing so using local materials and labor as well as promoting a strong sense of community.



proposal

Rural communities are struggling to hang on to their existence. This is hard to watch happen coming from a small town. Knowing that who I am today is based on my upbringing in a small town. The good work ethic and morals I was brought up has equipped me for the rest of my life. This shows how important rural America is to the history of our country. Many of these towns are falling victim to time taking a toll on the businesses and structures of the area. Due to the declining population in these rural areas services and businesses are struggling to hang on to the ability to benefit these villages. The structural icons of the area can fall into disrepair without the proper resources and skills to keep them up. At that point they become a victim to the past.

Local dairy cooperative creameries were a common commodity in the rural areas of Minnesota. They helped individual farmers come together as a group to make their investment go farther. They took the leap of faith to invest in each other in order to achieve a common goal of progressing their business. The idea behind cooperatives have been around far beyond cooperatives as we know them today. For centuries farmers have rallied together to plant and harvest crops. It is a key part of history of agriculture. When a town is settled around agriculture it becomes a major part of that town's history. It is important to preserve those ideas that have been instilled in the communities of cooperation, hard work, and trust.

The two groups that seldom interact on a regular basis are the senior citizens and the youth of the community. Both are valuable and indispensable roles of the community. The elders are full of knowledge and what has worked or progressed in the past. The youth are up to date on the latest technology and up and coming processes. They can establish relationships with each other by learning from each other. The elderly can teach the younger generation the crafts and skills that have been a lost part of the community's history. This is due to the faster pace of our world and new mechanical processes. In turn the youth can help to educate the elderly on the use of new processes. It may even be able to enhance their specific trade. Anything from a new power tool for woodworking, ideas of how to market that family recipe, or new embroidery patterns. This would link the past to the present to the future.

users

Seniors of the area will be able to have a place of social value to them. A place they can use to catch up on the latest news of the area, work on their skills and trades, and in turn share them with the rest of the community and learn new ones. This will keep them active in the sense of themselves and the community.

Youth of the area will be able to have a constructive environment to engage with others socially while learning. They can learn skills and trades from the seniors and in turn teach new things such as technology or other subjects that they would like to share.

Community members will be able to reap the direct produce of this unlikely relationship as well as use it as a social gathering space.

client

Community members are taking the initiative to invest within themselves to reflect the prior use of the building as a cooperative creamery.

major project elements

- different working spaces: quilting, baking, woodworking, technology
- coffee/bake shop
- garden
- farmer's market structure
- gallery of displays that show the heritage and culture of the community.

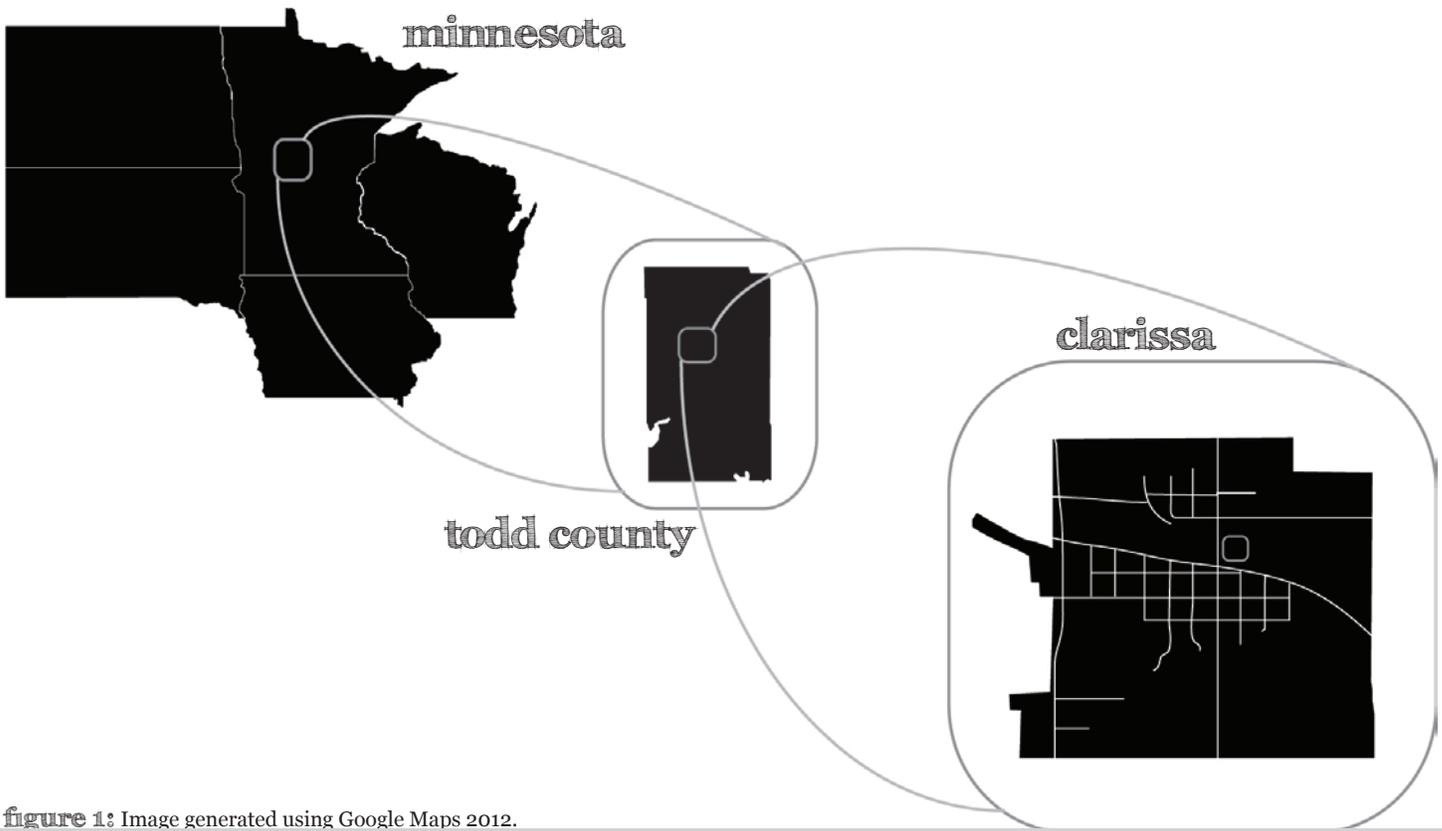


figure 1: Image generated using Google Maps 2012.

site images



image 1: Close up of site, Source Google Earth, (2012).



image 2: Aerial of Clarissa, Source Google Earth, (2012).



This thesis will emphasize the ability to renew the sense of community by them using the community as the tool. Through cooperation and investing in each other, a cross-generational collaboration, will yield the result of products produced, skills learned, and relationships cultivated.

**project
emphasis**

plan for proceeding

research direction

The research for this thesis will be an ongoing process. The guiding factors of research will be the theoretical premise/unifying idea, understanding of the typology, historical and current context, analysis of the site, interactions, cultural meanings and program requirements. The output of this research will be a well throughout and organized space that will reflect the community and region of the site.

design methodology

Design Methodologies will be a mixed methods approach to the research and design of the this thesis. It will consist of a combination of quantitative and qualitative research that will be guided by the theoretical premise.

Quantitative Data of statistics and scientific data will be gathered and analyzed to check the relevancy to this thesis.

Qualitative Data will be collected through several different avenues such as archival search, local survey, direct interviews and observations.

documenting process

Documentation will be an important part of the process. An exercise of at least weekly timing will need to happen to keep all pieces in order throughout all phases of the design process for use in the final presentation.

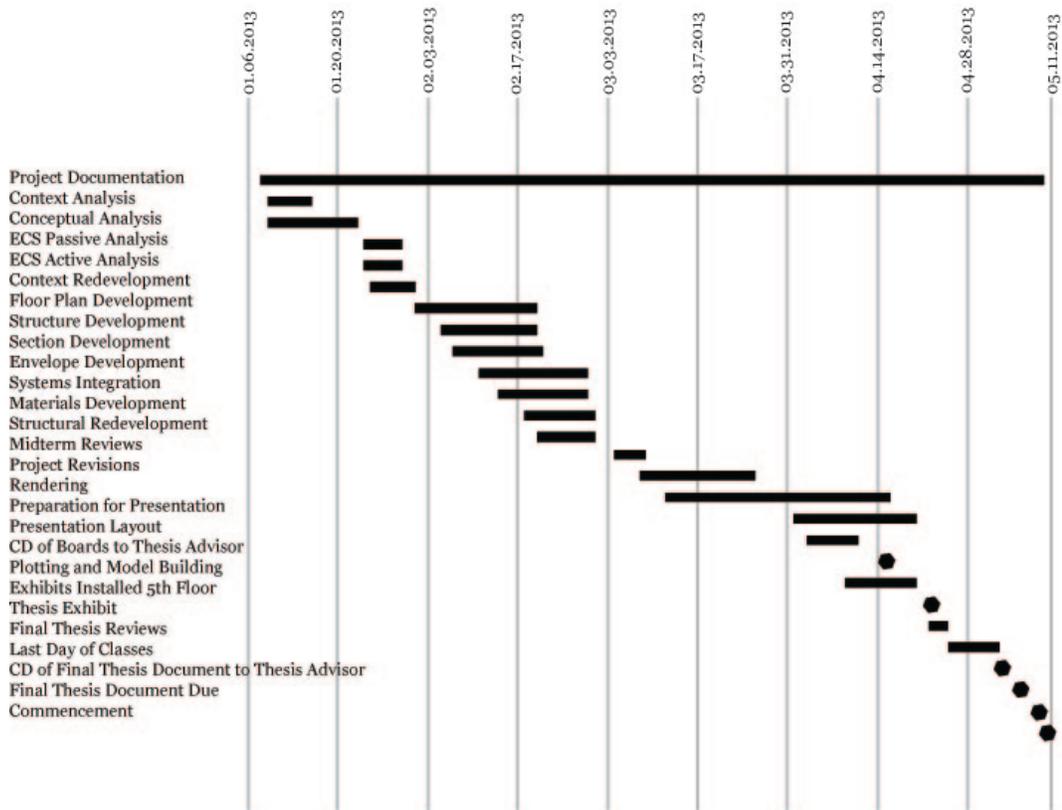


figure 2: schedule generated using Microsoft Project

schedule

Project Documentation	88 days	Tue 1/8/13	Thu 5/9/13
Context Analysis	5 days	Wed 1/9/13	Tue 1/15/13
Conceptual Analysis	10 days	Wed 1/9/13	Tue 1/22/13
ECS Passive Analysis	4 days	Thu 1/24/13	Tue 1/29/13
ECS Active Analysis	4 days	Thu 1/24/13	Tue 1/29/13
Context Redevelopment	5 days	Fri 1/25/13	Thu 1/31/13
Floor Plan Development	13 days	Fri 2/1/13	Tue 2/19/13
Structure Development	11 days	Tue 2/5/13	Tue 2/19/13
Section Development	10 days	Thu 2/7/13	Wed 2/20/13
Envelope Development	13 days	Mon 2/11/13	Wed 2/27/13
Systems Integration	10 days	Thu 2/14/13	Wed 2/27/13
Materials Development	9 days	Mon 2/18/13	Thu 2/28/13
Structural Redevelopment	7 days	Wed 2/20/13	Thu 2/28/13
Midterm Reviews	5 days	Mon 3/4/13	Fri 3/8/13
Project Revisions	12 days	Fri 3/8/13	Mon 3/25/13
Rendering	25 days	Tue 3/12/13	Mon 4/15/13
Preparation for Presentation	15 days	Mon 4/1/13	Fri 4/19/13
Presentation Layout	6 days	Wed 4/3/13	Wed 4/10/13
CD of Boards to Thesis Advisor		Mon 4/15/13	
Plotting and Model Building	9 days	Tue 4/9/13	Fri 4/19/13
Exhibits Installed 5th Floor		Mon 4/22/13	
Thesis Exhibit	3 days	Mon 4/22/13	Wed 4/24/13
Final Thesis Reviews	6 days	Thu 4/25/13	Thu 5/2/13
Last Day of Classes		Fri 5/3/13	
CD of Final Thesis Document to Thesis Advisor		Mon 5/6/13	
Final Thesis Document Due		Thu 5/9/13	
Commencement		Fri 5/10/13	

figure 3: schedule generated using Microsoft Project

program



research

Using History...

The history of a specific place, person, or object can tell you a lot about that place, person, or object. History is everywhere around us. From the various scars left behind from the glaciers to the embankment left as part of an old railroad bed. One can learn so much from what has taken place and how it has affected our way of life today. Both natural and man-made historical events can have an impact on the history of an area. These remnants can be seen everywhere around the landscape of this state. They can range from the old mills along the Mississippi River in downtown Minneapolis and St. Paul to the one room school houses left on the open prairie, to the Civilian Conservation Corps Camps, that helped out our nation when it needed it most. Time and conditions have no choice, but to wreak havoc on these old structures. There is a need to help to save these key pieces of history for the future generations to come.

The Legacy Act within the Minnesota Constitution states “... may be spent only for arts, arts education, and arts access and to preserve Minnesota’s history and cultural heritage” (Minnesota History Coalition 2011). They have recognized the need to save what is still left that tells the story of our past. The Coalition has realized that there are several things history can give. Some of those things are a sound understanding, ability to analyze and verbalize their analysis of the what has happened to form what we experience daily (2011). Not only can we learn from the preservation of history, but it can also influence our economy and employment in all sectors (Minnesota History Coalition, 2011).

There are many organizations nationally and locally that strive to help with preserving the memories and structures of these important remnants of past. Multiple agencies and organizations have been set up to help join people who are passionate about saving the past for future generations and to help fund what are usually community projects. Some of them include, Minnesota Historical Society, Preservation Alliance of Minnesota (PAM), Minnesota History Coalition, set up by the Legacy Act, National Trust for Historic Preservation,

and Minnesota Main Street. There is a constant need for information, help, and funds to accommodate all of the historical preservation projects due to the revitalization of interest in it through the Legacy Act (Minnesota History Coalition, 2011). Across the state there are 474 grants that can be used in all parts of the state (Minnesota History Coalition, 2011). According to the Coalition the need for funding overwhelmed the source of funding that is available by 2 1/2 : 1 (2011).

Structure of a Community...

The definition of a rural town or community as defined by the U.S. Census Bureau, is “an unincorporated place fewer than 2,500 inhabitants (Carlton-LaNey, Edwards, & Reid, 1999, 6). Definitions vary depending on the source. For this purpose we will use this. The makeup of any small rural community is different, but what makes a town attractive or welcoming? According to Young’s research, he discovered that it has shifted from the idea of two separate parts to more of a ranked system with an organization of the town (1999, 51). He challenged the idea that “communities are autonomous” which was researched earlier by Warren (1999, 53). Communities are more isolated and not affected by moreover other regional communities’ forces. Through his research of three factors and fourteen variables he was able to link information to draw conclusions of the community’s organization.

Factors	Variables
Services	-number of banks, retail stores, Catholic churches, business and veterans club, and schools
Administrative Activity	-number of workers employed by town office, government committees, popular Protestant churches, primary schools (overlaps)
Traditional Protestant	-number of traditional Protestant churches, fraternal organizations, unincorporated village associations

table 1: (Young, 1999, 56)

The data he drew from these relationships are that the increase in popular Protestant churches and primary the schools was related to have recent growth, the number of pages in the newspaper is proportional to the amount of service businesses there are because of advertising fill, and the traditional Protestant group is relational due to the fact that those towns are “locally oriented” (Young, 1999, 56).

Back in 1983 a group of students interested in reaching out to smaller communities in the state to help them formulate a planning and development plan created the Minnesota Designn Team (Minnesota Design Team, 2012). Today it is made up of a group of professionals, urban designers, planners, architects, landscape architects, and people specialized in community development, volunteer their time to use their expertise in design to work with a town to design and plan their community for the future (Minnesota Design Team, 2012). They were able to see the pontential in using their knowledge and work together with individual communities to create a place that works not only for the residents, but also for the area. The Minnesota Design Team has some key principles that each team works by throughout the design process (2012),

1. Recognizing people are a community’s best resource for visioning and investing in the future.
 2. Approaching planning and design problems with an interdisciplinary team is necessary to achieve* balanced planning and physical design solutions.
 3. Understanding a community’s unique sense of place is developed through respect for the local environmental, physical, social, and economic environments.
 4. Promoting physical design as an integral component of a community’s quality of life offers the most effective use of the Design Team’s planning and design skills.
 5. Encouraging redevelopment in areas where urban infrastructure exists, or new development in areas where infrastructure capacity exists, ensures that a community’s land and utility resources will be used efficiently.
 6. Promoting compact development patterns assures that a community uses its land, transportation and civic resources wisely.
 7. Encouraging development of public realm amenities that will attract private sector construction is an effective economic development strategy for improving community quality of life.
 8. Promoting a range of housing types assures that citizens of differing
-

incomes, lifestyles and preferences have a range of housing choices within the community.

9. Promoting a range of commercial building types assures a range of building and employment choices within the community.

10. Encouraging community stakeholders to collaborate with one another will assure that community improvements are directed responsibly.

11. Using graphics and visual references allows the Design Team to communicate ideas quickly and effectively.

By using the above principles the Minnesota Design Team collaborates with each community and its members to sort out what needs to be done and what the town as a whole would like to see done. This is where collaboration is key. The team members, with their experience, know what is within reach to be done to revitalize the community and what won't work or isn't worth the investment. In my observance of a portion of the recent Lake Park visit during the fall of 2012, it was evident that the residents were set on certain things that they thought would be effective to restoring their community. The team could recognize that the ideas that they did have were realistic or the most impactful. To help the community to realize other options, they were very intentional in the way that they asked certain questions when getting their feedback on certain issues. Once they had time to give their individual feedback, the community members were encouraged to collaborate with other members to see what their perspective was on issues. That helps to see where they are coming from and how things will affect somebody else in the community that is in a different situation.

In researching an area for encouraging growth of a small town, there are different areas that need to be considered because they have an active role in the development of the community. The traits show examples of some differences and similarities between more urban areas and the rural environment.

Small Size and Geographic Isolation: Rural communities are usually known for their small size, distance from other towns and urban areas, and the lack of executives working in public organizations. It is hard for small towns to make things work. The "go-it-alone" idea doesn't always work (Fugitt, Brown, &

Beale, 1989). With the decrease in population, small rural towns need to come together to create more opportunities for people of all ages to encourage growth. This can be hard for small communities to handle. There is a lot of pride in where one is from. Usually there are rivalries that go deep into the generations that prevent this from happening. Clarissa and Eagle Bend, a neighboring town to the north, have been able to recognize this need. They have consolidated schools together, organized a clinic between the two towns that allows and each community has different establishments and businesses to complement the other.

Economic Specialization: Economies in small towns tend to be very specific in their industries and their markets. They know their strengths and they stick with it. This tends to limit and prevent growth because it limits the marketing capabilities to attract people, businesses, and investors. By having a diverse group of businesses, services, and opportunities, there is more of a chance to bring people in for growth. To accomplish this goal the towns could come together as stated previously to create a conglomerate that attracts a wide range of people. Working together communities would be able to accomplish far more than any one community could.

Limited Human Capital: Small rural communities are normally known to have a lack in “human capital” (Fuguitt, Brown, & Beale, 1989). To keep up in the world today there are three groups of people that need “education, training, and other human resource activities” (Fuguitt, Brown, & Beale, 1989). These three tools will give the power to individuals to actively better themselves with skills to lead them to success. Then the workforce in the community can be divided up into three main categories. They are new workers starting in the workforce, workers that are already in the workforce, and agricultural and industry workers (Fuguitt, Brown, & Beale, 1989). These tools would help those that would like to stay where they are or move up in the economic structure.

Dependency and Disadvantages: There is usually a denser population that rely on a variety of assistance. The amount of the population is not even distributed around in all rural and small town settings, they tend to be grouped together. According to Cynthia Boyd's article from MINNPOST states that the poverty levels of a specific area are related to how healthy the people are that are living there (2011). Todd county makes the list of the ten least healthy, which would then be related to be one of the poorest counties in Minnesota (2011). This can be usually attributed to a higher concentration of elderly and "economically disadvantaged individuals (Fuguitte, Brown, & Beale, 1989). This is usually attributed to the lack of economic growth or tribulations. Todd County cares for its individual residents and make assistance available to a variety of demographic groups: elderly, safety of children, and people living with disabilities (2011).

Todd County Social services like to contribute to the elderly in hopes of helping them live as good of quality of life as possible and for as long as they would like to be independent. It is usually hard to have populations change from being an independent contributor of the area to one that relies heavily on resources to get them through. For the "aging" population there are a variety of services ranging from long term full time care to coordinating services through the senior centers around the area.

Children are the future of any civilization. That is why Todd County extends a full range of services to children in hopes of allowing them to become strong contributing people of society. They find that safety and support is key for children to grow up in a caring environment (Todd County, 2011). Again there are a variety of services such as "protection assessments and services, child welfare services, children's mental health services, out-of-home care, adoption and permanency services, custody and mediation services and services to minor parents" (Todd County, 2011). They also offer Minnesota's Child Care Assistance Program. This helps to make child care more affordable for parents who work

(Todd County 2011). This allows parents to have a job in order to create a quality of life for their child, but more importantly it gives the child a safe and simulating environment while they are away from their parent.

Todd County also offers assistance to those with “physical and developmental disabilities” (Todd County, 2011). This allows them to live a better quality of life and live as independent as possible for as long as possible (Todd County, 2011). The services available range from evaluations, services, and help finding other avenues of assistance and help.

The youth can make up a key component of any community. The initial thought is that they are not and that they just cause trouble. The need to change that prospective is great. The youth are the future leaders of America. It seems though that the number of youth that are “at risk” are on the rise (Brown & Swanson 2003, p.97). This can be caused by a number of thing such as behavior issues, familial issues, education, and substance abuse (Brown & Swanson 2003, p.97). Most of the time this is thought to happen in urban areas and rural areas have their insulation against all of it, but this is not true. These behaviors are almost just as common in rural areas. With smaller class sizes, strong network of community, and strong families with faith playing a key role in their lives helps to an extent, but not as much as communities would like to believe. There are a few contributing factors that can have an effect on youth development.

Living in poverty can have a lasting effect on a child’s “cognitive and emotional development” (Brown & Swanson, 2003, p.98). The damage that is done is based on the cause, length, and magnitude. Poverty is usually brought about differently than urban poverty. With poverty that is happening in rural areas, it most commonly happens due the working persons in the household losing their job and is usually in a hold with two married parents.(Brown & Swanson, 2003, p.99). Because of this it is more likely to happen than in more urban environment. Families in these situations are far more likely to not receive cash assistance and are not contained by ethnicity or location (Brown & Swanson,

2003, p.99). It is an overall relation to the culturally physical isolation of the child.

The composition of the rural family is changing and having an effect on the children growing up in that environment. The balance of living with their married mother and father. There is a small difference between the amount of children that live with both married parents in a rural environment than the national average(Brown & Swanson, 2003, p.99). This sounds uncharacteristic of smaller communities. Living with fragmented families can cause “economic and social well being of children” (Brown & Swanson, 2003, p.99). More and more small town children are living in unconventional home settings (Brown & Swanson, 2003, p.99). Children living in single parent families are decreasing because they are now being raised by grandparents instead of a single parent.

The farther children go in school the more hopes and dreams they have. This is also affected by the balance or lack thereof within the family or home life. Rural schools usually have lower performance rates and higher dropout rates(Brown & Swanson, 2003, p.101). There are always exceptions to the rule though. Another thing experts say are going against rural youth, that jobs in rural America don't give back as much as other areas based on the type of education that is accomplished(Brown & Swanson, 2003, p.101). One thing is that they didn't consider is that rural living usually has a lower cost of living that in an urban setting. The payouts coming from a vocation or job is directly proportional to the amount of expenses and standard of living. Rural and small town schools aren't supported by as much funding from the government, which leads into the cause of lower than average outputs of environment, scores, and participation.

Choices make up a large part of how we as individuals grow and develop. The choices early on are some of the most crucial. Drugs and alcohol are some of those that are faced in early stages of life. Rural youth are more likely to use alcohol and try it at a younger age than urban youth(Brown & Swanson, 2003,

p.102). Urban youth are more likely to drugs such as cocaine, heroine, and marijuana (Brown & Swanson, 2003, p.103). Being exposed to alcohol at a lower age leads to outcomes such as violence, criminal acts, and drugs. (Brown & Swanson, 2003, p.103). There are other contributing factors such as home influence and victimization.

Some new causes are emerging in newer research: the increasing numbers of racial and ethnic diversity, the changing economics of shifting job opportunities, and change in youth development.

This thesis has many variables that need to be worked out carefully. The design and quality of preservation, the existing and future structure of the community, and social interactions of the youth, but also their current and future development. These are all vital and important portions of a revitalization and community development project. The history of an area can influence people in what they want and what they are willing to work for.

Preserving any older building can be a struggle no matter the size or the location demographics. Going through all of the regulating structures is the first thing and is a necessary on the checklist. There are a variety of boards and teams that can help you decide on materials and the absolutely necessary functional parts of the building. They will most likely be the users of the buildings, so they can tell you what is working and what doesn't, that could use more work redesign. Preservation projects can take a longer amount of time and a larger amount of money up front. The reason for this is making sure that all salvaged or repurposed materials are to the site on time, installed correctly to the right era, and sometimes the practice of performing a specific traditional process or finish. The community needs to help out when possible and need to be the driving force for getting projects done on time.

The structure of a town can have an effect on an individual, of a variety of age ranges. This is because we learn so much from the individuals who monitor the our safety through a variety of ways. Most common are laws and ordinances

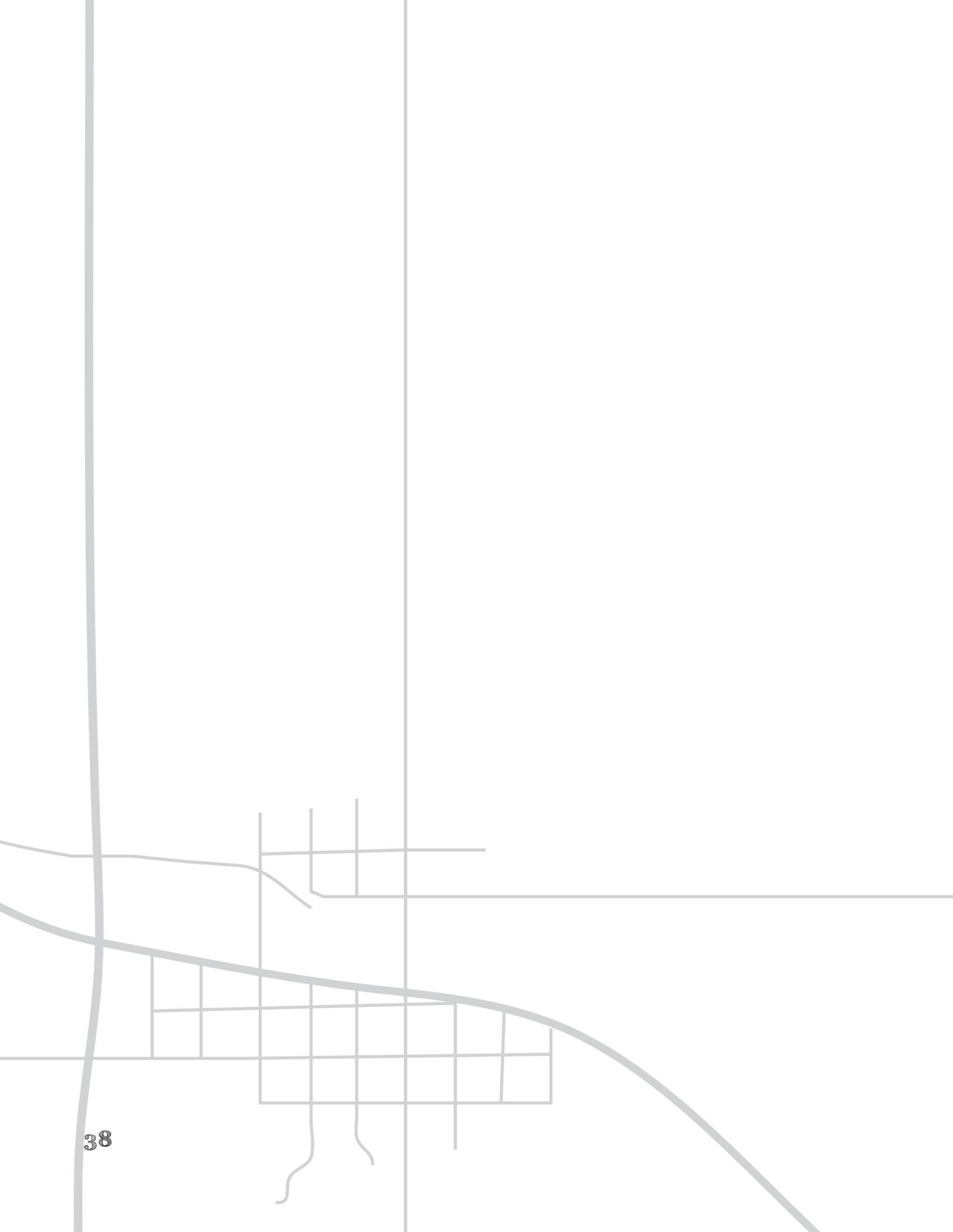
The youth of a community are usually the most impressionable and fragile in the sense of the how they will develop after going through different experiences. From the research, children that live with married mother and father tend to perform well in their studies. Those students also tend to be active in their community by volunteering their time to give back to the community in which they live in. This was mostly related to the image children see of their parent going a meeting. That time allows them to wonder what goes on in some of the meetings. Children just perceive that something good happens out of the meeting

and do not realize how much work will be associated with the job. This is due to inexperience in of these decisions. If they are willing to help, it opens the door to experience. Experience can lead to the possibility of another cycle to cycle through.

Getting the youth involved can deter involvement of other harmful activities. The more busy, doing positive things a teen, the more reliable and they won't get of the straight and narrow very much. There is an underlying theme. Another group that struggles in rural communities. Actually the elderly struggle in a variety of ways and can depend on the environment. The aging generations of any community are usually forgotten about and struggle to survive. It is difficult for them to get around especially when the weather decides to make travel difficult. It is also physically difficult for a lot of senior citizens just getting around their house and understanding all the technological upgrades on most appliances and house wares. This can be frustrating for people who have been able to be independent their whole lives. It can be a hard thing to ask for help in an instance, young or old.

There are a few crafts that are becoming less available and known about because nobody does them anymore. A lot of these crafts came over here with our ancestors. They were a large part of their life, but have dwindled from the original generation. It is hard to pass it on, if nobody would like to take it on. Not only does this happen on a small scale of products, but it can happen with the family business too.

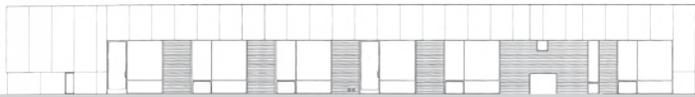
The structure of a town can have an effect on an individual, of a variety of age ranges. This is because we learn so much from the individuals who monitor the our safety through a variety of ways. Most common are laws and ordinances. Working together on specific project allows for bond to form between the group members. This bond can create lasting relationships from a project. Later they become friends by learning more about each other and what the two parties really have in common. Making that connection for place of the old projects to bring a new perspective to crafting in general, while bringing in the technology of tomorrow and today to the older generations that don't quite know what to do with most of it. The right place to have such a facility needs to have a strong connection to the history of the time and place to be successful .



38

typological research





elevation source: Architectural Record, pg. 68 (2011).



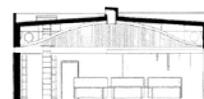
plan source: Architectural Record, pg. 68 (2011).

990 office

location:
Tucson

architect:
Rob Paulus
Architects

reusing



sections: Architectural Record, pg. 69 (2011).

990 offices is a repurposed 4,292 square foot auto shop in Millville, a anything but lively industrial neighborhood outside of the downtown area (Mcknight, 2011, 67). Ron Paulus acquired the property with the intention of converting into an office for his firm with space left over for another office up for lease. This project is a unique re-use of the building and the parts from within. The program is composed of an entry, studio space, meeting room, storage, restrooms, lounge and the same for the lease space. Due to the unconventional work environment of architecture there are walls that create office spaces in the space reserved for a tenant. The relatively open plan allows for the incorporation of sustainable strategies across the board.

Paulus is quite familiar with this area though. He is single handedly trying to revitalized the area from an industrial dust cloud to the next up and coming neighborhood. Back in 2002 he went in with a couple of investors to buy cold-storage building with the intent of converting the space into condos (Mcknight, 2001, 67). The eighty year old building was the first overhaul of its kind in the state of Arizona (Mcknight, 2001, 67). Shortly thereafter, Paulus acquired another nearby parcel of bare land. Nice residences were built on the one acre parcel. Not only did the metal cladding create a strong sense of connection between the context and history of the site and the soon to be 990 Office, but it also must have appealed to the single family dwelling market because they sold so fast.

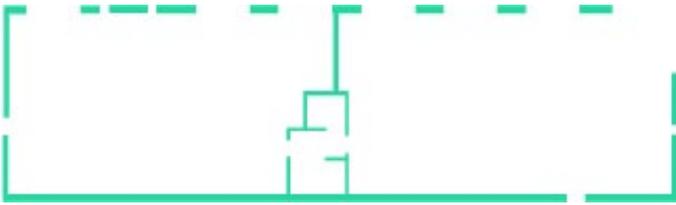
The only thing original is the structure. Otherwise everything else was stripped. The main up grade was high quality insulation to protect against heat gain to help with the consumption and expense of energy (Mcknight, 2001, 67). With the insulation in place, that allowed for the space to be opened up and exposed for natural daylight to penetrate the walls. This gives a great energy saving selling point, but also creates a standard of indoor quality. This is shown by example along the north side where all of the overhead garage doors were replace by full windows. --Where did the garage doors go then? They were repurposed, along with scraps of steel as a fence for a landscaped outdoor community space. The original awning also contributed to the courtyard by being used as the framework for the native gardens, which are water by a rain collection system on site. The extension of the interior to the outdoors helps to soften the industrial

feel of the neighborhood and relate well to the surrounding new developments in the areas.↵↵↵↵

The layout of the building uses its space efficiently the common rooms are in the central part of the building so both sides have adequate access to them. Because of the efficient structural system of the building Paulus was able to keep a relatively open floor plan on his own half, where the furniture designates each space. On the other side though the tenant, Epstein Construction, needed to have a more structure floor plan with walls. The creation of the office like spaces arranged on the outside edges to create an efficient central walkway (Mcknight, 2001, 69). The “over -arching” theme is the ebbing wood slated ceiling. It has helped to warm up the rigidness of the structure along with the structure being painted orange The slats were originally designed to address the diffusion of sound and the light coming through the skylights.

By taking a look through the process of this design, subtle design details have come out and made the design useful and dependable. This case has a strong emphasis on re-using, incorporating sustainable strategies, and design individual, but cohesive spaces. The layout of the building uses its space efficiently the common rooms are in the central part of the building so both sides have adequate access to them. Because of the efficient structural system of the building Paulus was able to keep a relatively open floor plan on his own half, where the furniture designates each space. On the other side though the tenant, Epstein Construction, needed to have a more structure floor plan with walls. The creation of the office like spaces arranged on the outside edges to create an efficient central walkway (Mcknight, 2001, 69). The “over -arching” theme is the ebbing wood slated ceiling. It has helped to warm up the rigidness of the structure along with the structure being painted orange The slats were originally designed to address the diffusion of sound and the light coming through the skylights.

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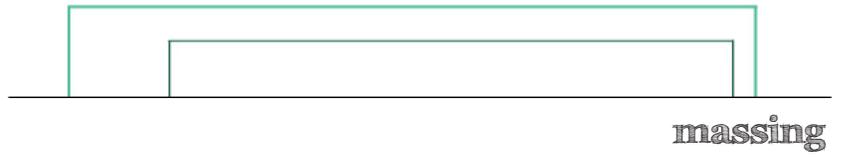
structure



geometry



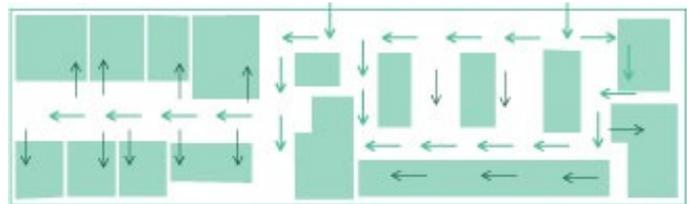
plan to section



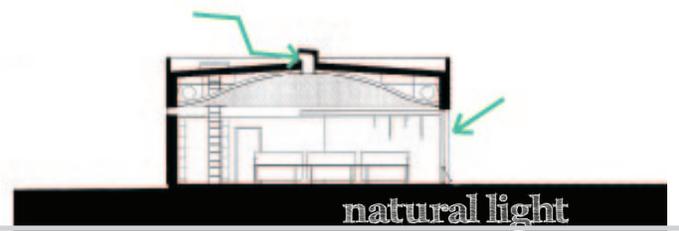
massing



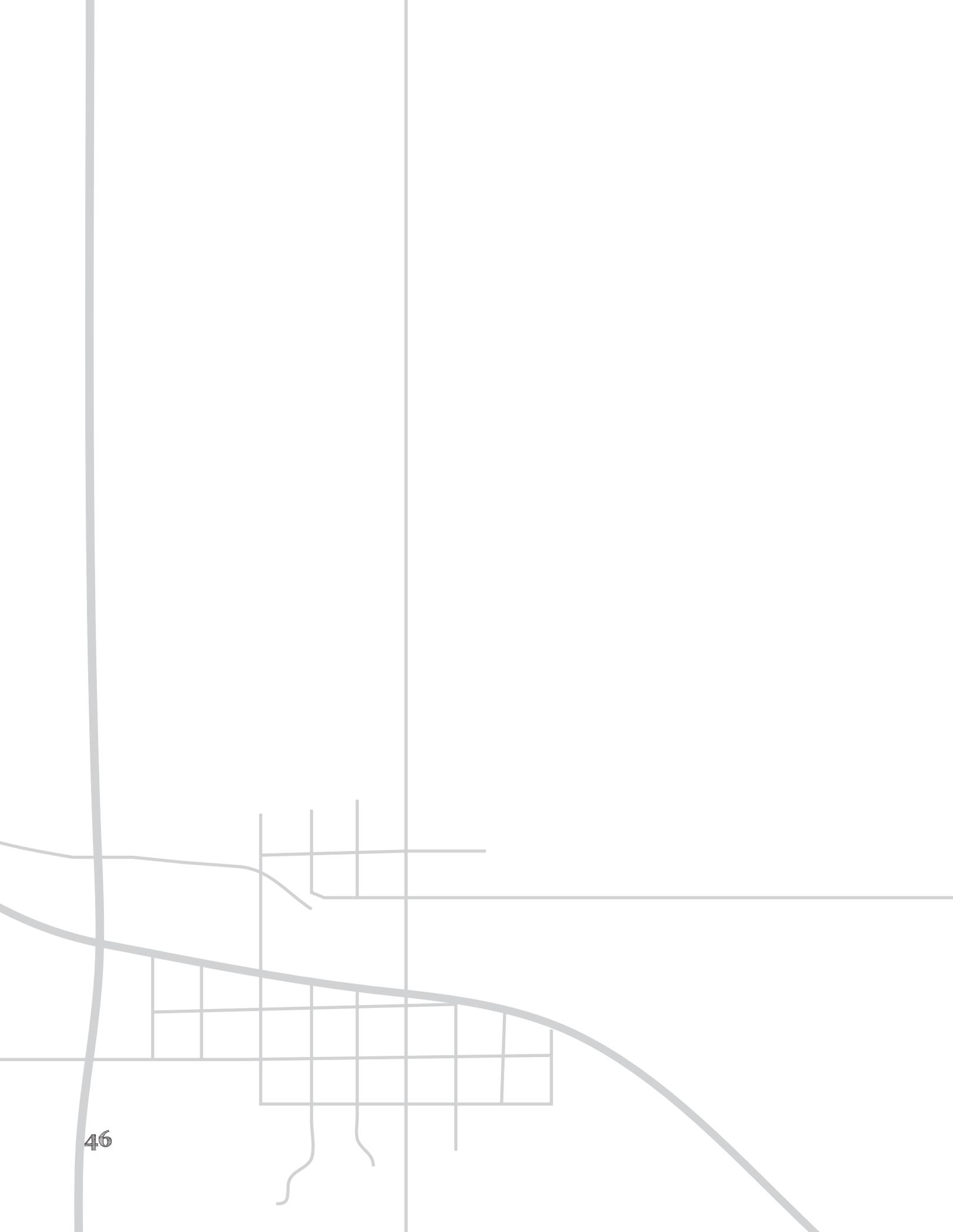
hierarchy

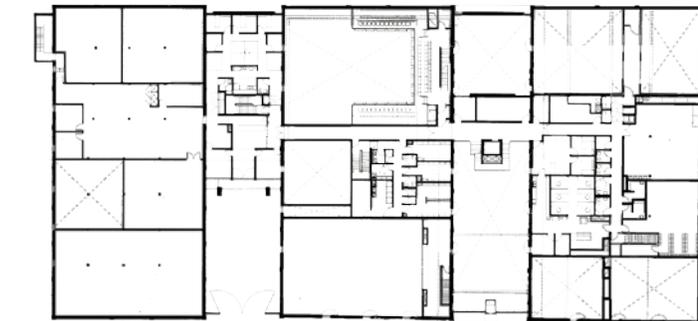


circulation



natural light





second floor



first floor

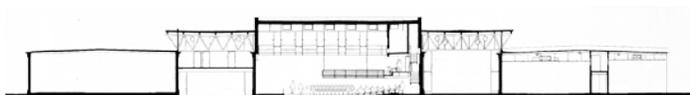
plans source: Canadian Architect, pg. 42 (2007).

young centre for the performing arts

location:
Toronto

architect:
Kuwabara Payne McKenna
Blumberg Architects

artifacts



section source: Canadian Architect, pg. 43 (2007).

The Young Centre has an inviting allure with its “structure and air” presence it has in the Dooderham & Worts Distillery District (Chodikoff, 2007, 41). For the past nine years the historic district has been undergoing a facelift, bringing the bustle back down to the historic heart of Toronto. The performing arts centre has been an integral catalyst of bringing more people into the historically preserved neighborhood that has grown so much in recent years. With so many people coming down to see shows and concerts, going to classes and rehearsals, and going to work there have helped neighboring businesses a lot. The Young Centre was designed to serve both the Soulpepper Theatre Company and George Brown College Theatre School. The location allowed for a short commute for students of George Brown College, while allowing the Soulpepper to take up permanent residence there. The combination of a variety of spaces and the total square footage of 45,000 allows the two entities to share the space without interrupting or crowding of each other (Chodikoff, 2007, 41).

The main original structure is composed of two tank houses. The designers, Kuwabara Payne McKenna Blumberg Architects, wanted to keep as much of the original character intact. Due to that, as you experience a space with the original chipped paint and distressed wood and steel. This creates a rare glimpse into past of the existing structures. Since the two tank houses were used as “found objects,” the space between them had to be utilized to its fullest potential (Chodikoff, 2007, 44). That is why it was the perfect place to incorporate the lobby, a crucial piece of the program. Being that it is the first space that is experienced it needs to have a certain awe factor. With the space being between the buildings it enabled KPMB to construct a new ceiling that is higher than the two adjacent roofs which allows day-light to filter in through the exposed wood structure. With the extensive space of a clerestory, a connection between the upper and lower floors is established. Approaching the entry at dusk the light floods out of the clerestory windows show casing the exposed structure before ever setting foot with in the building .

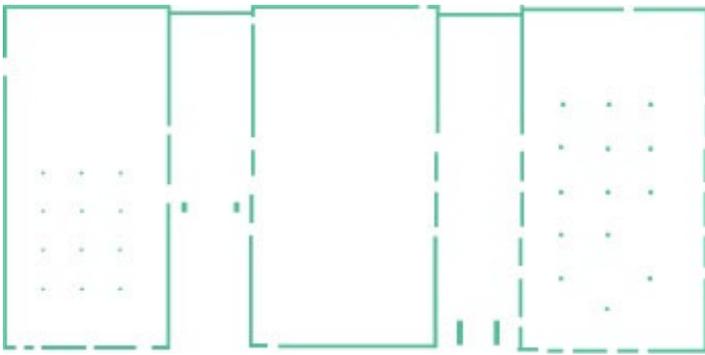
Other design spaces include the most valuable, the performance spaces. Within this complex there are four different theatres. They range from an adjustable 400

seat theatre to a ninety seat cabaret (Chodikoff, 2007, 44). Each theatre gives visitor a unique experience. The largest of the four, Charles and Marilyn Baillie, is completely enclosed in a tank house. It is unique because it has resurrected the art of performing on a thrust stage. This gives a more intimate connection between actor and audience member. The cabaret also gives audience members an intimate and more casual experience. Some unique features to this program is the inclusion of retail unit, carpentry and prop assembly space, and courtyard loading dock. The extra spaces programed in to the design make it an inviting space to just hang out. The courtyard loading dock is treasured by its users by being a welcomed connection to the outside and a secure place to keep a bike (Chodikoff, 2007, 44). Another feature the students enjoy are having the classrooms and studio spaces in close proximity to the theatres, which allow for interactions with other actors and opportunities to learn in a whole new way. There are informal practice rooms that students can use on their own as well.

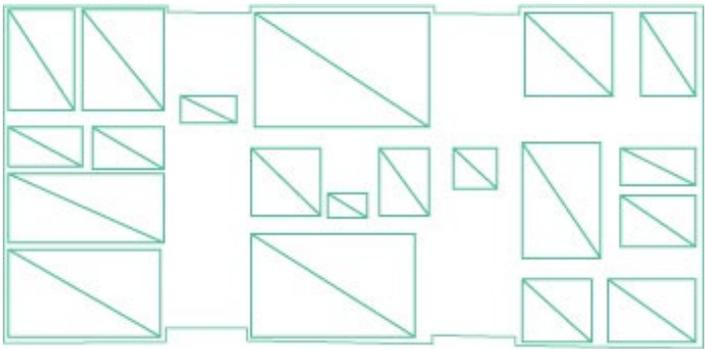
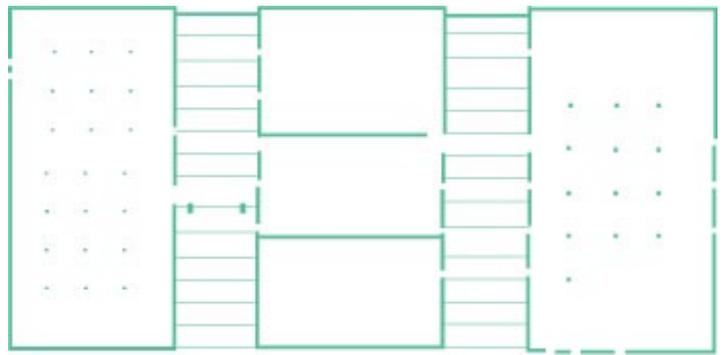
The circulation of this building is fantastic. there are walkways all over the place, criss-crossing in every direction. This creates numerous paths that may lead to the same location. The circulation is the main linking point connecting the different sides of the building. Vertical circulation is a new one to look at, but it allows for a exposed grandstaircase wrapped around a glass elevator. This allows the performers, if they would want to, watch from above before going on stage for the show.

The structure is an interesting combination of existing load bearing walls and a gridwork of columns. The pattern of the columns create a repetitive pattern that creates some order and structure within a larger space. This is different than some other spaces in the Performing Arts Center. The theatre spaces can not have that do to the want of the customers not to have an obstruction of their view.

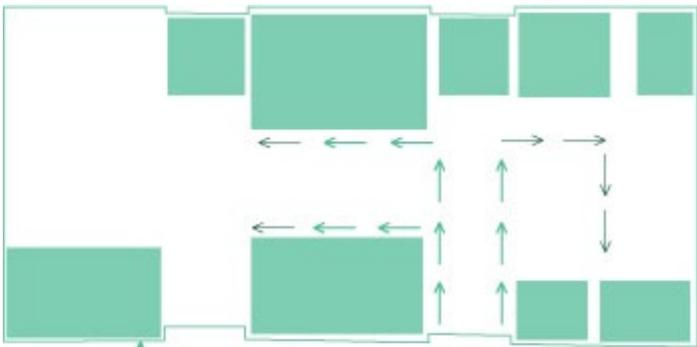
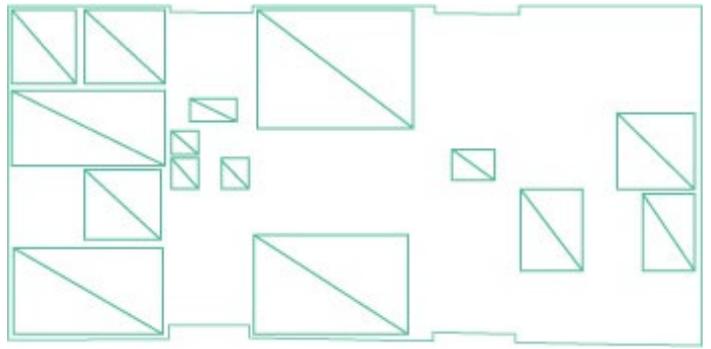
This case study is a good example of how a structure that was not being used to its fullest potential can be used as a foundation or jumping off point of revitalizing and creating a real sense of community. The design takes into account the historical and site context which is a crucial in making those connections.



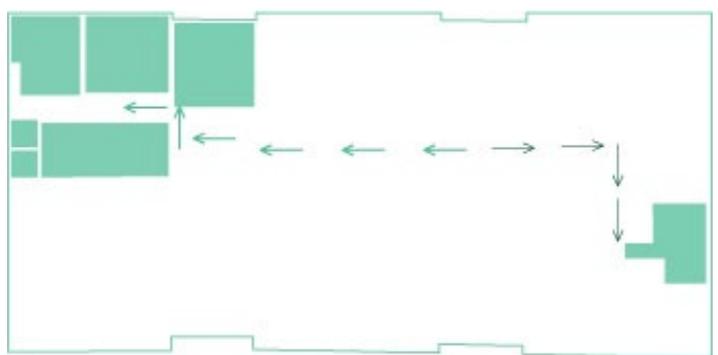
structure



geometry

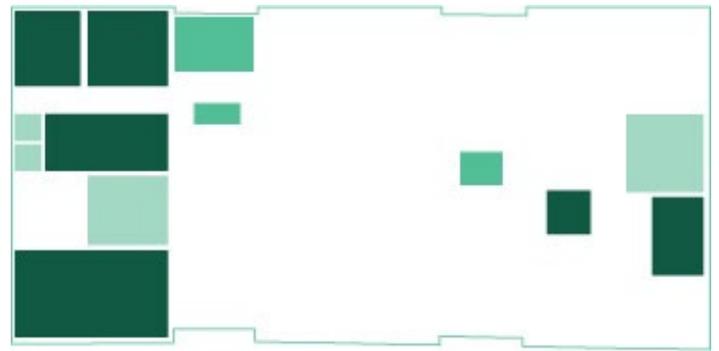
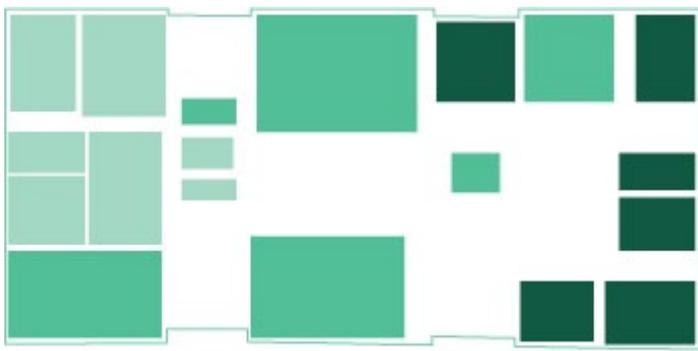


circulation

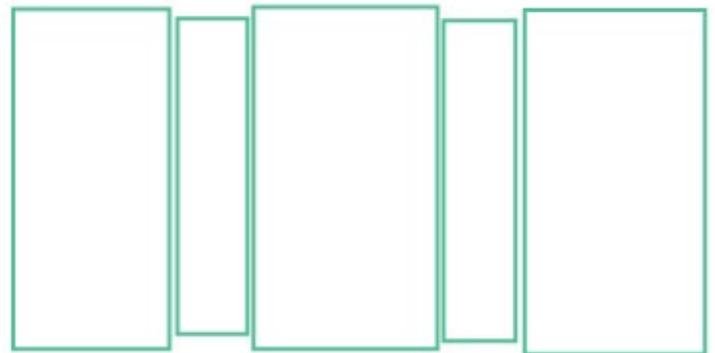


massing

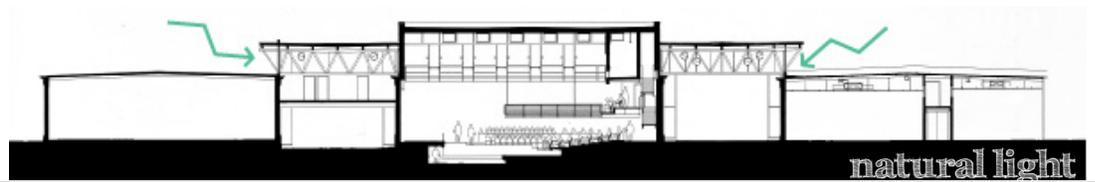




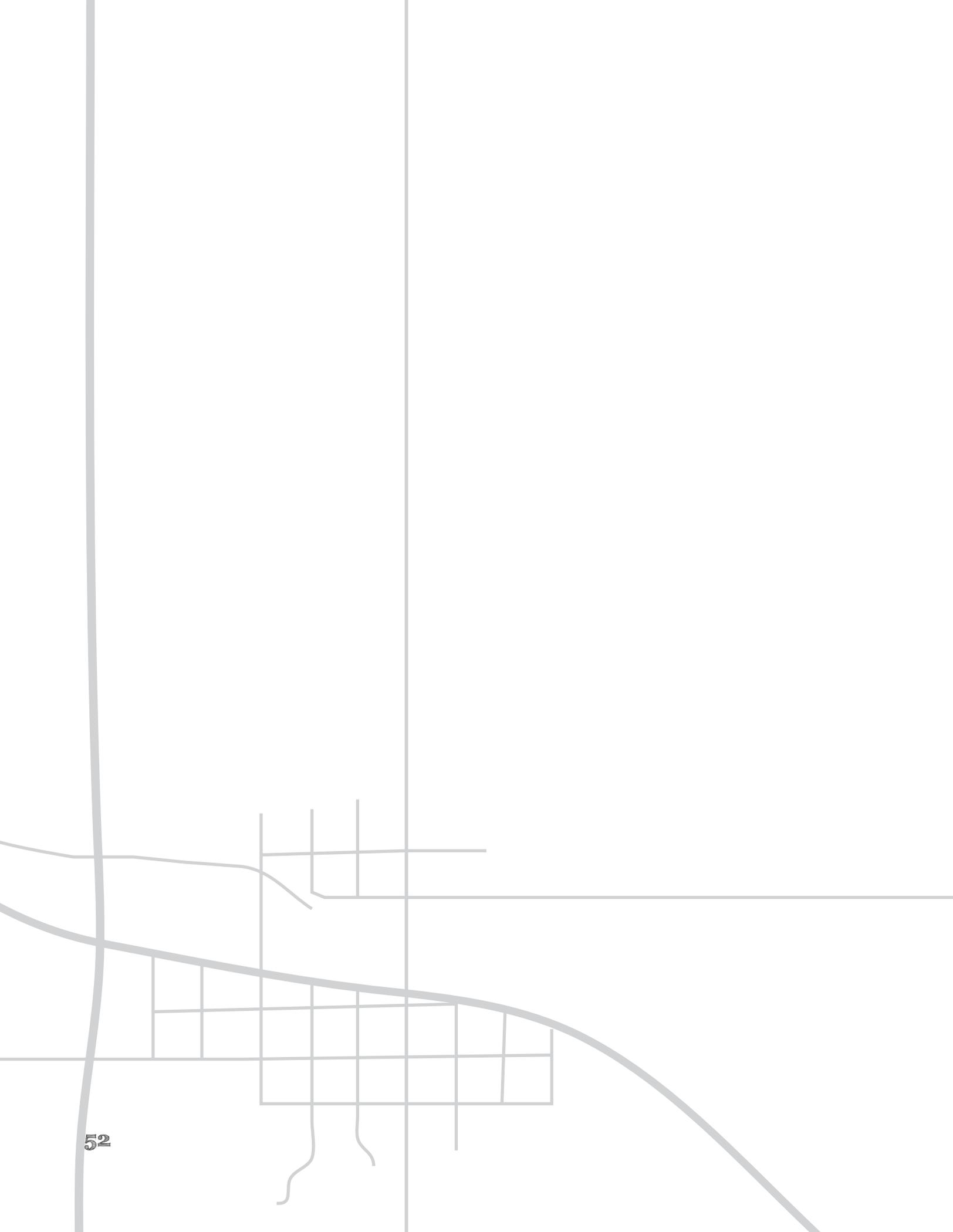
hierarchy

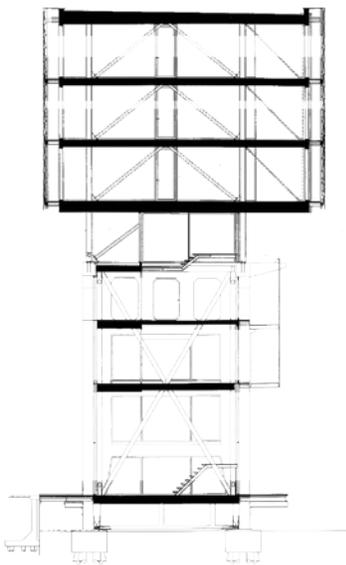


plan to section



natural light





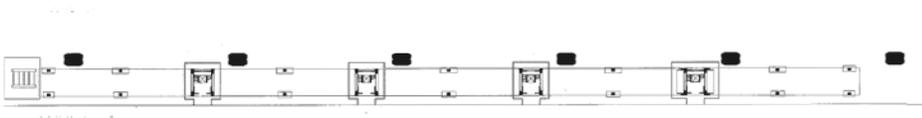
section source: Architectural Record, pg. 82 (2011).

kraanspoor

location:
Amsterdam

architect:
Ontwerpgroep Trude
Hooykaas [OTH]

context



plans source: Architectural Record, pg. 82 (2011).

Kraanspoor is an adaptive reuse of an old shipping dock for the Dutch Dock and Ship Building Company. The completed office space renovation totals up to 134,549 square feet (Metz, 2011, 81). OTH decided to use the existing 55 year old concrete pillars to bring a historic and physical connection to the site. It was designed to have very little architecture so the focus would be on the views and the connection with the water.

Trude Hooykaas was out enjoying an early morning bike ride when she noticed the un-used kraanspoor, which means “crane track,” with its two abandoned cranes atop the structure (Metz, 2011, 81). Ontwerpgroep Trude Hooykaas was in the market for a new office space. Hooykaas thought it would make the perfect office along with a number of others. The idea was to create a volume with that was “as light and transparent as the base is heavy” (Metz, 2011, 81).

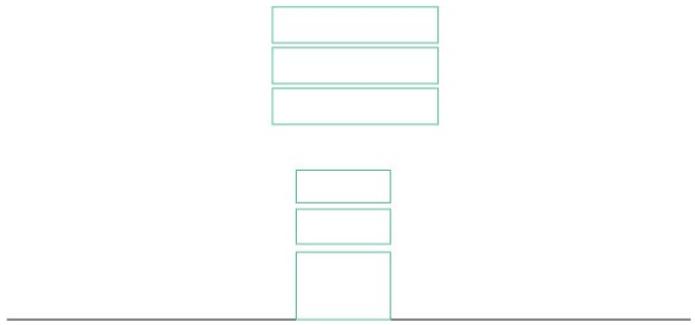
The piece of architecture speaks volumes of the period and place of the site. The iconic glass box hovers over the waterfront in the harbor. Having one side on land the other in the water allows for easy access, but still having the connection to the water. The glass box is 886 feet long, 38 feet high, and 43 feet wide (Metz, 2011, 81). The inhabited part of the structure actually cantilevers to both sides to allow for a reasonable amount of square footage to be utilized efficiently as office space. It was designed with a void between the old and new. This was done in a way to honor the original concrete structure. The original wood docks are still intact and used to approach the stairs. The original concrete structure allowed for four separate stair entries along with two other egress ones. The H concrete form stands out and makes a statement of how well built it was during the time period, that it has survived and was in good enough shape to take it on as a project. The key to making projects with stand the test of time for future generations, is to maintain them properly. It is almost as important to hire a caring and determined facilities manager compared to a project manager.

Each support has its own entry with elevators and stairs. This comes in handy by allowing each entrance to service only two offices. One on either side. This allows for a very personable experience of each establishment. The second floor

was designed for functional spaces to be present there such as restrooms, storage, and mechanical functions of the building. This experience is more of a private one because for every two offices, there are dressing rooms. The experience of going through the void is unfathomable. Once up on the fourth through sixth floor, the plan really opens up and allows for the most views, basically 360° around. To accomplish the “floating” nature. A concept of a double skin exterior, with the exterior one being a system of operable louvers. The interior is piece of strengthened glass with frits were placed, on the side closest to the land, to help maintain a workable environment by containing the sun. The three feet between the two layers is not only for functionality of being able to clean and maintain them, but also as well as a buffer of insulation, and ventilation through the floors. Air can be used as an insulation factor and a cooling system depending on the season. The spaces’ temperature is maintained by having water heated or cooled circulating through pipes in the minimal two and three quarter inch floor (Metz, 2011, 83). This water is actually pumped from 26 feet below the basin of the harbor (Metz, 2011, 83). Hooykaas admits that the interior environment is not perfect. It struggles to maintain a consistent air temperature throughout due to all four facades being covered in glass.

The interior spaces are open for whatever type of client decides to move in. Unfortunately Trude Hook was not present with the firm when the decision was made to not move in to the time laborious project.

The unique connection to its surroundings and the idea that it is alone, but still within close proximity to other buildings. The idea that the architects designed as little architecture as possible. The reason was to not inhibit any view with a man-made piece of work that was not original to the area. This can be hard for a firm to recognize the need to go with a minimal design. Usually designers want to do a really elaborate design that can detract from the site. The site is just as important to consider as the materiality choices and structure calculations. The simple, but effective mechanics of the building that maintains that comfort level are interesting details that have a huge impact on the building throughout its life time.

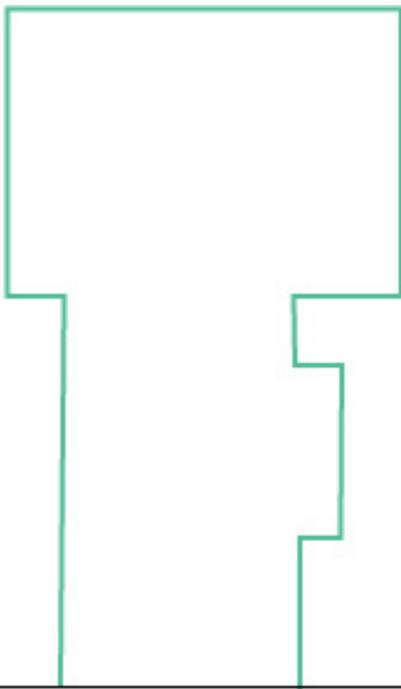


first floor

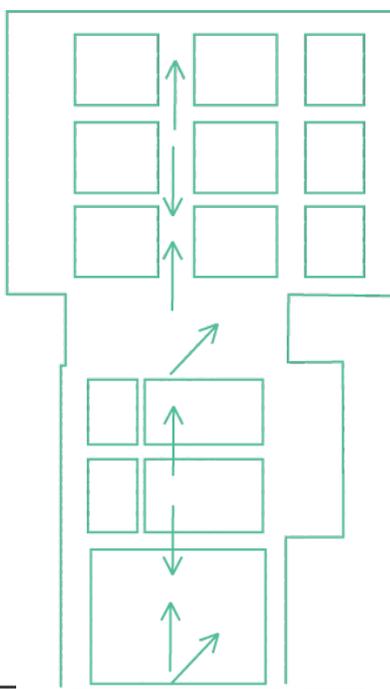
second floor

fourth, fifth, & sixth floor

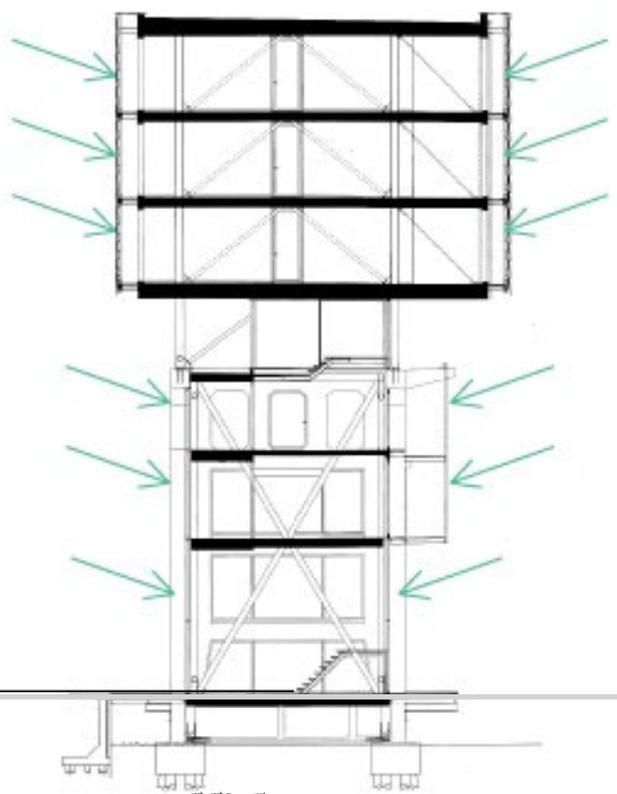
plan to section



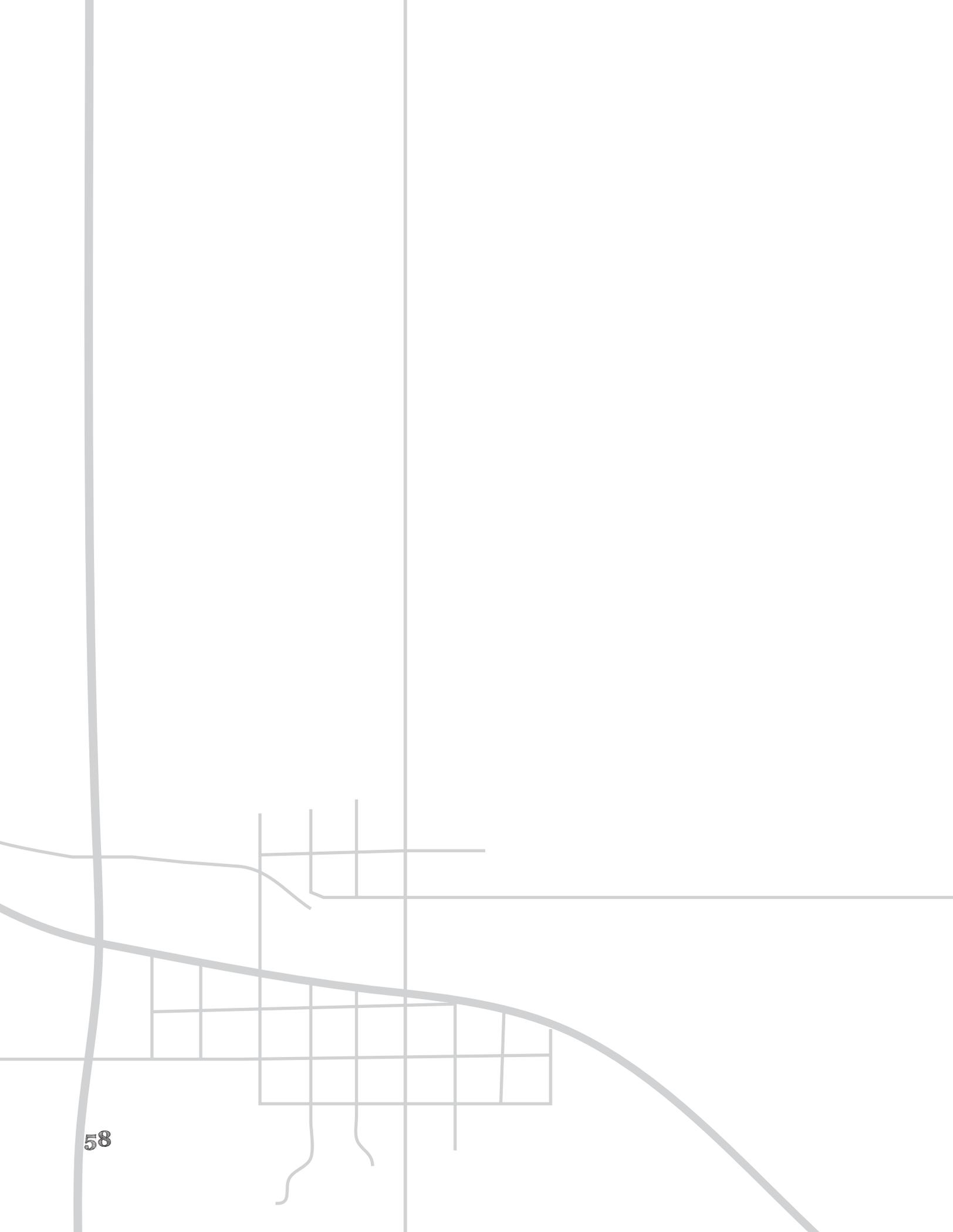
massing



circulation



natural light



ford assembly building

location:
Richmond, CA

architect:
Marcy Wong Donn
Logan Architects

regulations

The original 517,000 square foot Ford Assembly factory, in Richmond, California, was design by Albert Kahn in 1931 (King, 2010, p. 78). This quarter mile long structure made up of mostly open space with very little divisions. Ford occupied the building until the 1950s when they moved to the suburbs. The City of Richmond acquired the empty building and registered it to be put on the National Register of Historic Places in 1988 (King, 2010, p.78). Due to its location in an seismically-active area, there have been various repairs that have had to be done. These repairs were costly in time and money. During those year of repairs there were many proposals, but no actions taken developing the at the time 60 year old building.

The main deterrent was the location. Richmond is known for crime and rocky politics. Not to mention the extraordinary size and disrepair caused by time and the environment. It was difficult to find businesses to commit to making that area their home. In 2004, Orton Development bought the building, for \$5.4 million, and hired Marcy Wong Donn Logan Architects to take on the project (King, 2010, p.78). In order to make the site an attractive and marketable space, Orton decide to “restore and modernize the shell” (King, 2010, p.78). Working on a building on the National Register of Historic Places has its hoops to jump through. Both the National Historic Preservation Office and the National Park Service keeping the design team on their toes.

The main focus was to repair the exterior first with as little design changes as possible. Mostly to make sure the development got is “historic tax credits” and to keep as much of the original design integrity of the structure. The boards were most concerned with the facades that are the closed to the main roads in the area. Most of the exterior repairs were replacing windows and corroded framework. The skylights on the “sawtooth roof” are a good source of a lot of diffuse light that is key for factory and assembly work environments. This was an area that needed quite a bit of work. As much as could be salvaged was to create a cohesive and original look. A few things were not salvageable because it was not possible to save the earthquake stricken details.

The main dilemma was what type of space to put in the what now called the Craneway Pavilion. It is a one acre room with 65 foot ceilings on a pier in the bay (King, 2010, p.81). This means that the public has control over it and it gets the Bay Conservation and Development Commission involved. The solution was to utilize it into “a vast event center with pulleys and an entire crane left as artifacts” (King, 2010, p.81). The artifacts give the space a deep connection to what the space was originally designed for eighty years prior.

The main portion of the structure is then divided up into five portions for different tenants. Vetrazzo, Mountain Hardwear, and Sun Power are some of their tenants. They were each able to personalized their own portions. Sun Power has one of the most unique design features in their lobby. A stringerless steel staircase. This solution actually stemmed from a warning from their engineer on the project. He didn't think they should try to compromise the concrete slab foundation (King, 2010, p.81). So the solution ended up using the handrails to suspend the stairs from the ceiling.

Upon its completion, the Ford Assembly Building has received an award from the National Trust for Historic Preservation. The building was awarded because :

“It demonstrates that a monolithic relic of our industrial heyday can be reimagined for use in today's diverse economy. This doesn't feel like a multitenant structure so much as a cluster of workshops and offices that happen to be within one gaunt shell. (King, 2010, p.81).

The path and detail of the process of this project gives good insight into how the design process is managed with have the National Park Service and the State Historic Preservation office are involved. The examples of dealing with salvaging what is possible and finding the best replacement for parts. Creating a successful design of smaller parts that fit together to comprise the large original building.

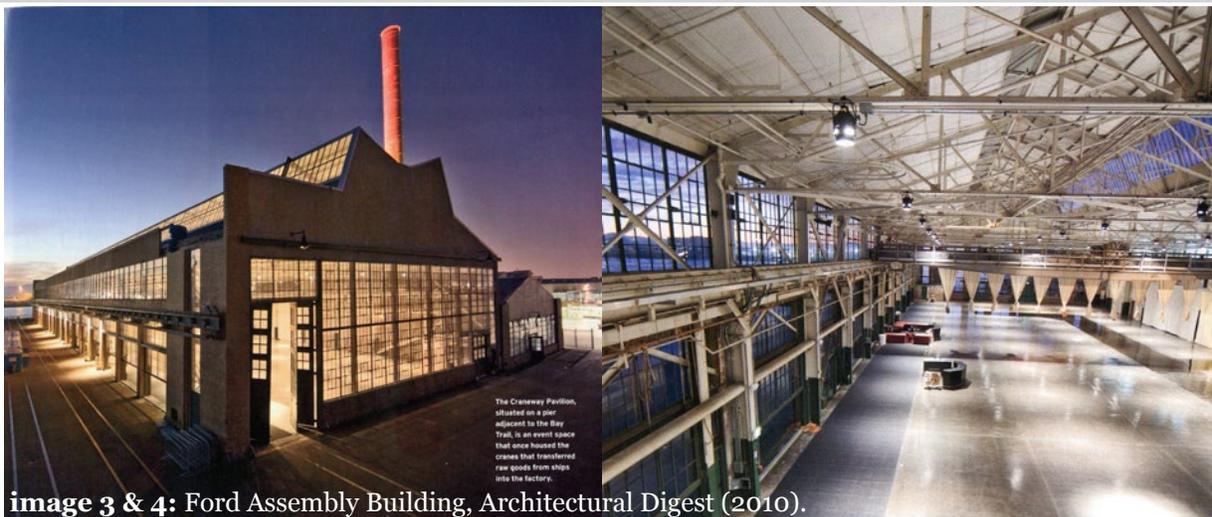
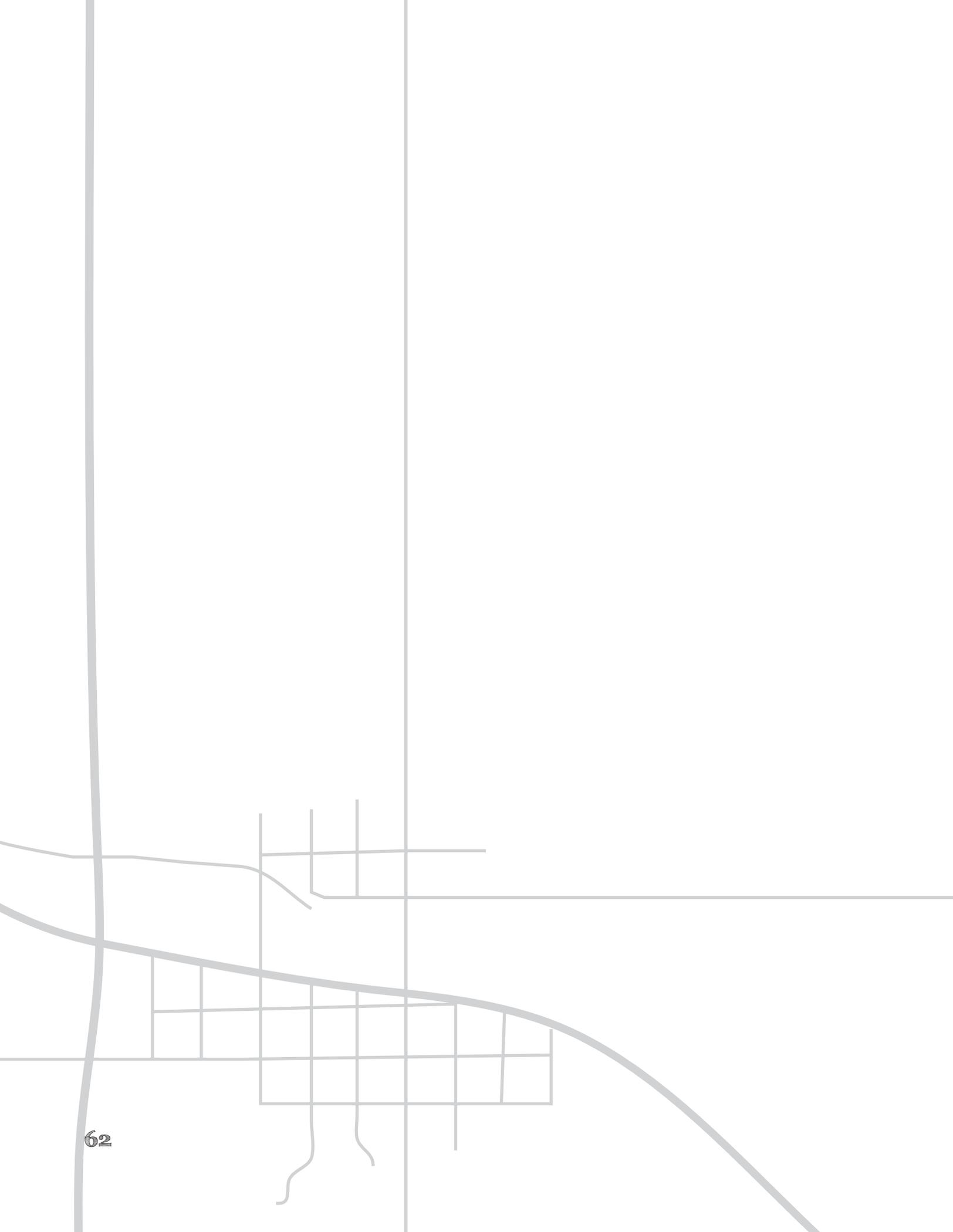


image 3 & 4: Ford Assembly Building, Architectural Digest (2010).



iron market

location:
Port-su-Prince

architect:
John McAslan
+ Partners

morale

The Port-au-Prince open air market, Iron Market or Marché de Fer, is made up of two 25,000 square foot parts (McKnight, 2012, p.76). The structures were damaged like most structures in Port-au-Prince from the January 12, 2010 earthquake. Two years later, the structure is completely restored to its red and green glory, complete with four 75 foot tall minarets flanking the clock tower. The structure was prefabricated in France in 1891 (McKnight, 2012, p.76). Originally it was designed to be Cairo's rail station. Haiti stepped in when that plan failed. It quickly became the main area for commercial activity for the next 100 years until a fire in 2008 damaged the north end.

Digicel, a cell phone company in Haiti, the owner of Iron Market put in \$12 million dollars to restore the devastated structure. They knew what an icon and jewel to the community it was, which is why they wanted to get the restoration started as soon as possible. John McAslan + Partners, a United Kingdom firm, was appointed the job a month or so after the earthquake hit. This was done to boost the morale of the city and help people to know that they can pick themselves up, dust off and move on. Together with local consultants the decision was made to keep as much of the original structure and materials in place. The project was finished a year later, opening on the day before the earthquake's one year anniversary ((McKnight, 2012, p.77). It worked well with McAslan because he had already been doing some work in Haiti previous to that and had suggested revitalizing the market prior to the ravenous event.

The pile of rubble was evaluated to see what would be salvageable. The main concern was an addition of a raised concrete deck that had collapsed onto the south wing. If it hadn't been for that the south hall would have only had to undergo minor restoration surgery. It basically "chopped the columns in half" (McKnight, 2012, p.79). While using the Institute for the Protection of National Heritage, a plan was developed to use as much of the original rod iron as possible. Some places like the clock tower it was impossible. In order to prevent this traumatic experience from happening again, the clock town columns were replaced with steel. For most of the project local Haitian skilled workers did the work. The north wing, or arts and crafts pavilion, was completely rebuilt using

steel. Since the project was the going the decision was made to bring up to code with the International Building Code. By adding “column anchors and X-bracing,” this was accomplished (McKnight, 2012, p.79). The small amount of power that it needs is taken care of with the addition of solar panels. The 800 vendors realized that it isn’t quite back to the way it use to be. It is still mostly surrounded groups of tents and ravaged buildings (McKnight, 2012, p.79). They know that one day it will get back to the bustling days of 1891.

The original design was very well crafted and thought out it. The thin and elegantly detailed columns that support the two enormous halves of the total complex. The beautiful arched openings on the exterior facades. The design needed to take into consideration for natural ventilations systems and maybe electical, since there is not much need for it except for a handful of industrial fans.

Visiting this structure to experinece the architecture would give you a sense of connection to the site and how it was able to rebuild so quickly. It would bring back of that day when when the earthquake hit. The Iron Market structure was important and special to the local residnets before the distaster. Now it not only represents the market and place to socialize, welcome people, and see old friends with booths. Now it stands for “picking your self up and dusting off.” As the rest of the community continues in the right direction by rebuilding, they will look towards the bell tower to underand that anything is possible and that things can get back to normal.

This project is a good example of using the project as a catalyst for revitalization. The owner realized the importance of the structure to the community and the effects it would have on the hub of Port-au-Prince. After a natural disaster like that, a restoration project is needed to get the residents excited again and build the morale of the community.

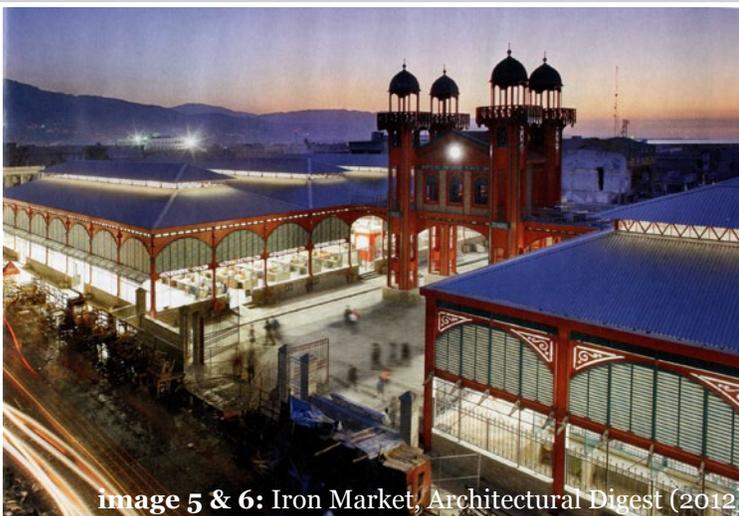
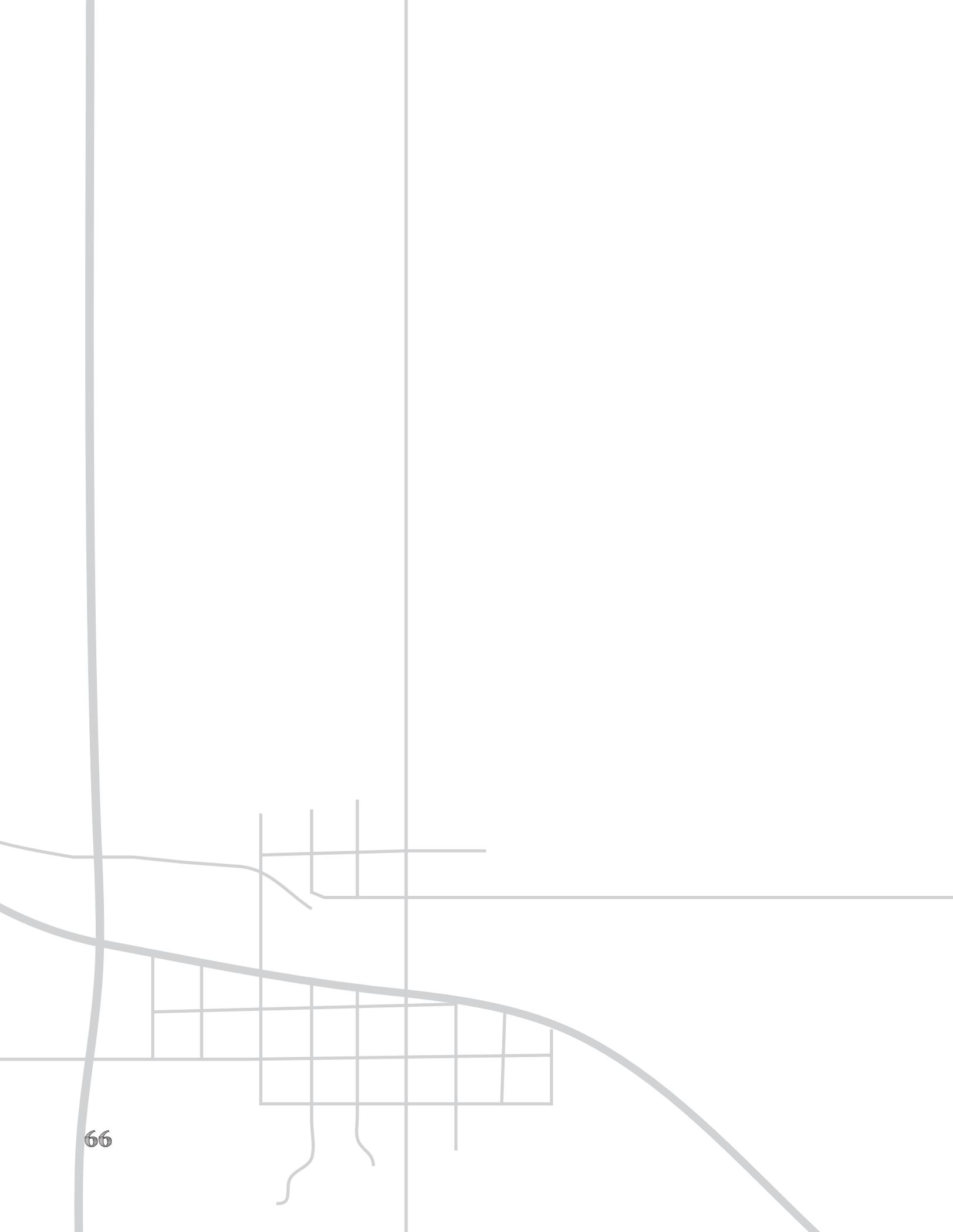


image 5 & 6: Iron Market, Architectural Digest (2012).



urban outfitters corporate campus

location:
Philadelphia, PA

architect:
Meyer Scherer
& Rockcastle

community

In 2006, the decision was made to move the Urban Outfitters corporate campus to the Philadelphia Navy Yard. Up until then the campus was sprinkled throughout the downtown area. This brought the 650 employees together to a 330,000 square foot campus (Scherer, 2006). The buildings were built anywhere from 1880-1939 (Scherer, 2006). The location is a prime spot where the Delaware and Schuylkill Rivers join with seven miles of waterfront. (Scherer, 2006). The structures were in pretty bad shape from time, nature, and lack of attention.

The Navy Yard has been established as a National Historic District that consists of 263 structures (Scherer, 2006). The prime time of the yard was between 1872 and 1945 (Scherer, 2006). It was used primarily for building and fixing boats and ships. At one point it was used as a “receiving station” for the Marine Corps (Scherer, 2006).

The 23 month long project worked on five different buildings .

Building 10, a 50,000 square foot two story building, was constructed for the Workshop for Bureau of Equipment in 1903 (Scherer, 2006). The Renaissance Revival styled building is home to the Anthropologie brand, consists of a variety of spaces for the employees. The open floor plan opened it up for an kind of arrangement of open, enclosed, and half and half type of rooms (Scherer, 2006). Pieces that needed to be replaced came from a structure in Chicago to keep with the time period.

Building 7 was one of the earlier buildings built in 1880 (Scherer, 2006). Restorations happened twice prior to the current project, in 1916 and 1940 (Scherer, 2006). The two story brick building was the Docking and Apparatus Building, but is now home to the Urban Outfitters brand. The added mezzanine was taken out to reveal a similar floor plan as building 10. This allowed for its full height to be enjoyed once again.

Building 12 is home to the offices of shared offices between the three brands. The 1903 building brick building was also designed in the Renaissance Rival style (Scherer, 2006). Everything in the 20,000 square foot building was refurbished to its intial glory (Scherer, 2006). A new stair case was added to

connect the two existing stories.

Building 15, “the one-story, rectangular, hip-roofed, red brick” building was built in 1903 (Scherer, 2006). Now the Free People Brand has 20,000 square feet to call home on the corporate campus. It used to be the Smithery and the “decompression tank room” was taken out for more room to put offices and other spaces (Scherer, 2006). Building 15 can be identified by its replicated “red clay tile roof” (Scherer, 2006).

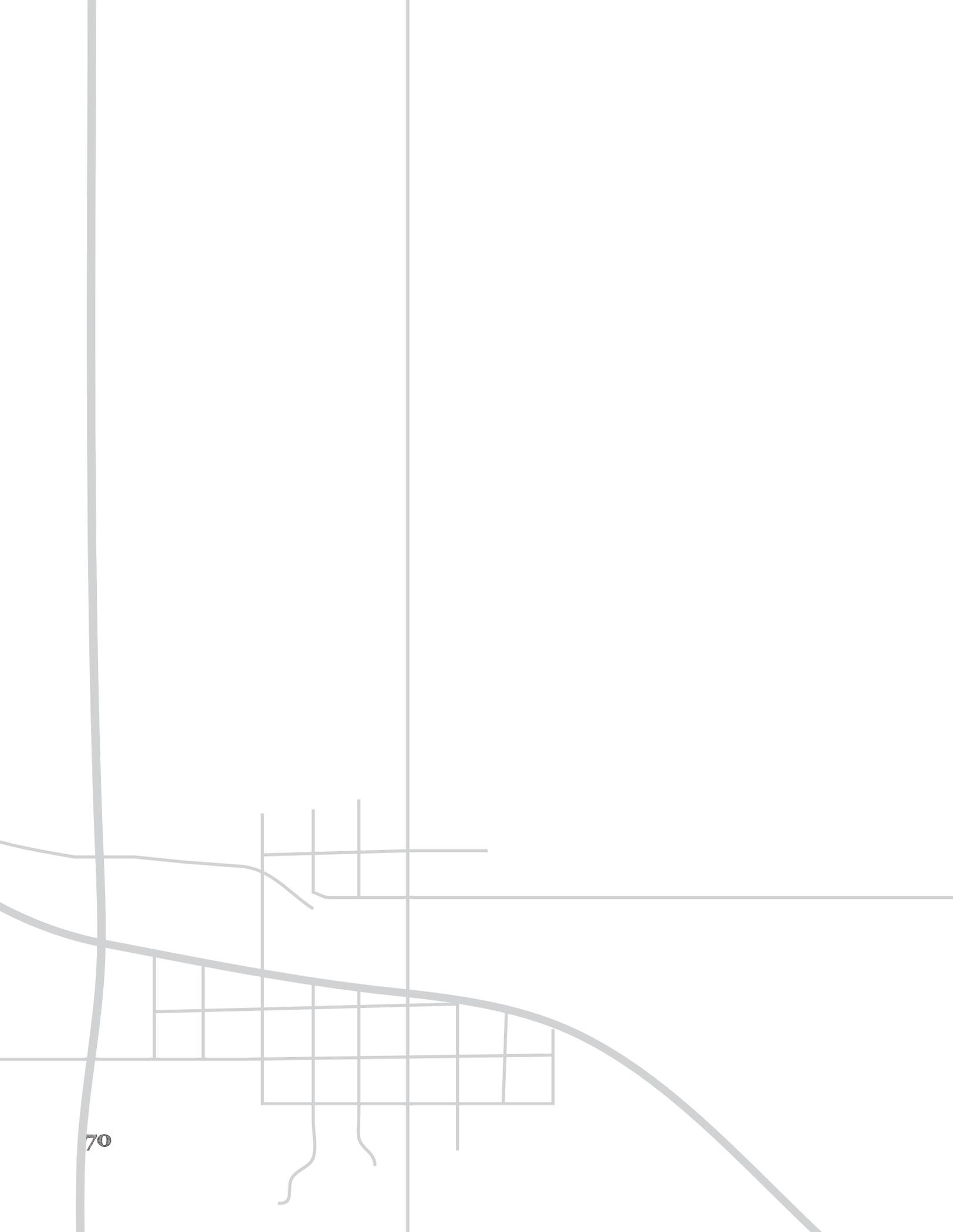
Building 543, the Pipe and Coppersmith Shop built in 1939, which is quite evident based on the style of the building (Scherer, 2006). It has a very industrial modern feel to it. The focus is on “streamlined appearance, smooth wall materials, and long bands of industrial windows” (Scherer, 2006). This is the reason why it makes a good central building for common spaces. The building holds a variety of spaces with eating space, workout space, learning space, and other functional uses. Anything new that was added kept with the original industrial feel. The 280 foot bamboo trench and koi ponds may not, but they boost the quality of the work space. Most of the remaining industrial equipment that was left was designed around to keep the character intact.

The idea of just picking up all your employees and moving them to completely different side of town is not easy. For some employees it is a longer commute to work, but the work environment is a trade off. The interiors were carefully crafted with all period details that make the building seamless. By including green space around the building, it inspires people to go outside and be active while at work. By moving their campus to the Navy Yard, it has caused a booming affect on the area by bringing an excess of 3,000 more employees after their move (Scherer, 2006).

The reason it worked so well to do make the move, is because the idea of it falls into place with the company’s beliefs. They strive to create a deep connection between customer and their designs. Their designs, range from dresses to dishes, strive for uniqueness, durability, usability. In their displays, they try to incorporate props that are either found or forgotten about and repurpose them in their marketing strategy, which is a smaller scale than the campus.



image 7 & 8: Urban Outfitters Campus, Architectural Digest (2006).



70

the old creamery quilt shop

location:
Randall, MN

Randall Cooperative Creamery

activity

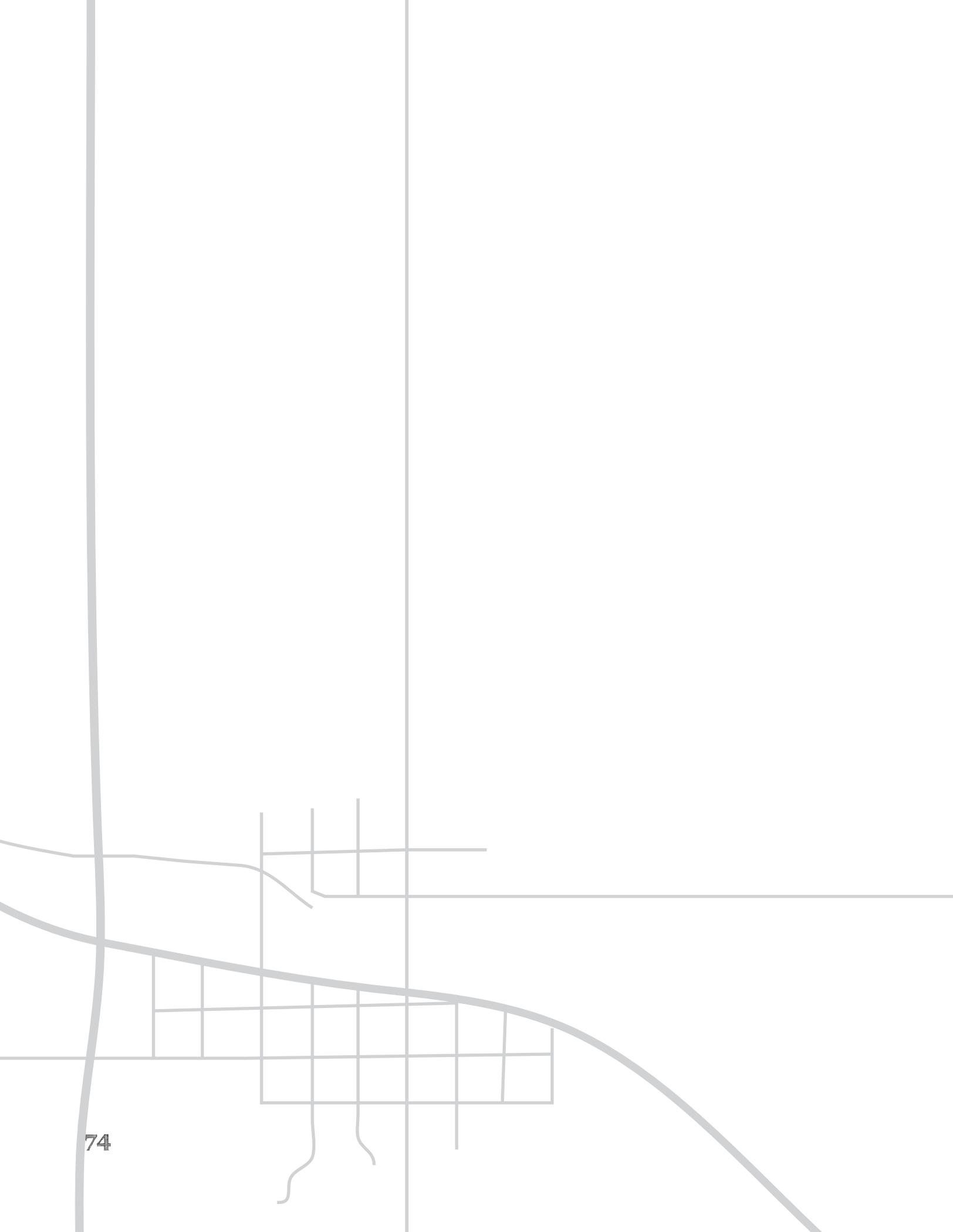
Janelle Johnson and Linda Thesing had always wanted to own a quilt shop. In 2011, that dream came true. Johnson approached the previous owners just to see if they would ever consider selling. Turns out they were. After getting several offers from many individuals interested in purchasing it with the intent of opening a small engine repair shop, a quilt shop was closer to the antique shop that they envisioned for the 1920s building.

The building was used as a creamery up until the 1970s. After that it had gone through a series of ownership changes as well as visions of what the masonry building could be to best benefit the small community that built it.

For being untouched and unoccupied for 11 years, no structural repairs were needed. The only major repair was some plaster work up on the second floor caused by water damage. Johnson and Thesing wanted to keep as much of the original details as possible. The light fixtures are original as well as the can doors are celebrated in unique ways. Local timber that the previous owners had was sawn down to tongue and groove for flooring in the quilt shop area. The singular restroom is the original restroom that was the first indoor plumbing in the area when the structure was built. The quilt shop is in what was the main processing room. The quilt shop is in what was the main processing room. The 1950s cooler addition houses the cafe and kitchen. Upstairs the stage looks out over work stations of tables instead of rows of seats that many people in the area sat in during various meetings, church functions, and plays throughout the glory years of the building. A photography studio, in the mechanical room, massage therapy room, in the coat room, and an office are also included in the program up stairs utilizing all of usable square footage.



image 9: The Old Creamery Quilt Shop



fond memories at the creamery

location:

Walnut Grove, MN

Walnut Grove
Cooperative Creamery

materiality

In 1996 Fond Memories opened in the 1930 Walnut Grove Creamery building. This registered National Historic Building is home to a scrapbook and card studio and store that sells those products, other crafts, and antiques. The unique modular rainbow bricks came from a factory in New Ulm, Minnesota.



image 10: Fond Memories at the Creamery

The handful of case studies that are compiled here are have a wide range of size, uses, and degree of restoration, repair, and repurposing. It is interesting to see the variety that makes up the repurposed built environment. That variety and repurposing is what makes the fabric of architecture interesting. Being able to see another take of the vision a previous person had.

990 offices was the youngest original project. The takeaway from this project is that whatever is existing and is not wanted, can be used in another way. It is good to repurpose things, but also keep it from being thrown out. It is a good example of using sustainable strategies and innovation to make the design go farther. Being efficient with the design is productive. In this case the need was to somehow screen the light come through the skylights and to soften the box like interior feel of a steel structured building. That is hold the curving slatted ceiling came to fruition. Another bonus of the design decision is that it cuts down on the reverberation of the interior.

The Young Centre for Performing Arts is unique in the fact that used two existing structures as spaces within a larger designed structure. The design of this structure accommodates the nature of the use of the building. This gives a great experience due to the fact that individual users can experience the existing structures by going around them instead of entering them and experiencing the interior of the structure as part of the design. There is a strong connection between practicing to perform and actually performing. The connection is there in the way they are connected and where they are connected. The classrooms and studios are right near the performance spaces. This shows the relationship visually and allows for a different mix of users can interact with one another. This can also relate to the organization layout in a vertical manner as well.

Kraanspoor's main strength is taking the site and the views into consideration. Designing a minimal amount of architecture to take advantage of the context of the site. This also ties back into the history of the original structure. The kraanspoor was used as a dock in the harbor for loading and unloading ships. Due to the idea of using a lot of glass to keep views visible from most areas within the building, it creates this juxtaposition between the light and airy feeling of the glass and the very dense and heavy concrete structure. Not only the difference of materials, but that also contributes to the upper glass portion portrays a very modern idea next to the old and worn concrete structure.

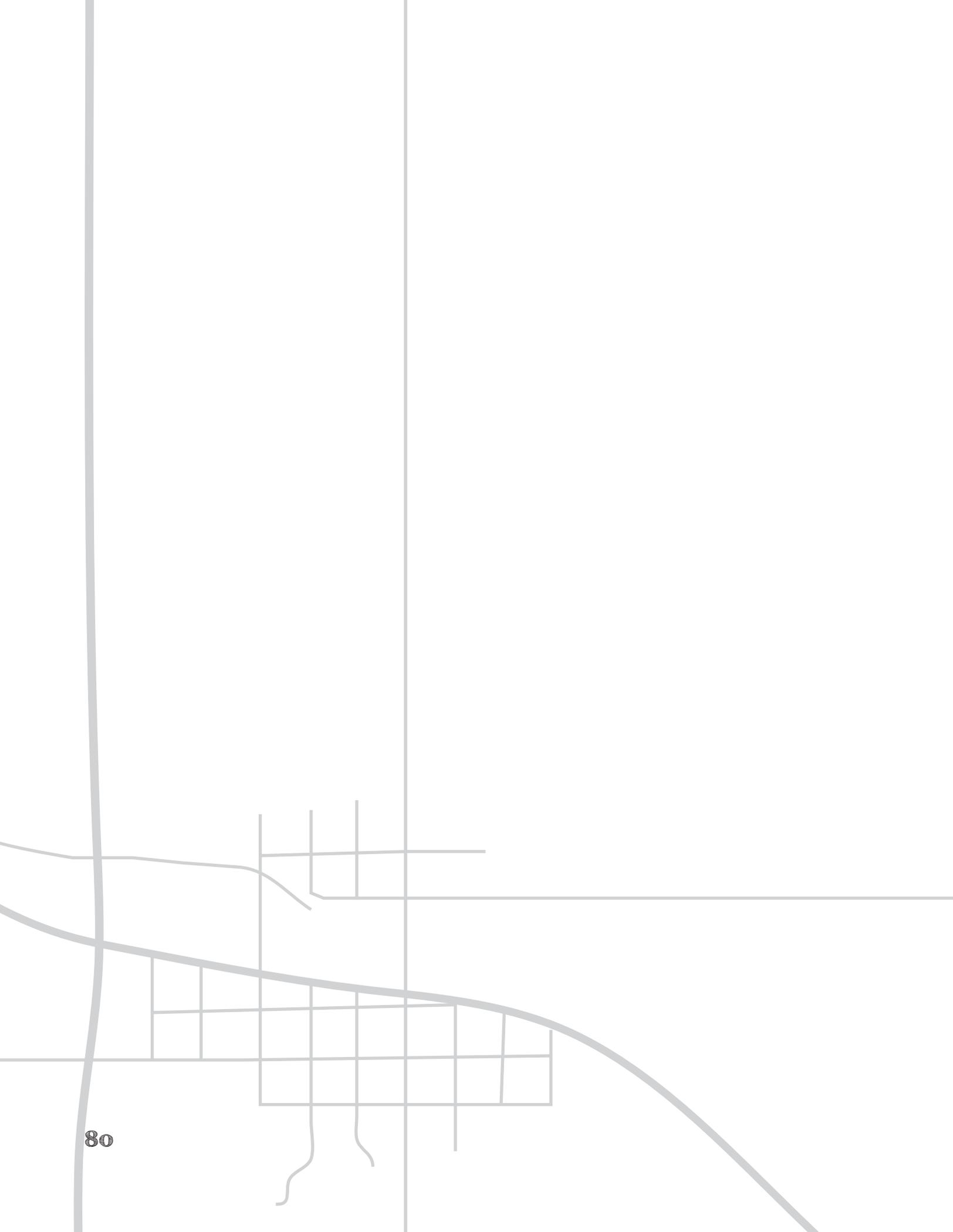
The Ford Assembly Building project building, the architects had to work alongside and in compliance of the State Park Office and the National Historic Preservation office. Even though added regulations to the already given regulations of building can make designing difficult, the rules are only there to create a safe environment for quality design. This helps to keep the people who are not truly passionate about the preservation process away and to keep projects relevant to their original design. It is not necessarily a requirement for every project. The tax incentives to design period designs that work with the necessary functions of the buildings help to regulate the process. There is always a compromise that needs to happen between the design and the period connection to the history of the building.

Iron Market had a quick timeline to it in order to give the people of Port-au-Prince hope that the pieces of the city could be put back together. In this project the difficult question was to use the original material for replacement or to improve the structure? In this case it was worth it to make the structure sound. With this decision the building should be able to withstand the local pressures for years to come. It is better to invest in that rather than having to adjust or add to the structure more often. A unique feature to this project is the location or site of it. The other studies, except 990 office, the environment is very mild and does not have to deal with the cooler weather and snow loads. In place of that, seismic loads had to be calculated precisely for the design and configuration of structural members.

The Urban Outfitters Corporate Campus focused on the notion of creating a community within a company that did not exist due to their spread out location in the downtown area. This project revitalized not only the buildings, but also the idea of having corporate or any kind of a business in the Philadelphia Navy Yard. The attention to details really paid off. If the part, floor, or piece of existing hardware could not be salvaged, a piece of similar context and time period would be found to keep the cohesive look to it. This is quite the opposite from the Kraanspoor project, where it was epitomized by the interesting juxtaposition of the materials, feeling, and era.

Visiting the local creameries helped to visually grasp the concept of re-purposing the masonry structures and to see first hand the different styles of creameries.

Through this process the amount of knowledge that has been taken it will be very helpful in the years to come. Each project has its emphasis on what was taken away from the study, but all aspects of the project are an important function of the building. It all contributes to the well being of the built environment. Not every detail of every project will be brought into this thesis project, but will be stored for the future.



80

historical context

Todd County, located in about the middle of Minnesota, was established in 1856 through the Minnesota Territorial Legislature (Todd County Heritage Book Committee (TCHBC), 1988, 4). The original territory reached as far east as the Mississippi River. At the time it included Fort Ripley, commanded by Captain Todd. It was condensed down to its current size of 28 townships eight years later in 1864 (TCHBC, 1988, 4). Originally the land was known as being a battleground between the Sioux and Chippewa. Few dared to homestead there during the unsettled times. In 1847 the land was given to the United States through the “Hole in the Day” Treaty of Fond du Lac (TCHBC, 1988, 2). Clarissa which has and is a small agricultural based community from its humble beginnings It is located about in the central part of the county along Highway 71. , in section 27 of Township Eagle Valley Highway 71 paralleled the Great Northern Rail, that cut across the nation.

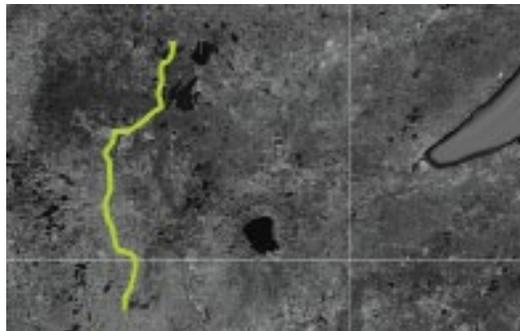


image 11: Local workers laying the K-line, Source: Todd County Heritage Book Committee (1988).
image 12: Map of K-line, Source Google (2012).

In 1889 the Great Northern began the construction a railroad track, the K-Line. this portion of the track would start in Sauk Centre and end in Cass Lake. The 150 mile long track would take a while to construct and large volumes of materials to construct it. This gave local individuals the opportunity for some extra work. The railroad hired locals for help in the constructing process. They were mostly used for harvest the local crop of timber for the railroad ties. Due to

the abundance of trees in the area, there were plenty harvested and used out in the Dakotas. Specifically, timber from the Browerville and Clarissa areas were used on the section between Fargo, ND and Ortonville, MN (Roers, 1983, 16). The locals were not only excited about the extra work available to them during this time, but also the promise of growth the railroad brought. With the ability of selling goods to a far great area, industries began to grow. The main economic activities in the area were logging and farming. That is still true today with the several poplar tree farms and the numerous dairy and cash crop farms in the area. This would not only create a connection for selling logs, produce, grain, and butter to the Twin Cities and then on to Chicago, but also to Duluth and Superior where it could be shipped out by boat. (map of K-line and photo of workers)

The elderly have always been an involved asset to the communities of the county as well

as a cared for group of people. There is a strong network of senior centers in almost all of the communities in the area. Along with that service organization, they also provide such services as transportation, meals, informed ready, and a volunteer program through the county. The volunteering program allows individuals the opportunity help out and give back in a variety of ways at different venues: senior centers, nutrition sites, schools, libraries, nursing homes, churches, and community organizations.

The community has also been thoughtful in the care and needs of their own community members as they age. In 1968, a group of Clarissa citizens realized the need for a community setting for the ageing members of the community (TCHBC, 1988, 44). They were able to organize Clarissa Manor, a nonprofit retirement community building that included eight units. Later in 1972, the community decided to establish a congregating spot for all aging members to gather and socialize among themselves (TCHBC, 1988, 44). They recognized the social needs of an elderly person who may not live in town and have that daily interaction with others. This creates a time for them to look forward to,

each weekday, to go into town to share a meal with friends and acquaintances and maybe partake in a card game or two. Presently an assisted living facility connected to a long term care center is available to residents and the surrounding areas.

A common vernacular typology that can be found in most agricultural based communities are creameries. They are a staple of any small town. Some have been preserved and taken care of others have fallen into the hands of nature. Most creameries are symbols of industrialization of dairy products and a sense of community. Being in this region, most people can identify with idea of a creamery nearby and what it brought to a community.



image 13: Original Creamery, Source: Todd County Heritage Book Committee (1988).

The idea of a true cooperative creamery, owned by the contributors, was first designed around 1882 in Denmark (Martens, 1993, 2). Shortly thereafter it was also found in Belgium in 1878 (Martens, 1993, 2). The this kind of structure of business, farmers were able to work together for the betterment of the process and they themselves. By having a central processing plant, the milk went through the same process each time and ended with the same results. This created a consistent product that allowed for a consistent price to be charged each time.

The starting point for cooperative creameries in Minnesota started in Freeborn

County, in a Danish community. The Clarks Grove cooperative creamery was formed in 1890 (Cartwright, 2012). Hans Peter Jensen, a farmer, brought back the knowledge and new technology from Denmark to cause a way of development in the world of organized creameries across the state. This led to 550 cooperative creameries to be set up across the state. The problem was that it would be difficult for each farmer to access and acquire their own equipment to produce the results they wanted. By going in together on equipment and mixing the butter in large amounts using cream separators. This increased the efficiency of butter production which in turn increased profits that was split amongst the group of farmers.

Clarks Grove became the standard for creamery operations and management. The man that put the up for this role was Theophilus Levi Haecker, who is known as the “father of cooperative dairying” (Martens, 1993, p.3). Haecker was a professor at the University of Minnesota in the dairy science department (Martens, 1993, p.3). This was how he became such a progressive thinker in the world of creameries with the experience and knowledge to push the movement in a forward direction. He investigated the different dairies across the state. Upon his findings he was very disappointed with the quality of the processing and the managing, but he was pleased with the facility at Clarks Grove. Based off of his findings he wrote up an article for distribution, in 1894, of how to establish a cooperative creamery using Clarks grove as an example (Cartwright, 2012). Upon that he traveled around the state giving lectures and helping farmers to start up a cooperative in their area. Haecker was the main presence in the growth of cooperatives in the state. By 1928 around half of the creameries in the nation were in Minnesota (Cartwright, 2012). That is how Minnesota has become the an image for cooperative dairies, dairy products, and agricultural base.

Both A.J. McGuire and John Brandt were also key personnel in the growth of the network of cooperatives around the state. McGuire and Brandt pushed creameries to rally together to form a county cooperative creamery. Brandt is the

man that organized county associations to form Minnesota Cooperative Creameries Association. The progress that happened over the time not only effected the dairy industry, but most agricultural supplies. Present day there are more small town ag supply coops, the dairy coops have banded together too, and created state wide coops

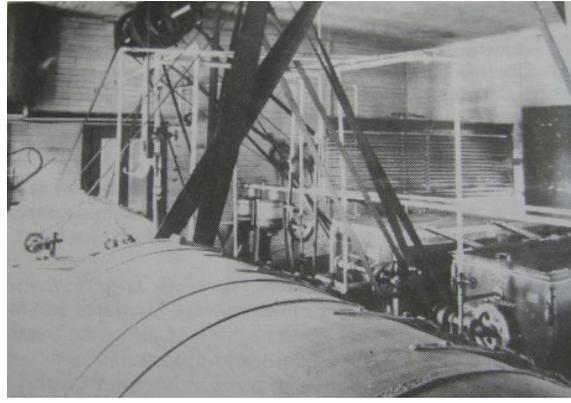
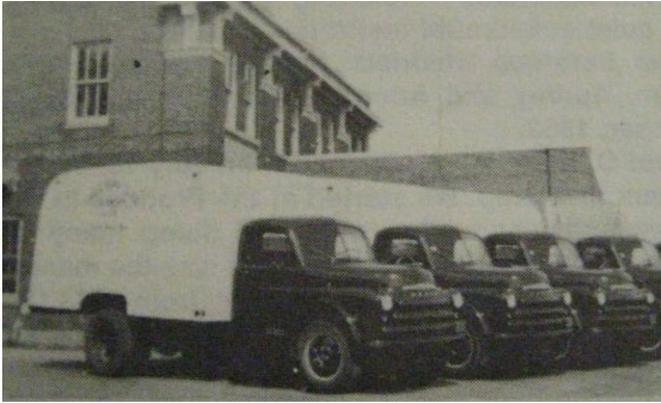


image 14: New Trucks & **image 15:** New Separators, Source: Todd County Heritage Book Committee (1988).

The invention of home separators and the encouragement of salesmen gave individual farm wives the idea of processing their own whole milk. At this point the process was not down to a perfect science so the results varied from “sweet cream” to “sour cream.” The main contribution to consistency was home sanitation.

The fire resistant brick, the cupolas and vents along the peak of the roof, and chimney stacks draw the attention of any given passerby that drives through a small town with an existing creamery building. They had a unique style all their own. They usually are visually picked out of the old historic buildings in a town. They have a unique style of architecture that speaks to the role the building had in the process of processing the milk to butter, but also the role it had in the community. The time period of when it was built, strongly influenced what the appearance and how the functionality of the building was arranged. There are four main types of creameries that can be classified by the time period in which

they were built. There is the “linear plan,” “cross gable replacement,” “squared off multistory,” and the classic “road barns” of creameries (Martens, 1997, p.32-34).

The linear plan was the first type built from 1889 to 1895. (Martens, 1997, p. 32). These early structures were constructed out of timber that the locals would harvest and deliver to the site. It would then be erected by individuals of the cooperative. There wasn't too special in the construction of this type, but they were still recognizable with the traditional chimney stacks and rooftop vents. The organization of the layout was situated as a series of rooms following the function of the process. Even though they started out as being wood, the linear plan creameries did make the transition to brick at the cost of losing the wood structure to a fire. Fires were common with the flammability of the wood and the steam engines used to run the equipment (Martens, 1997, p.32). This jump in type of construction led to improvements in the production of the product due to cleanliness and the ability to prevent fires through material choices. The roofs were still built of wood, but the walls helped a lot in.

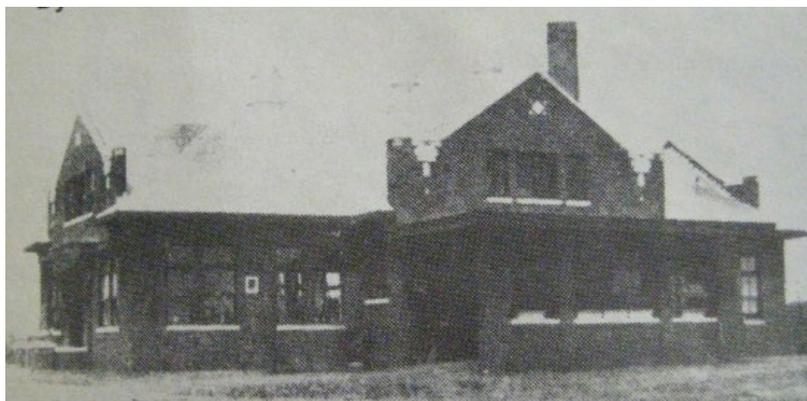


Image 16: 1922 Creamery, Source: Todd County Heritage Book Committee (1988).

The next evolution of creameries was the “cross gable replacement” that was typically built from 1905 to 1921 (Martens, 1997, p. 33). This new style had a lot

more details that were elaborated for decorative purposes. Some had functional purposes as well. The reason for the cross gable was to accommodate a drive through unloading area into the design of the building. This allows for easier and faster dropping off. Upon this design style was when the year blocks started to show up. One represents the year the structure was built and the other when the cooperative was established.

From 1915 to 1930 the style of creameries built were “squared off multi-story” structures (Martens, 1997, p. 33). This type of expression exudes a more practical design by incorporating the little bit of decorative details to more function things such as “window trim, cornice moldings and entrance banners” (Martens, 1997, p. 33). There are a lot of similarities to the traditional schools built around the same era. The image that wanted to be expressed to viewers was that the creamery itself was developing into a “public meeting place” or “civic institution” (Martens, 1997, p.33). This also speaks to the idea of a more industrial process taking place inside.

A few unique creameries such as Hayward, Milaca, and Park Rapids add a variety to the design standards of the specific era creameries were built. This showed that the some builders went up and beyond trying to design new solutions to the usual functional and processing problems. These distinguishable forms stood out more and captured the essence of the community. The creameries built after 1930 tended to be more standard structures with less ornate details. It spoke of the times, the Dust Bowl and Great Depression and the direction of the design, which was moving towards modernism.

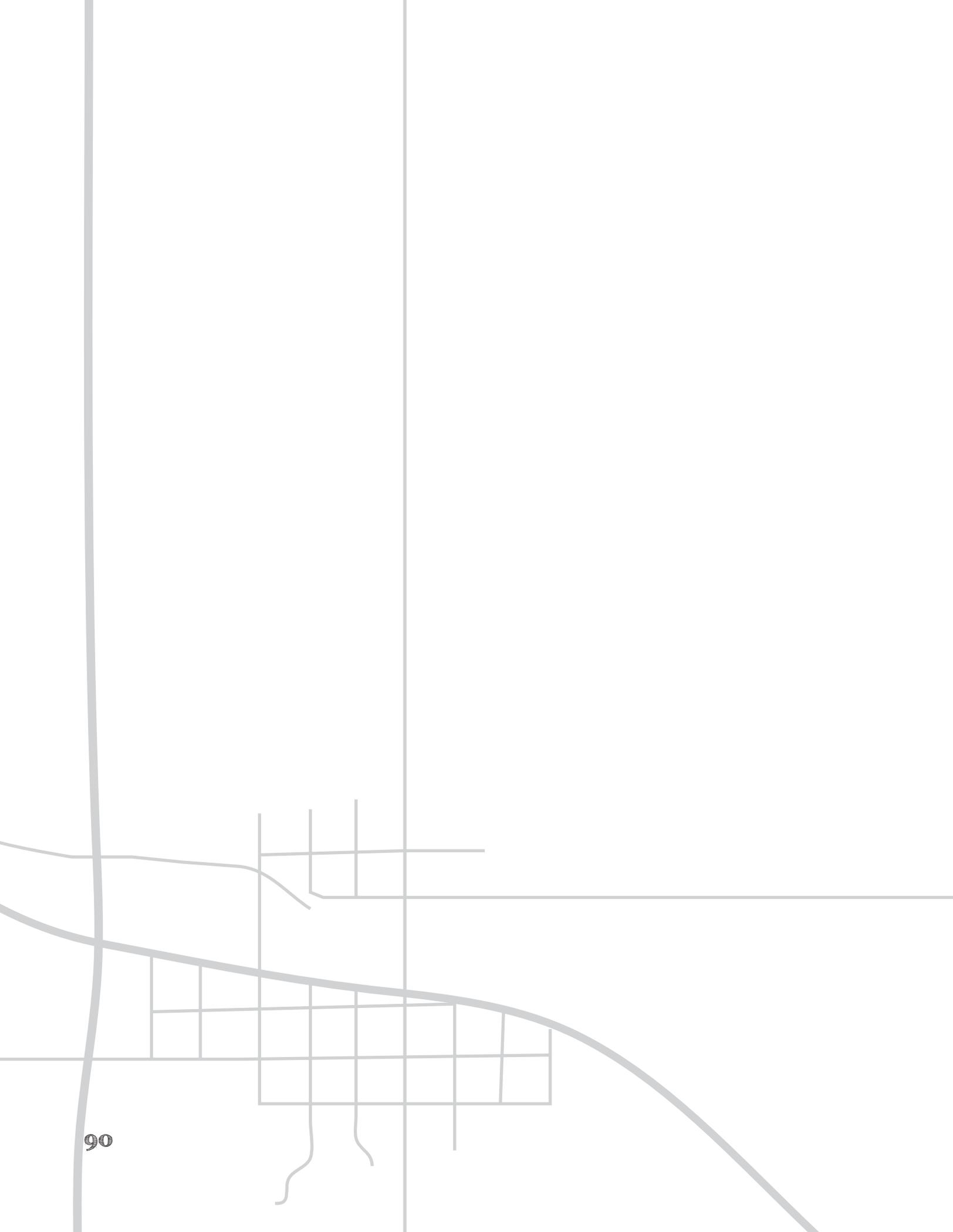
goals

academic: Currently I am finishing up my final year of my masters degree in architecture. I am incredibly thankful for this opportunity to achieve my goal of becoming an architect. I have enjoyed learning about the different aspects of design everything to conceptual design to board layout. There are a lot of things that I did not know were part of the process. In this thesis I hope to apply as many of those aspects as possible and be satisfied with final design and outcome. It is hard to believe where I started five years ago. At the end of the fourth year, I could not believe that I had learned enough to be graduating with my Bachelors degree, let alone graduating with my Master's degree in another year. This fall though, I was given the opportunity to serve as a teacher's assistant for a first year architecture class. Through this process of seeing how a professor interacts with their students, I have realized that would not be a good fit for me and in my personality. Also I was able to see how most students come in with little background in architecture or the world of design. This has helped me to see the extraordinary progress and development of myself as an designer.

professional: On the professional side of it, I would like to become a licensed architect. I would like to work anywhere where I can use design to improve the quality of life even it is just for one person. I hope to find that right firm for me. I know that will be difficult and take some time. I see myself helping people that are not usually affected by the design world to make their lives easier and more enjoyable. Creating a strong relationship with my coworkers is important to me. This would in turn create a very open environment to encourage more collaboration on a variety of problem solving endeavors. I want this thesis project to display my skills and work ethic that I have acquired from not only my education, but my volunteer and work experience.

personal: Looking back now to some of my characteristics when I was younger, they have definitely contributed to the chosen path I have taken. The fact that I never actually "played" with my Barbies. I would just design house and then did not know what to do after that. The experience of building forts with my brother and working with my dad to figure out a way to fix various things on the farm instilled in me the hunger for problem solving and a work ethic. This lead to the constant development of projects around the house to add extra character, such as reconfiguring the kitchen, wanting to add a bay window, planning a way to screen in our porch and the list could go on forever. Then the never ending drawing of floor plans during any spare time throughout junior high and high school that helped to develop strong space planning and relational skills. I hope to produce a well thought out and designed thesis project that I will learn something new from each and every day, even when I am done designing. I hope it will equip me with the skills to be a great addition to the design field and society.

thank you: I would not be where I am today if it wasn't for my amazing support system and influence of my parents, family, roommates, friends, classmates, professors and co-workers. Especially my parents for taking all of the teary-eyed overwhelmed phone calls and persuading me to continue to "play the game." My family and friends constantly cheering me on. Roommates that continually giving feedback, tips on Illustrator, and meals. The classmates that made staying in studio all night as enjoyable as it can be. The professors that constantly challenged me to push me to be the best I can be. The indispensable experiences my co-workers gave me to better understand the world of building.



90

site analysis

The location of this thesis project is at place where history was changed. Where the community of Clarissa, Minnesota decided to come together to make an investment in each other. By establishing a dairy cooperative over a hundred years ago, the dairy farmers are able to make an adequate profit on their goods. The existing structure is aging relatively gracefully except for a few broken windows and some rotting wood. The structure is home to a snowmobile and ATV salvage shop. I feel as though the current use is not using the full potential of the structure. This place is a landmark for the village of Clarissa and the development of creameries across the state. A milestone in the construction of these utilitarian buildings. The brickwork is more ornate than what I was thought it would be. The two date stone flank the entry facade, detailing the year the structure was built and the other when the cooperative with establish within the creamery. Everyone in town should be able to experience the rich history of the area by reutilizing the brick creamery building.

Within the town the site location has a slight disconnect from the main part of town, which is south of the site. The main reason for this is barrier that Highway 71 creates while passing through the small town. The state highway splits the town to create two small pieces of the town. This has a definite effect on the lack of pedestrian traffic within the community. The lack of shoulders on the road could also have something to do with it. The types and designs of building in the nearby area of town do not attract much of the pedestrian clientele.

The site and building itself is in between Eagle Creek and Central Ag Services, the local grain elevator and agriculture coop. Having the creek adds another division with in the town. On the other side of the river is a new development of homes than the ones on the other side of town. The winding flows on by without a thought about where it has come or where it will go. This is partially because it is hardly seen or heard by the numerous trees and tall grasses that flank its beds

creating both a visual and sound barrier. The sounds that are heard come from the sound of grain being unloaded from the truck to the storage containers, trucks going on and off the scale, traffic going by on Bridge Street. The sweet smell of grain mixed with gas permeates the site. Partially coming from the grain elevators and the other coming from the snowmobile and ATV salvage shop. There is a fenced-in yard that starts on the east side of the creamery and wraps around to the north side. Within the yard is to be a bunch of chaos of snowmobiles and ATVs and numerous parts. Within are a few pieces of existing concrete that may have been used for the loading or unloading of cream or butter.

Every building has a story, some more exciting than others, but it won't be known by just driving by. The best stories are not found easily. The average person driving through on Highway 71, is driving through and not taking in the local culture or even glance to the right or the left of the road. They are too busy in their on-the-go lifestyle, where they are over-committed. The norm is to have more conversations and more one-on-one with one's smart phone than a real live person. Clarissa seems to have been secluded in their own bubble. There are some that are on the go always, but for the most part the residents seem to enjoy where they are living and what is available to them. Between the handful of the churches, there has to be a social event every week, plus the senior center, Legion, and senior housing facility.

The welcoming feel on Main street fits with the personalities of the friendly people, but not the empty buildings. Just walking around taking pictures I felt at ease and comfortable taking photos of everything in town. A retired couple raking the leaves out in their yard, a man gutting a house throwing scraps into a dumpster, children running to their parents after school is let out at the end of the day, and an old man walking his puppy down the alleyway. Everybody enjoying the unique place that they live in. With this happiness, there is also drive and want to help keep the town the way it is. To preserve it for the coming generations in hopes that they will do the same.

north



east





south



west





Clarissa is a small community that is mostly composed of single family dwellings within the city limits. With Highway 71 running through the town creates a barrier through the town. The site is located on the north side of 71 along with a residential development, city park, a few businesses and establishments, and the grain elevator. The south side includes the main portion of town. This part would include all the businesses along Main Street, the places of worship, the elementary school, the general residential development, and the nursing home.

densities of the built

For the most part the quality of light on the site is a cool diffuse light. With the coop and grain elevator to the south, the creamery is shaded by the taller structures. The other buildings that make up the coop complex that create shadow around the site. The trees along the creek shade as well when the sun path gets that far north.

light quality

For most of the site there is very little vegetation except for a few sprouts that fight their way through to the expanse of the gravel parking and circulation area. On the north side of the site along the creek there is a variety of native grasses along with a variety of native trees.

vegetation

The presence of the Eagle Creek just north of the proposed site allows for access to the creek. It is a small continuous flowing tributary, that cuts through the township, to the Long Prairie River. This running stream with tree cover brings wildlife to the area creating connection to the natural environment within town.

water



wind

The wind typically comes in from the northwest in the winter. With the line of trees that are all along the river help to shelter the site from the blustery cold winds. In the summer the winds generally come from the southeast bringing the warm moist air from the south. Currently the Central Ag structures form a barrier to shelter against the wind.

human characteristics

The evidence of human presence is evident on the site. The existing creamery building is currently home to Dan's Snowmobile and ATV Salvage, a parts resource of snowmobile and all terrain vehicles. There is a fenced area wrapping around the east and north side that is used for the storage of snowmobiles and ATVs. The area to the east and south is occupied by the Central Ag Services. Throughout the day there are numerous people and vehicles coming in and out of the site.

distress

For the most part the human presence on the site has caused some distress, but nothing extravagant for the activities that take place. It is a relatively flat site except for the north side where it begins to slope down to Eagle Creek. The slope has enough natural vegetation and trees to prevent extreme erosion. The number of vacant building are relatively low, but are due to the lack of maintenance done to them. Personally they are standing there holding on to the potential of them. Most of the current commercial buildings have been added on to several times in a collective manner.



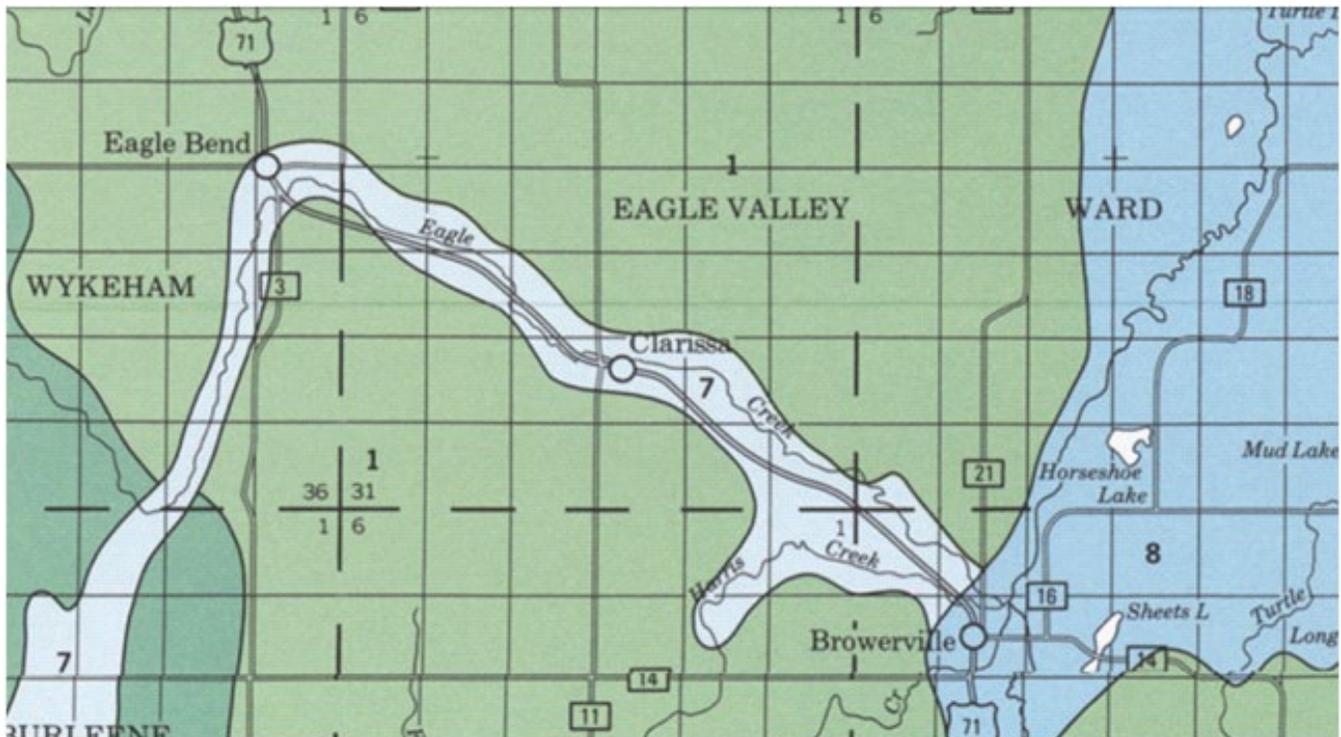


figure 4: Soil Survey, Source: United States Department of Agriculture (1989).

- 1 Rockwood-Blowers-Paddock association
- 2 Kandota-Wykeham-Runeberg association
- 7 Forada-Dorset-Arvilla association
- 8 Menaga-Hubbard-Bowstring association

The Forada-Dorset-Arville is type of soil found on the site. This type of soil is typically found near bodies of water and moraines. The loamy well drained characteristics of it speak of where it can be found. It can be found over a layer of gravel or sand that is about 22-40 inches deep.



utilities

Due to the site being developed, there are utilities present. They would be available from both the east, where the line comes in for the grain elevators, and from the main line from the west along Bridge Street.

vehicular traffic

With the location of the site so close to the both Highway 71, Bridge Street, and Ag Country services. The amount of vehicles going in and out of the elevator depending on the season and time of day. This will be a challenge to keep in mind while designing. Another contribution to the traffic of the town. Highway 71 is a major thoroughfare which brings a lot of people through the town , but not necessarily into the town.

pedestrian traffic

Being from a smaller community, there isn't much in the way pedestrian traffic. On the north side of Hwy 71 there isn't a sidewalk or path to encourage such an activity. On the other side of the highway. The southern side of Hwy 71 sidewalks' can be found to accompany their soil map.



slope analysis



figure 5: Slope analysis of thesis site Clarissa, MN.

site character





image 17: Aerial View looking east 1971: Lake Web (2012).

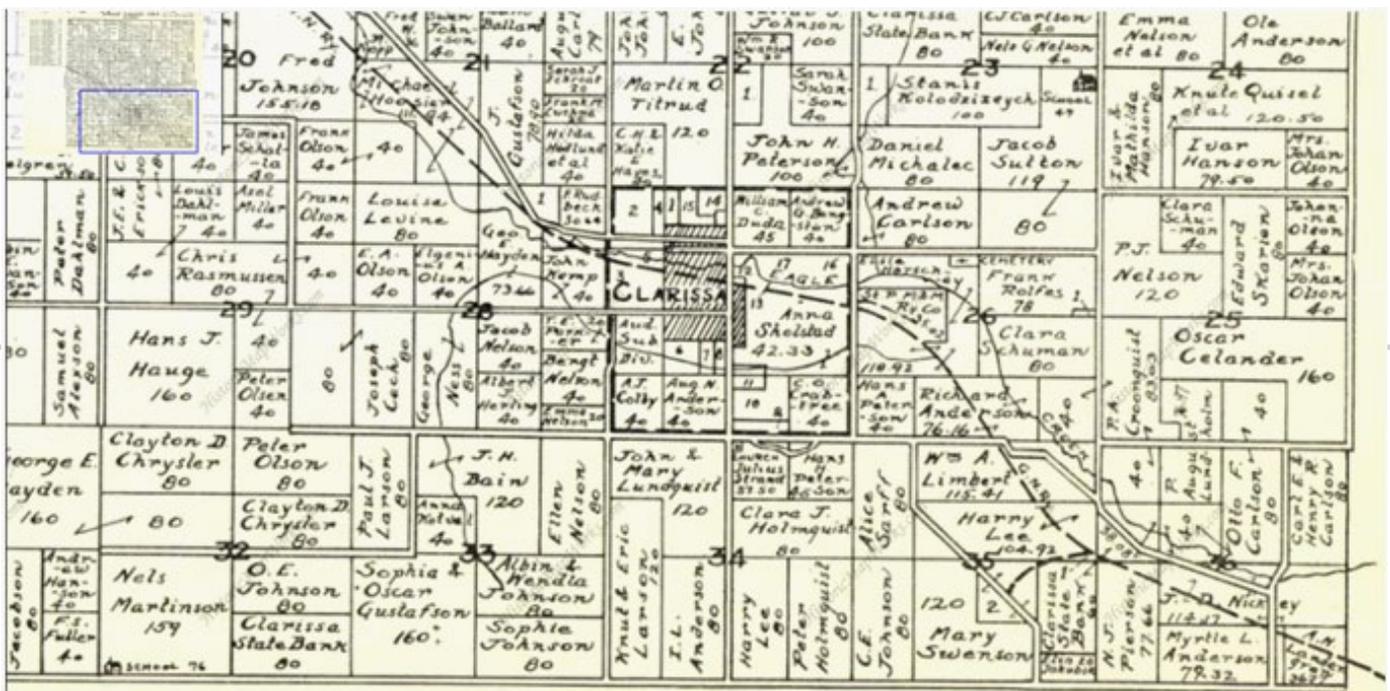


figure 6: Land Owner Map: Historic Map Works (2012).

photo grid

north



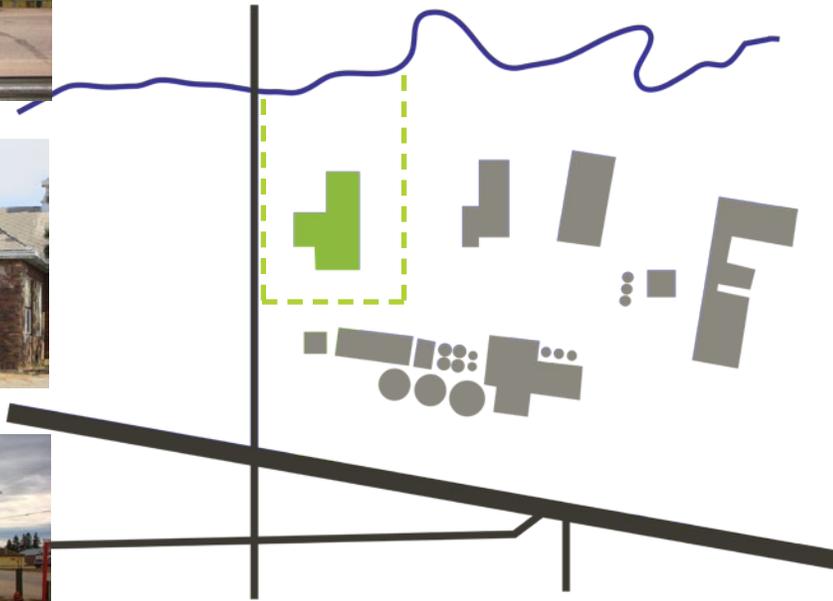
west



east



south



temperature

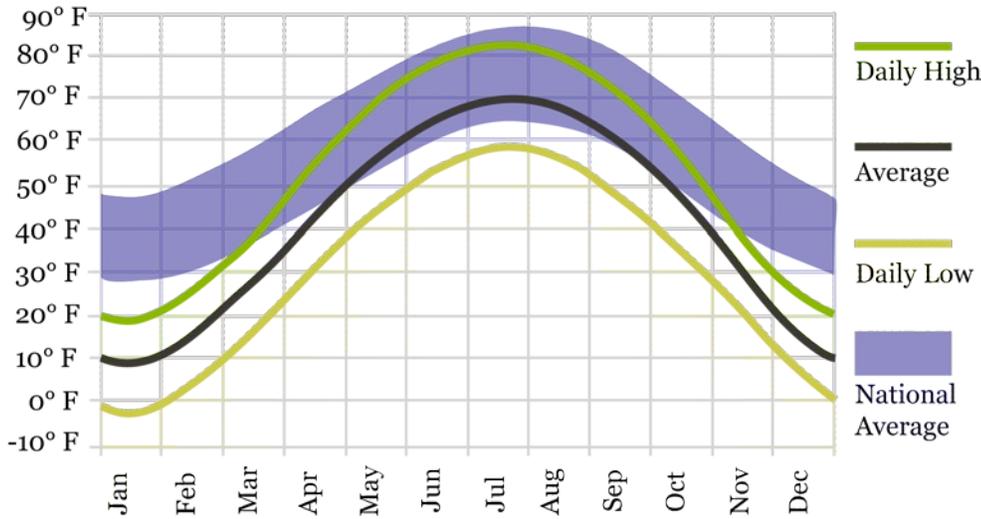


figure 7

sunshine

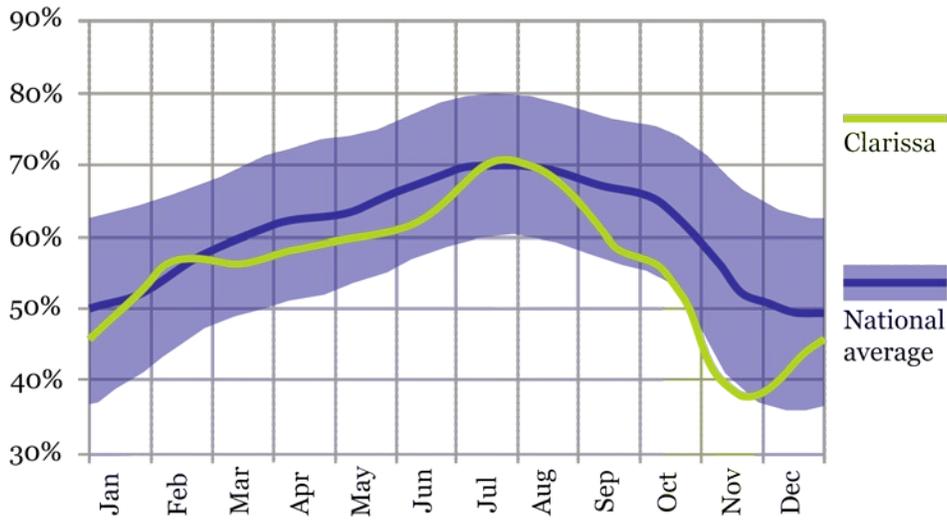


figure 8

cloudiness

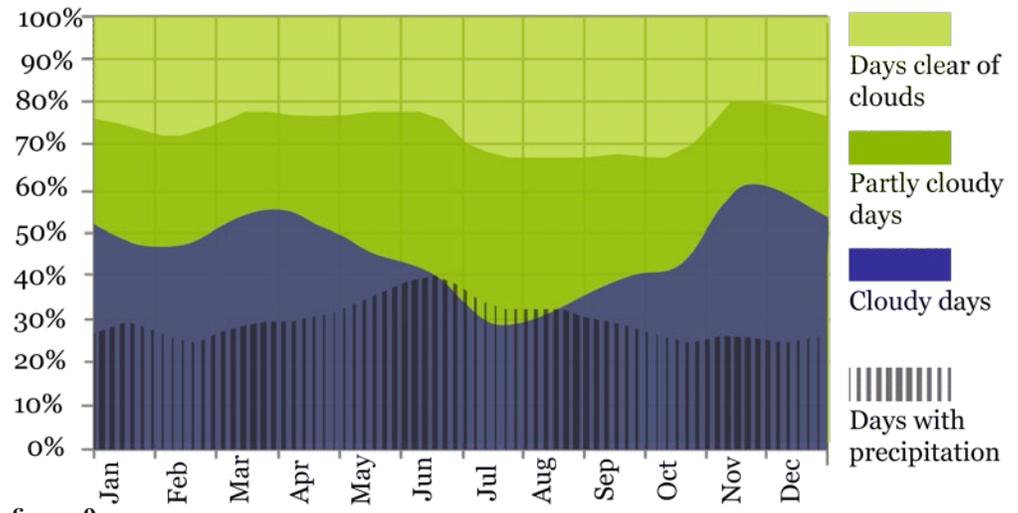


figure 9

precipitation

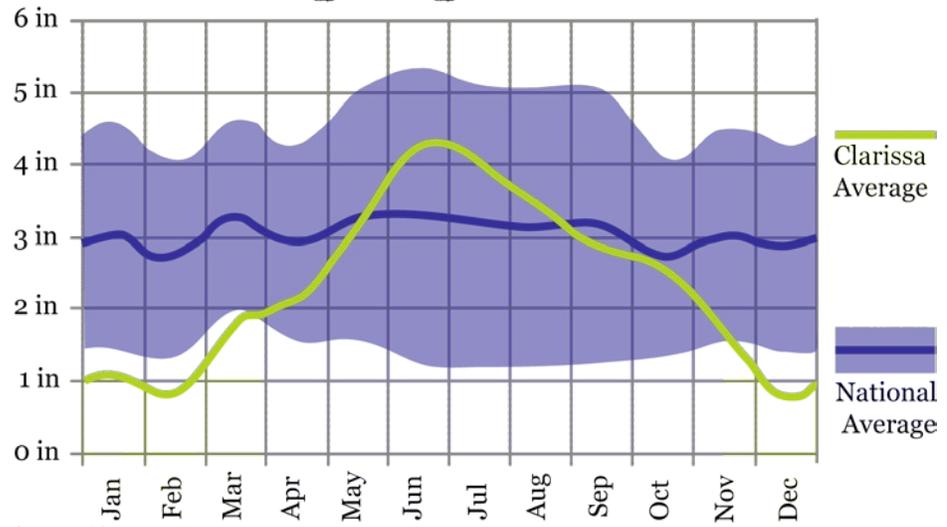


figure 10

wind speed (mph)

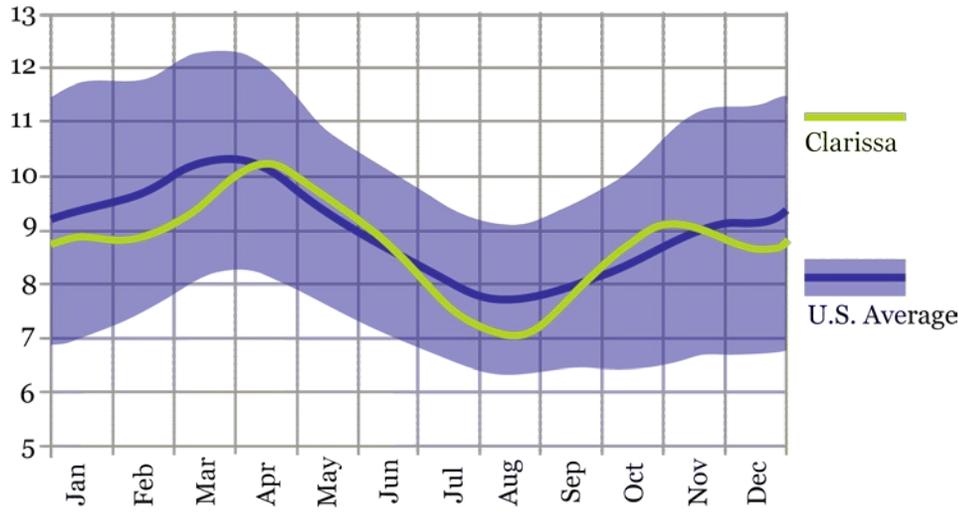


figure 11

humidity

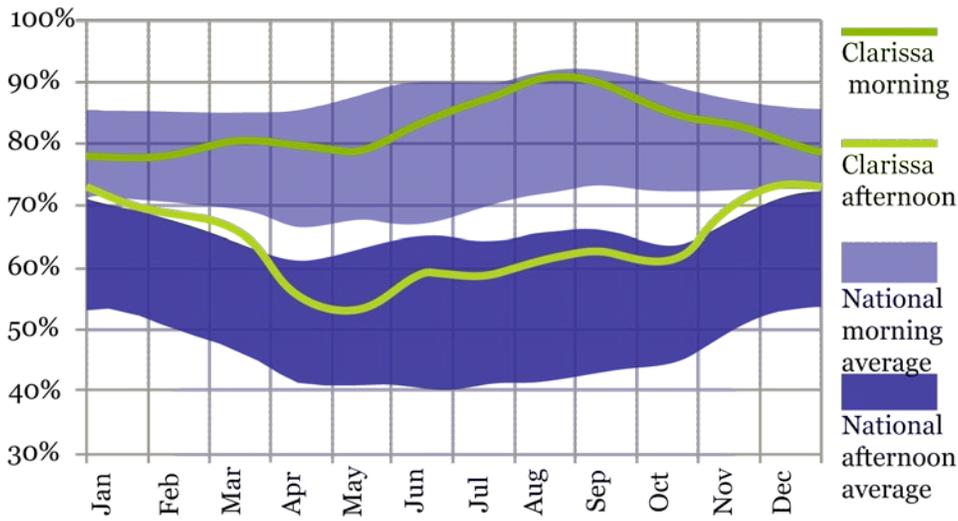


figure 12

sun path

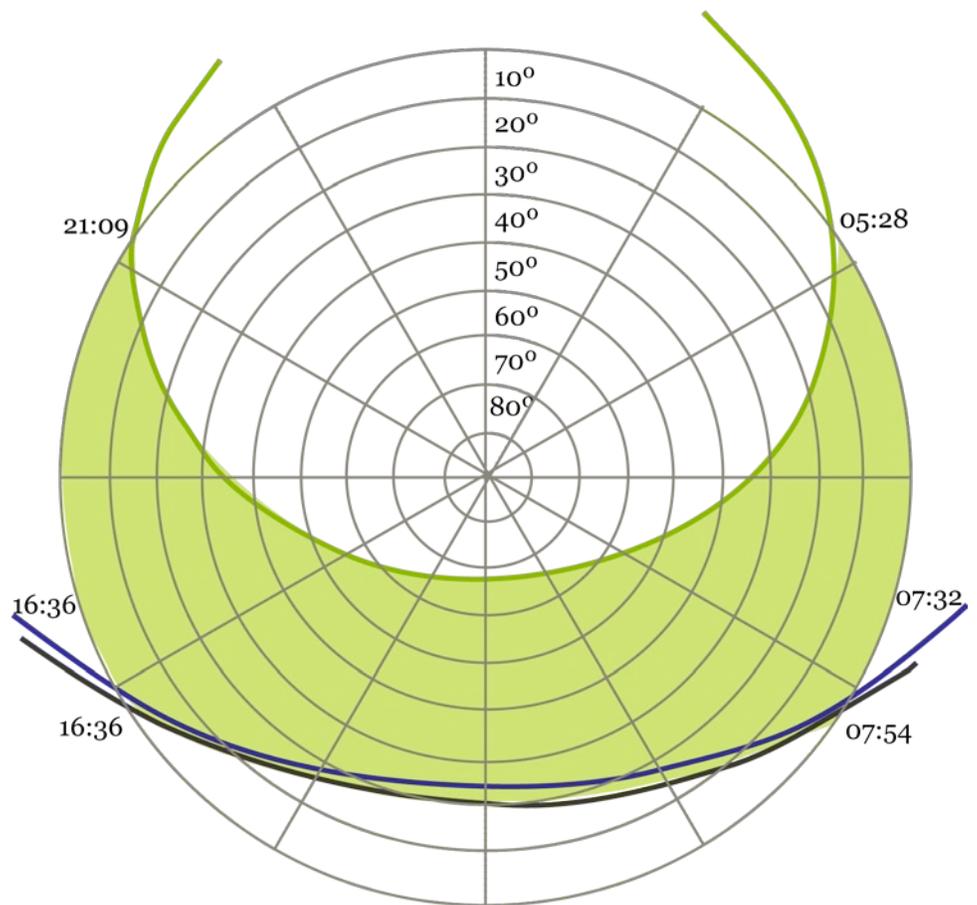


figure 13

wind direction

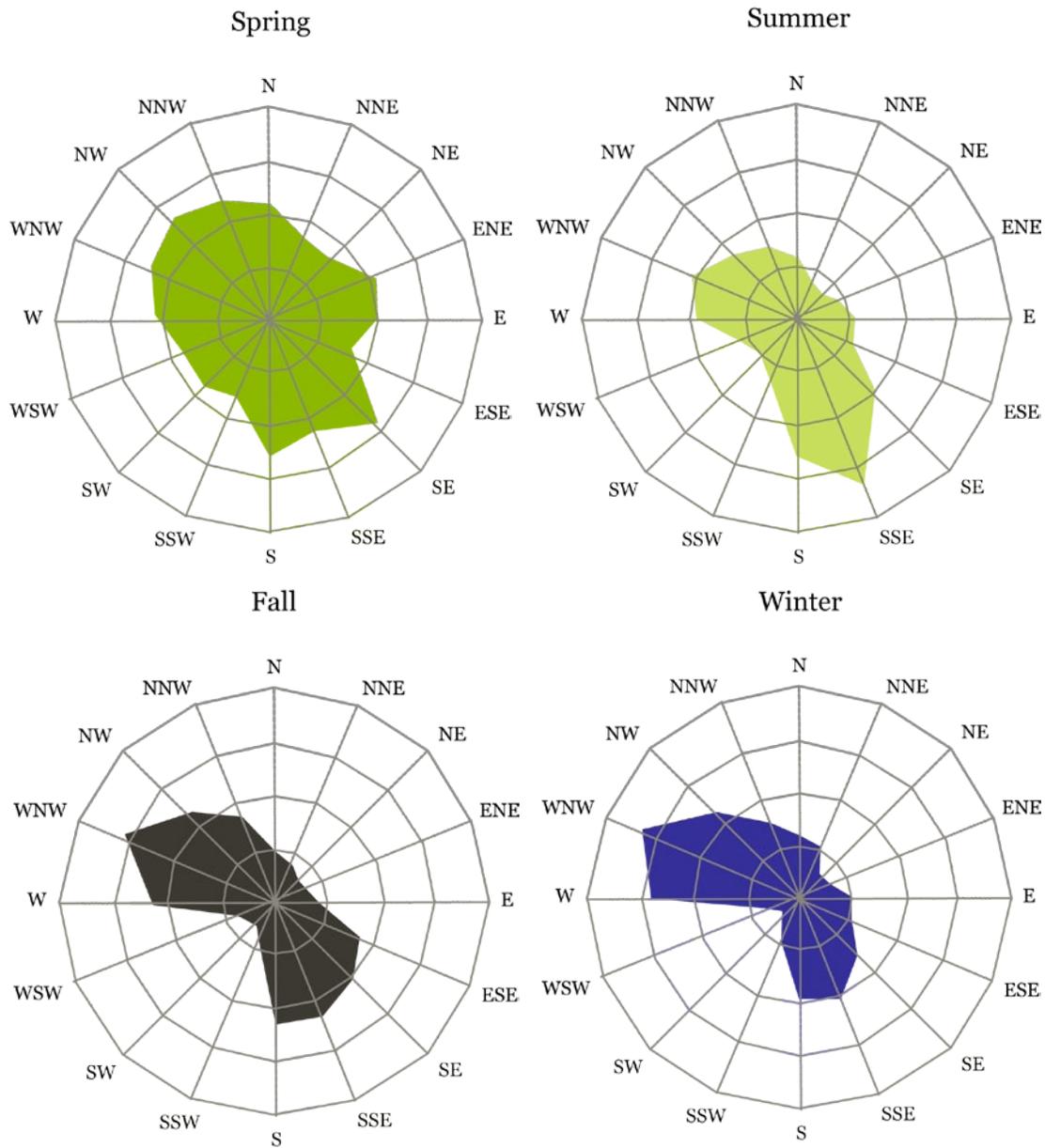


figure 14

shade & shadow



figure 15

topography & air movement slope & climate

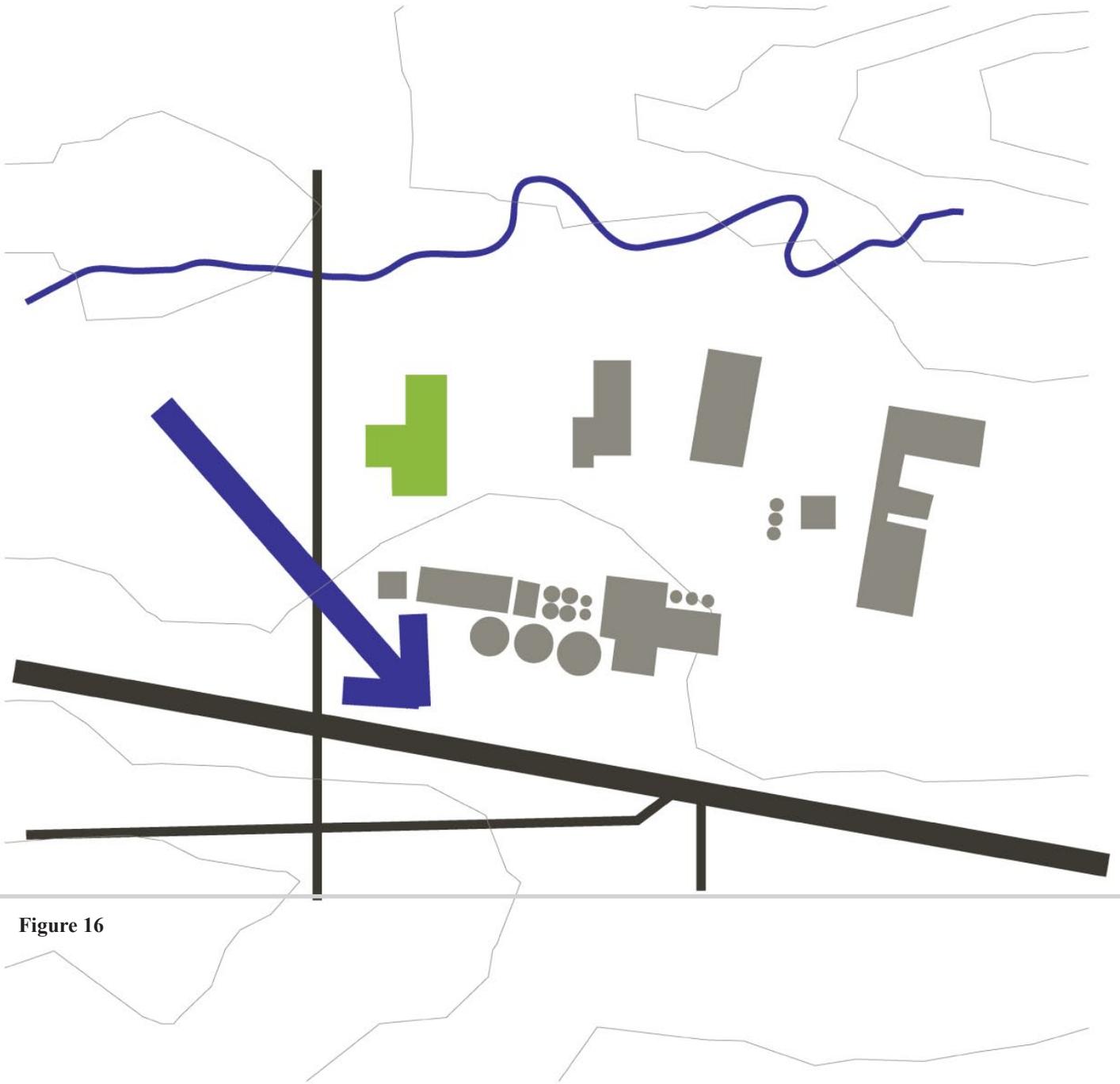


Figure 16

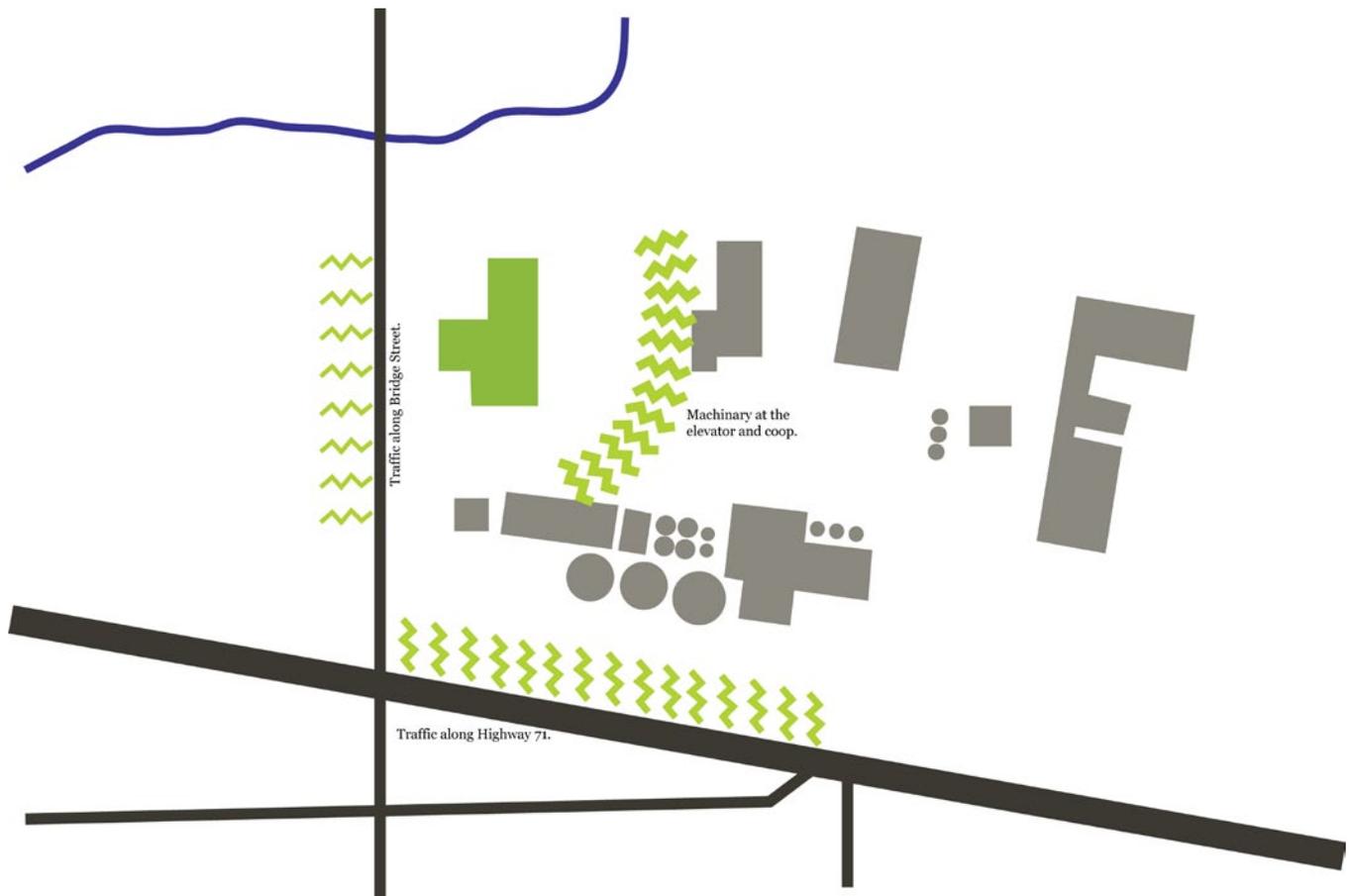


Figure 17

square footages

Main Entrances.....	220 square feet
Gallery.....	6,050 square feet
Classroom.....	420 square feet
Store.....	560 square feet
Storage.....	100 square feet
Baking.....	780 square feet
Cafe.....	1232 square feet
Restrooms.....	300 square feet
Sewing.....	884 square feet
Woodworking.....	1,551 square feet
Mechanical.....	150 square feet
Technology.....	350 square feet
Garden.....	2,000 square feet
Market	300 square feet
Storage.....	75 square feet
Back Entrance.....	350 square feet

interaction matrix

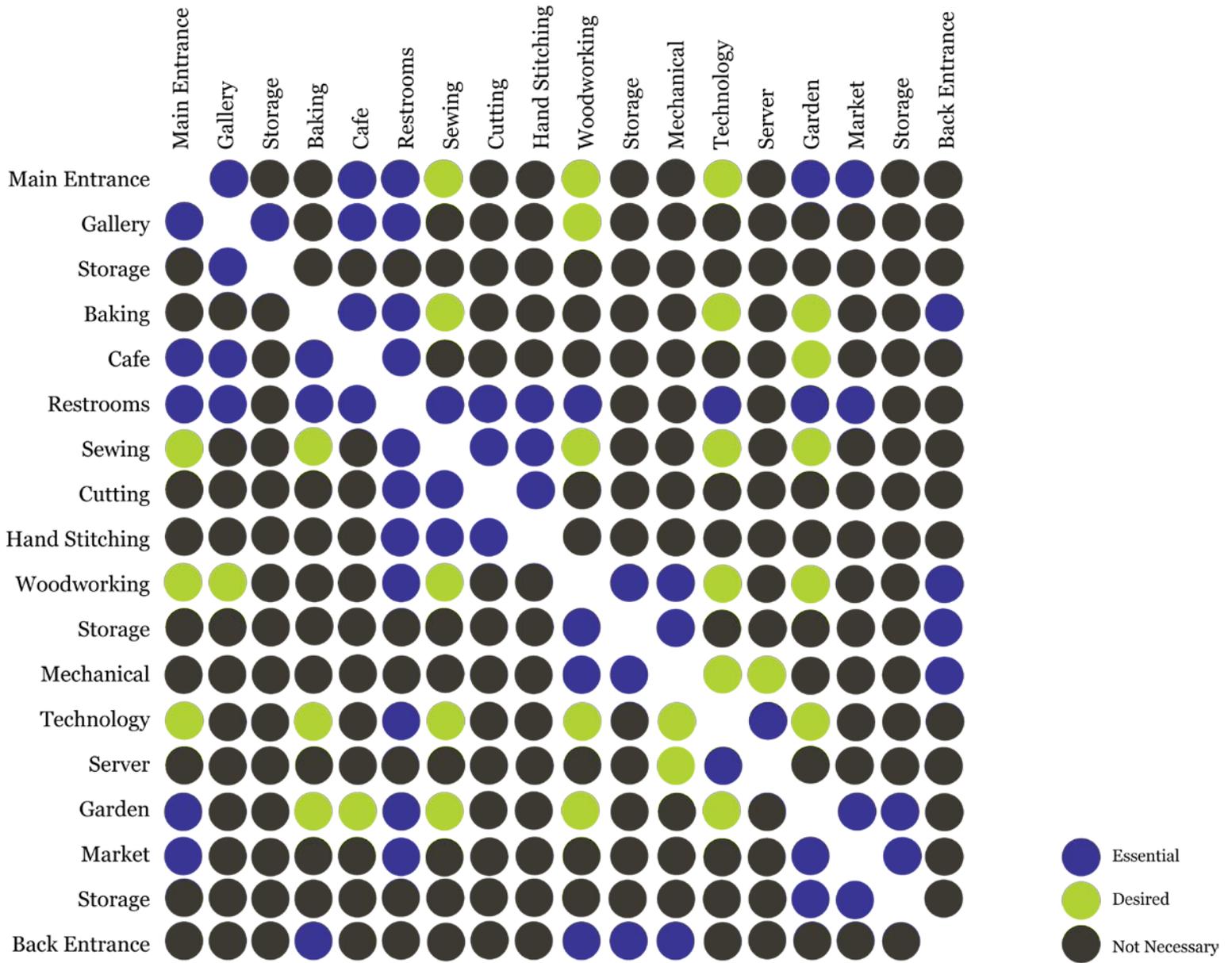


figure 18

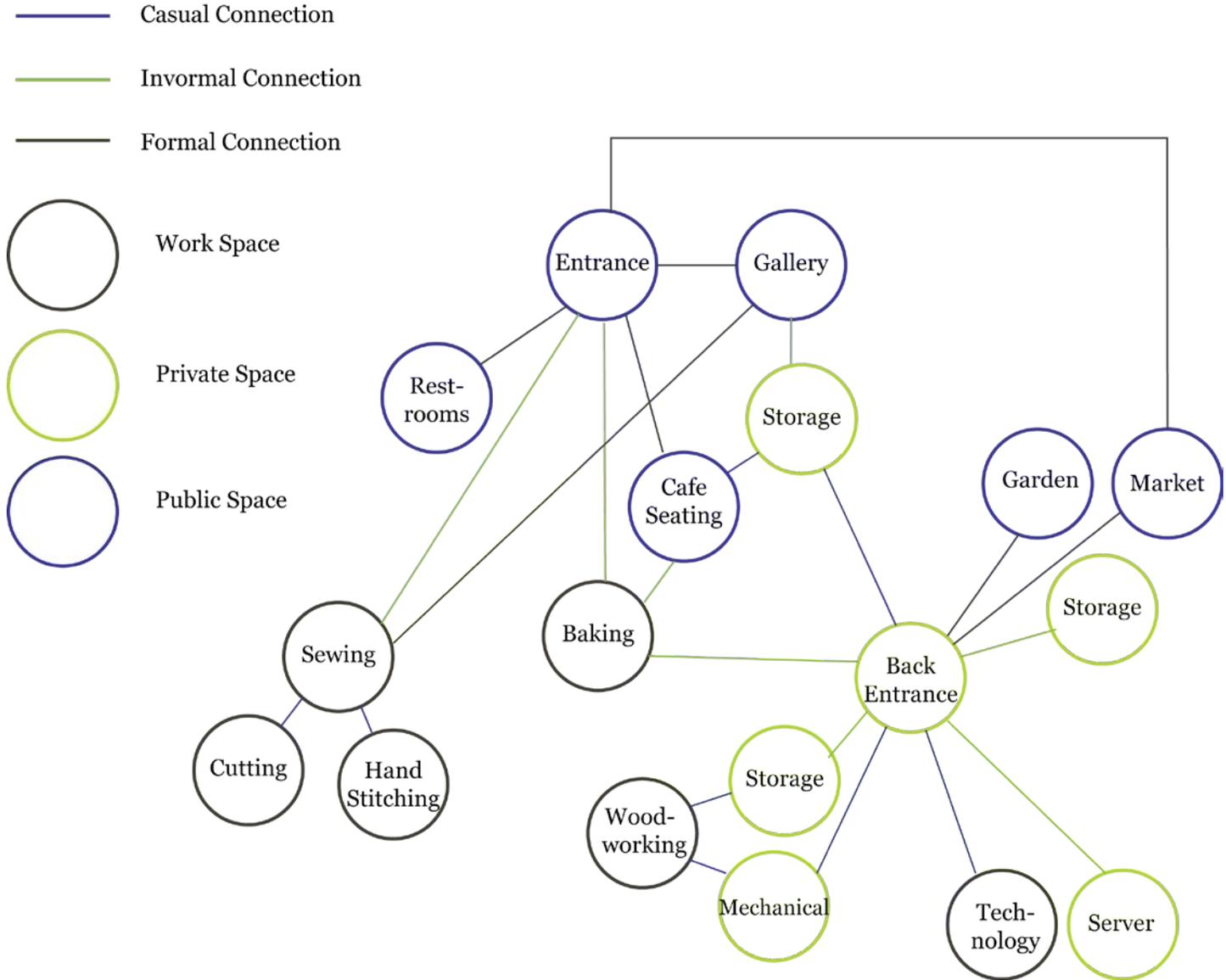
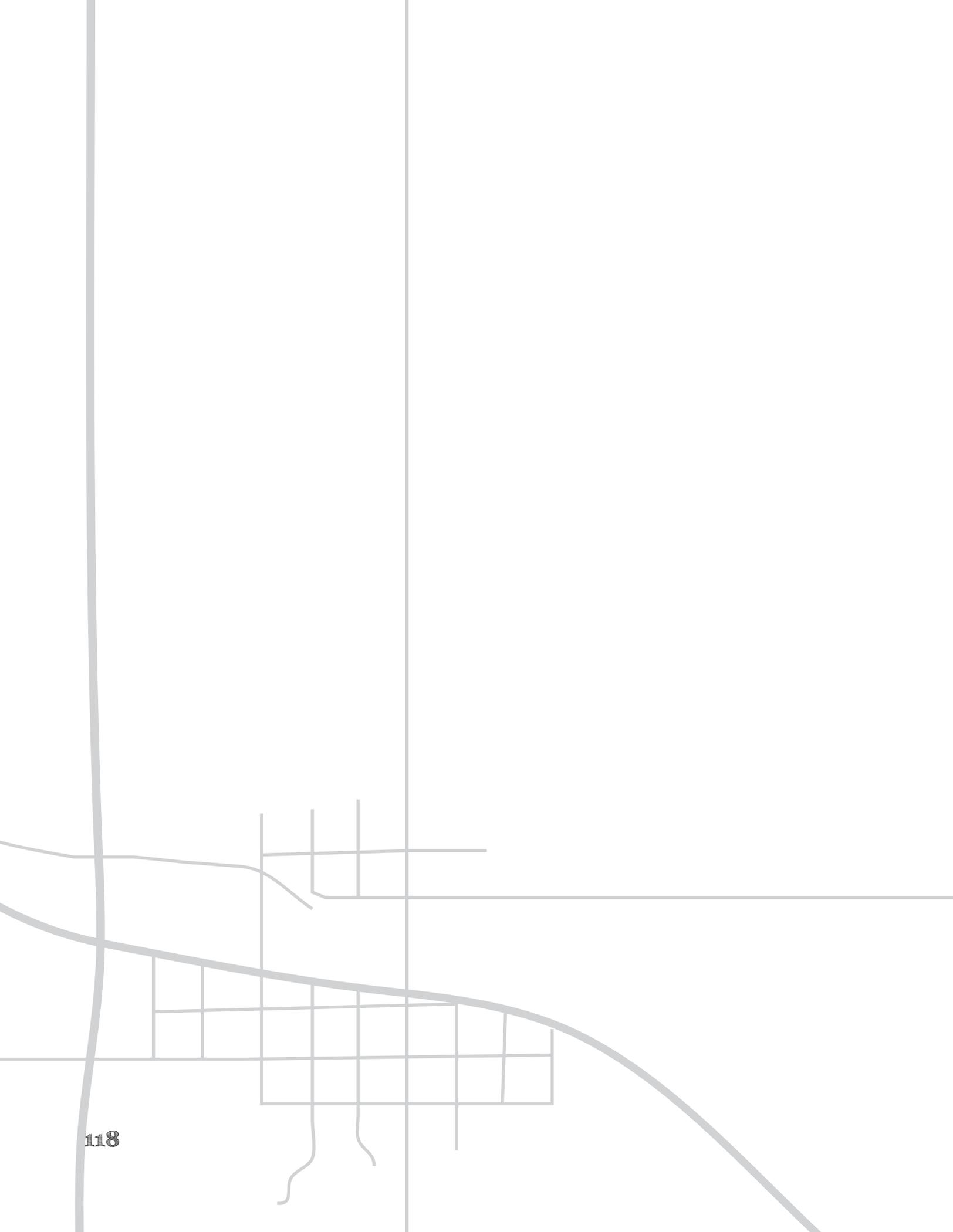
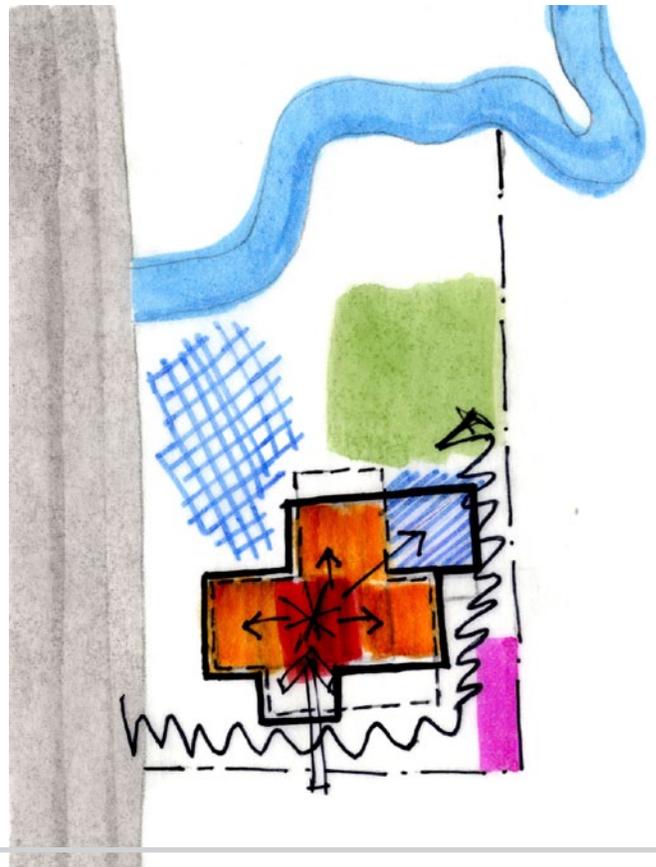
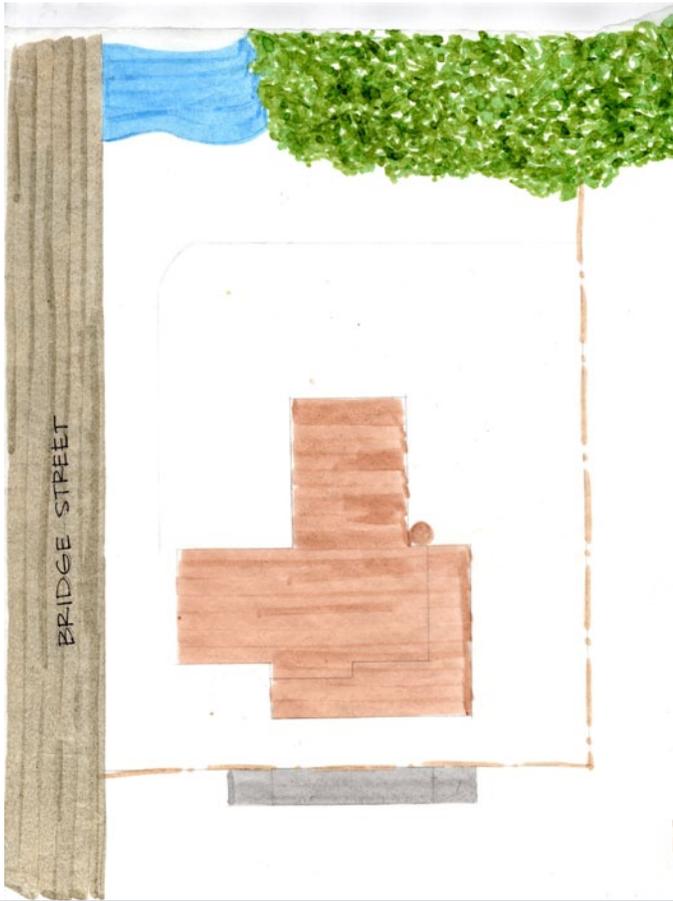


figure 19

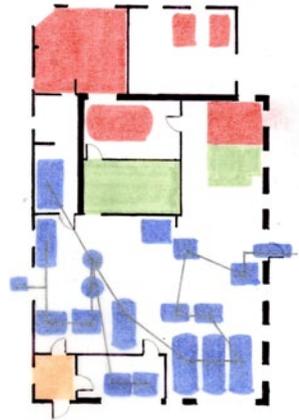
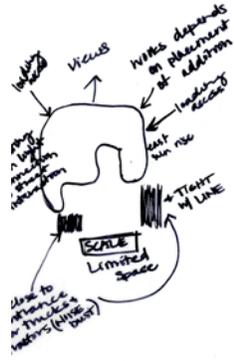
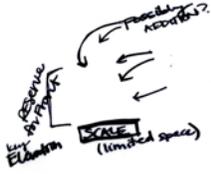


process

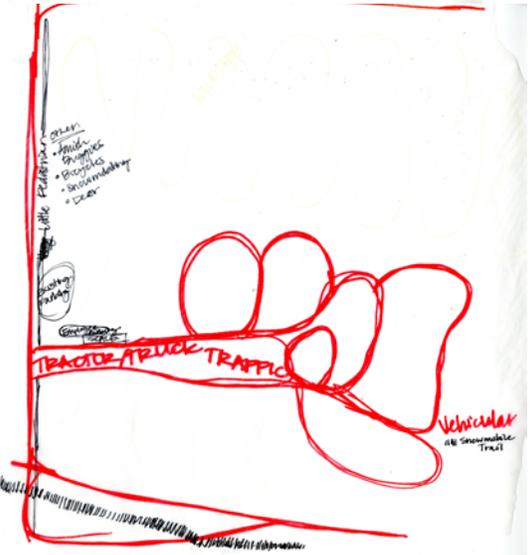
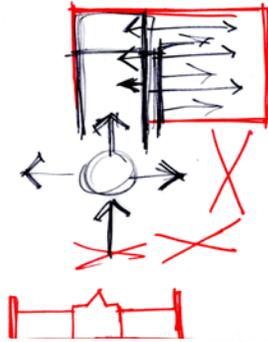
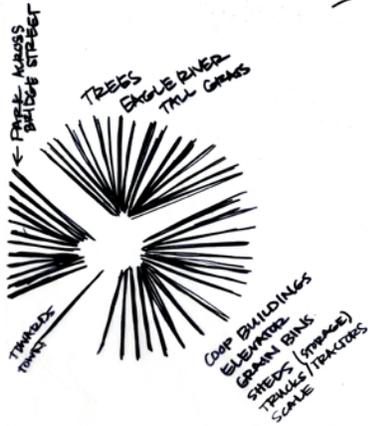


LOADING

OUTDOOR SPACES

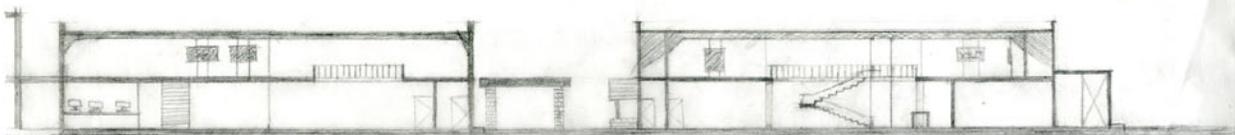
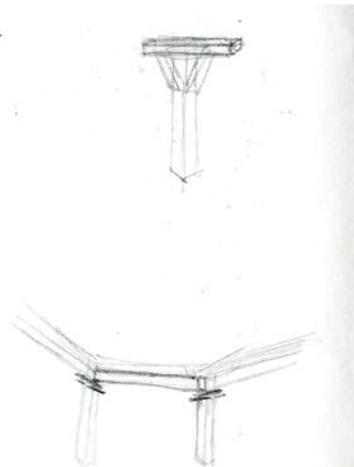


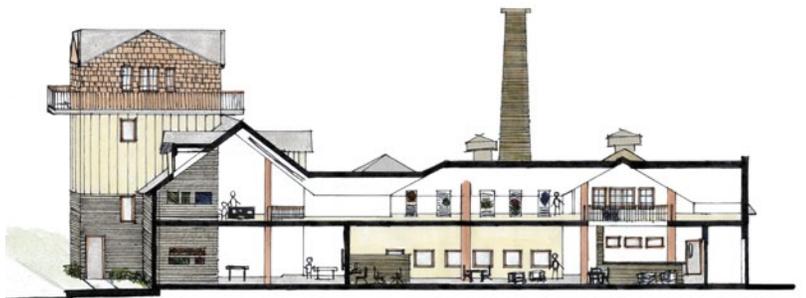
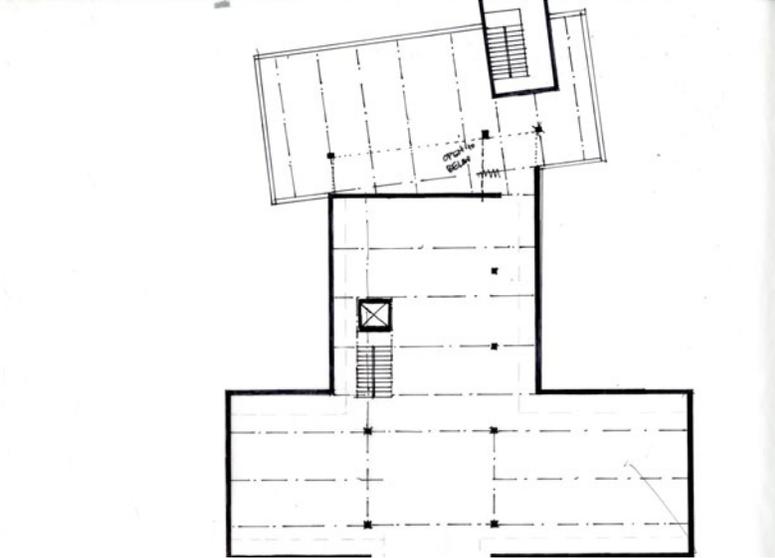
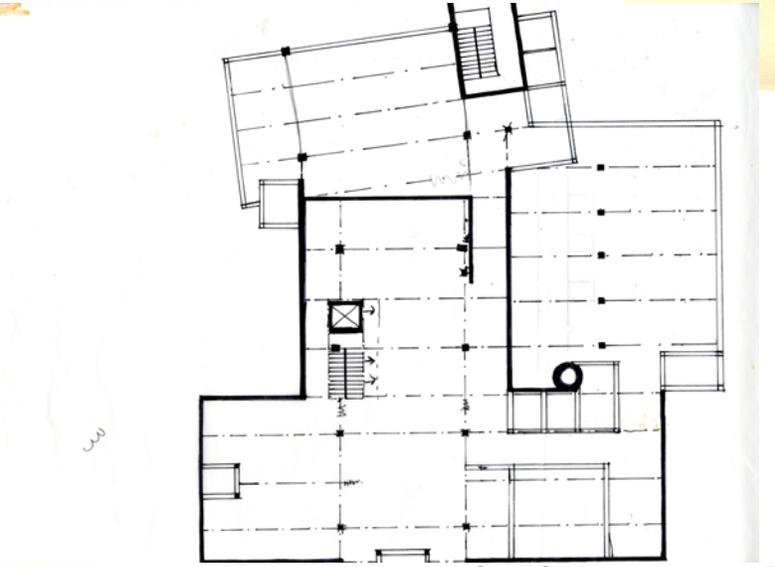
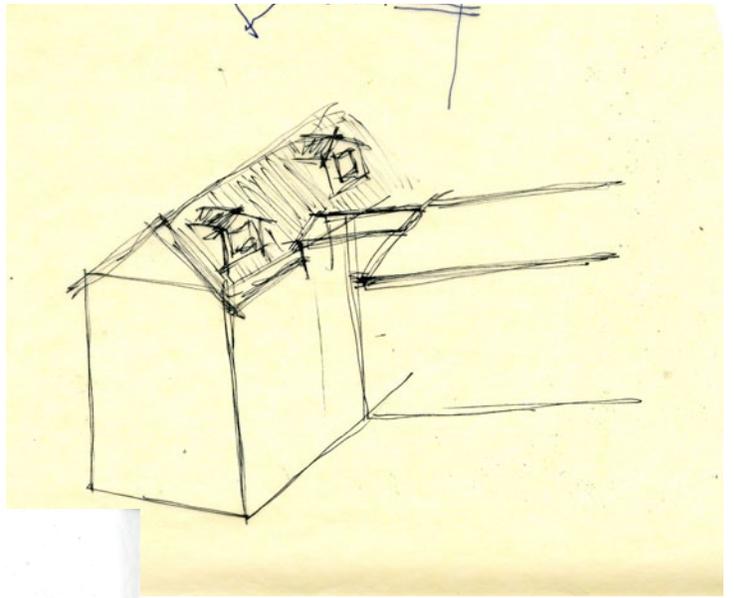
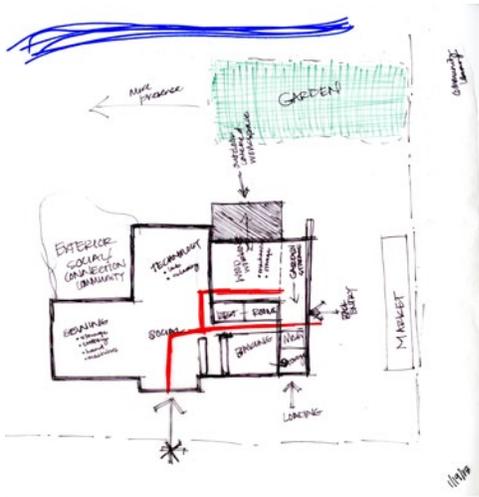
VIEWS

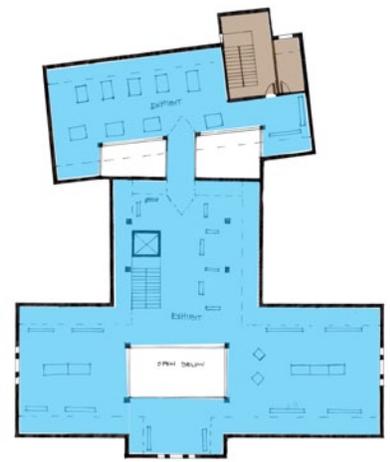
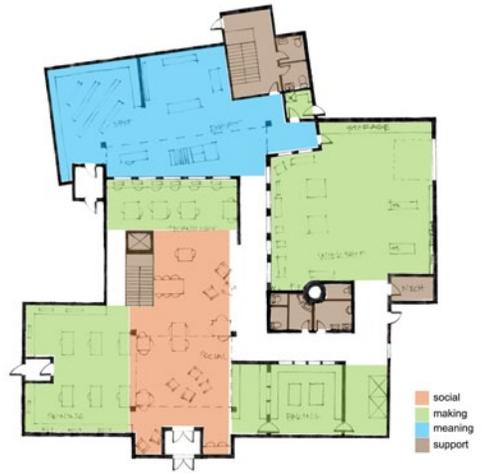
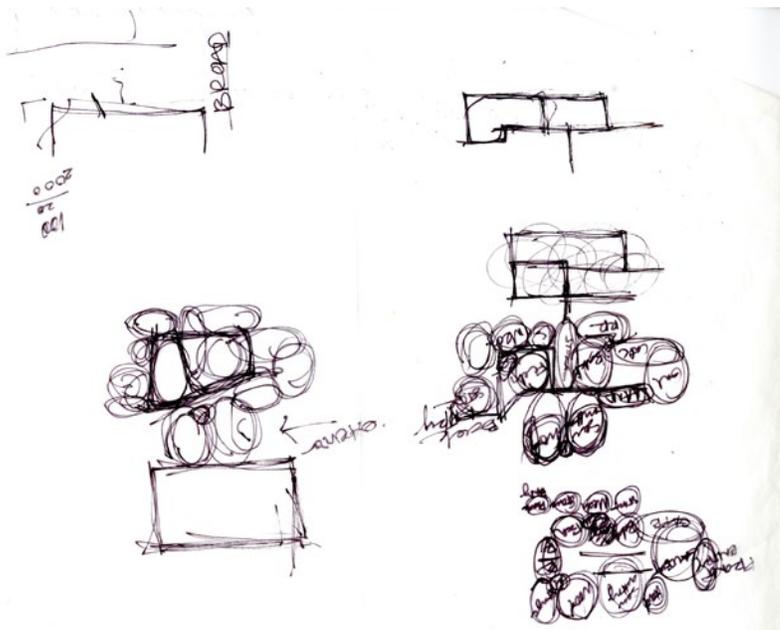


FLICK
WOOD
ROCK (LIVE)

is
sing to
an on...

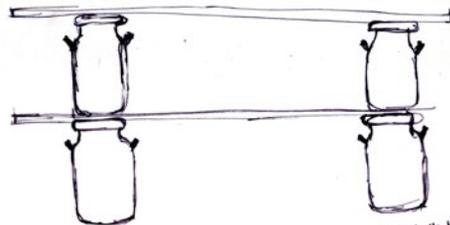
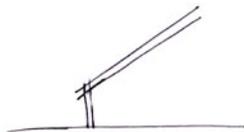
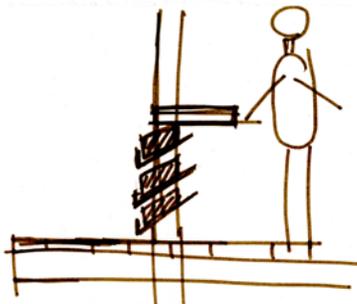








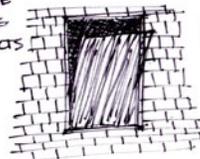
DISPLAY EXAMPLES



SHELVING SHOP



SHOWCASE EXISTING ARTIFACTS



LIGHT FIXTURES

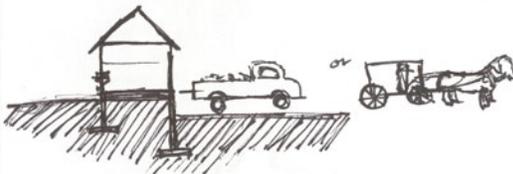


sliding panels of layers

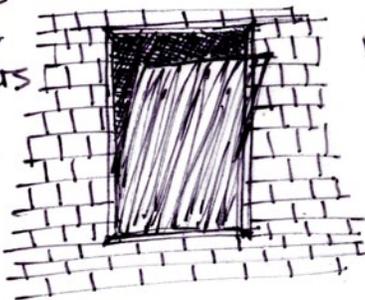
Moving slides in layers

SLIDING PANELS OF LAYERS

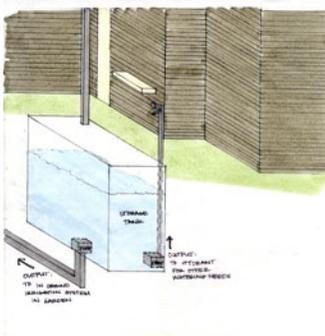
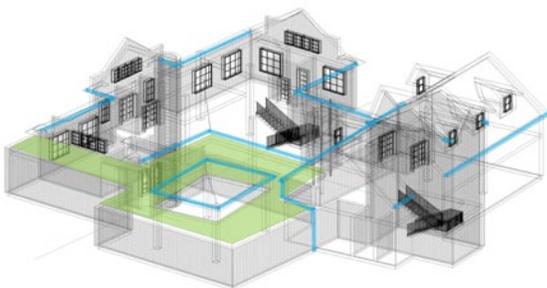
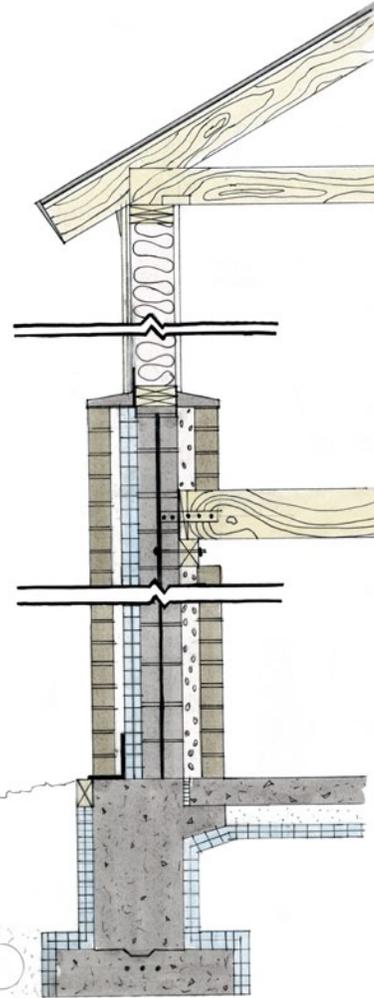
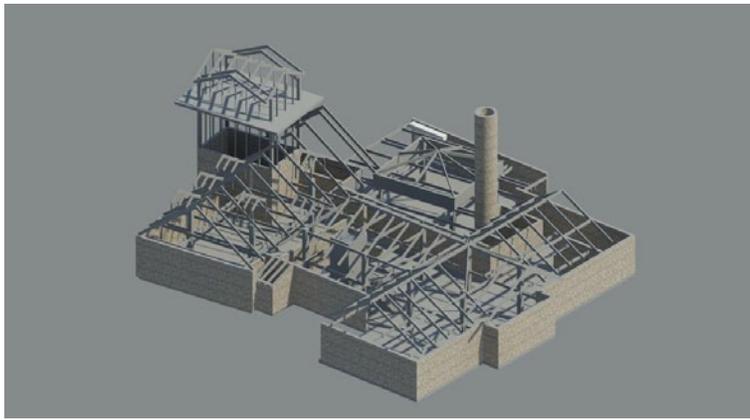
ALLOW THE COMMUNITY TO BUILD & CONTRIBUTE TO EXPERIENCE

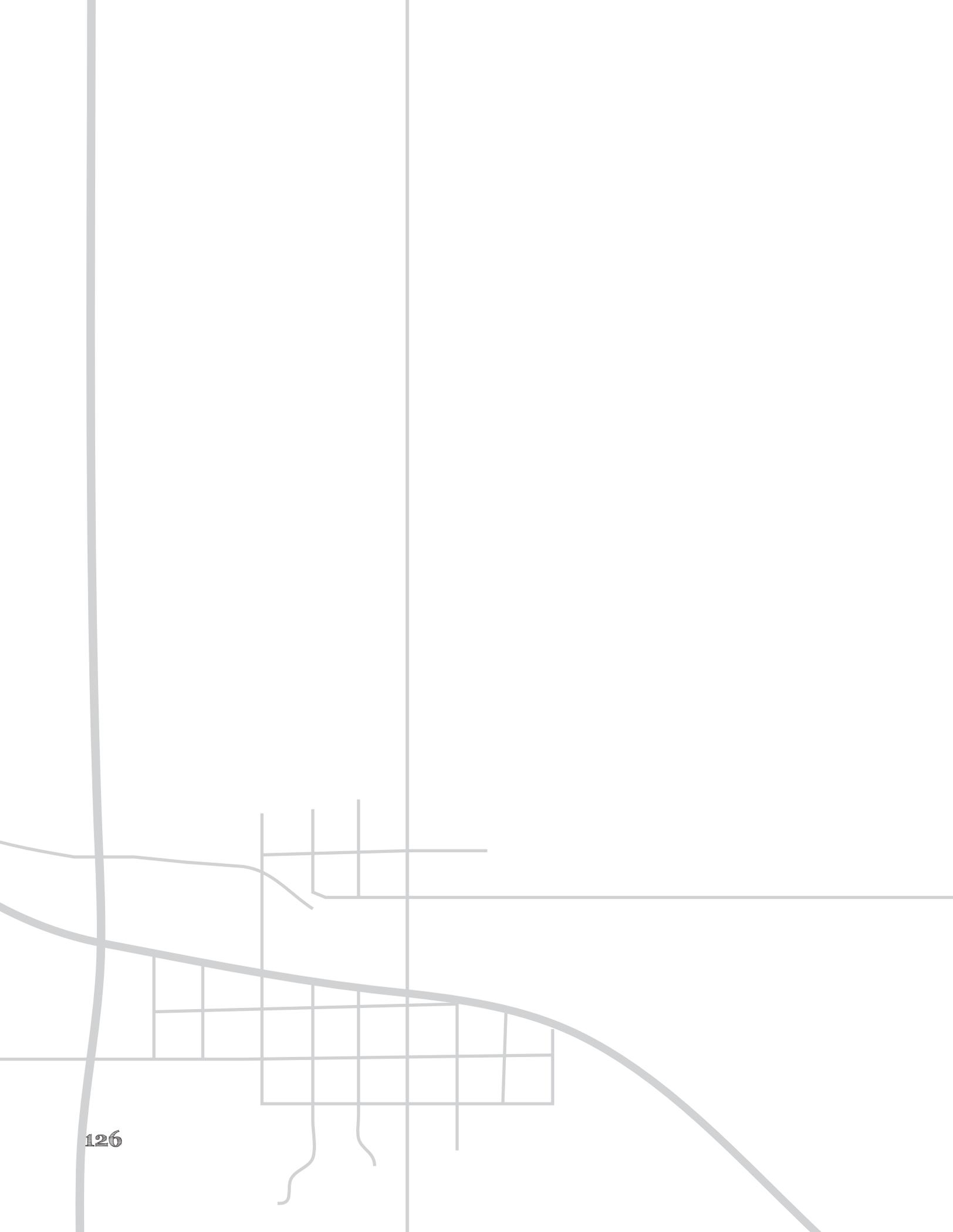


SHOWCASE EXISTING ARTIFACTS

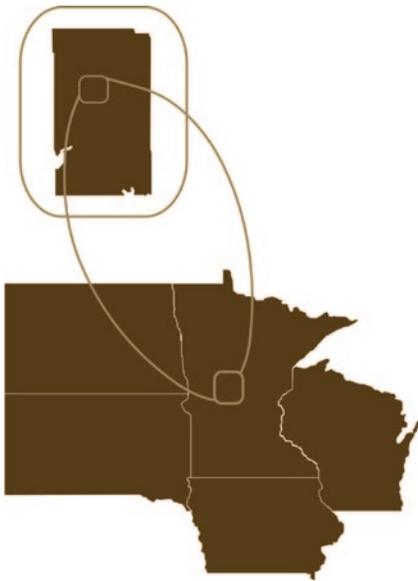


LIGHT FIXTURES



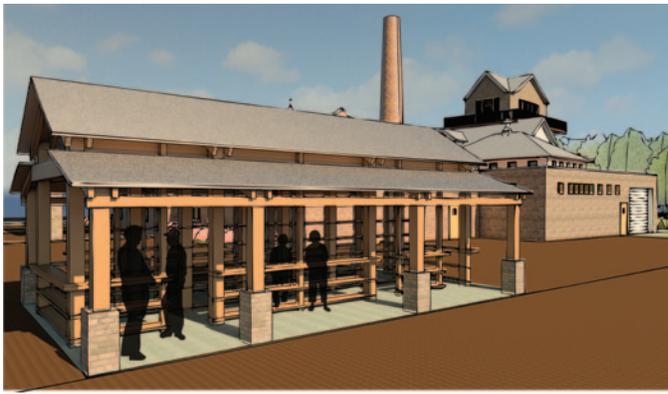


design proposal









presentation



growth through the past:

A Cooperation Between the Past, Present, and Future in Revitalizing Clarissa, Minnesota

Can a piece of history be used as a catalyst for growth of a dying community?

problem statement



1. Recognizing people are a community's best resource for visioning and investing in the future.
2. Approaching planning and design problems with an interdisciplinary team is necessary to achieve balanced planning and physical design solutions.
3. Understanding a community's unique sense of place is developed through respect for the local environmental, physical, social, and economic environments.
4. Promoting physical design as an integral component of a community's quality of life offers the most effective use of the Design Team's planning and design skills.
5. Encouraging redevelopment in areas where urban infrastructure exists, or new development in areas where infrastructure capacity exists, ensures that a community's land and utility resources will be used efficiently.
6. Promoting compact development patterns assures that a community uses its land, transportation and civic resources wisely.
7. Encouraging development of public realm amenities that will attract private sector construction is an effective economic development strategy for improving community quality of life.
8. Promoting a range of housing types assures that citizens of differing incomes, lifestyles and preferences have a range of housing choices within the community.
9. Promoting a range of commercial building types assures a range of building and employment choices within the community.
10. Encouraging community stakeholders to collaborate with one another will assure that community improvements are directed responsibly.
11. Using graphics and visual references allows the Design Team to communicate ideas quickly and effectively.



preserving the past

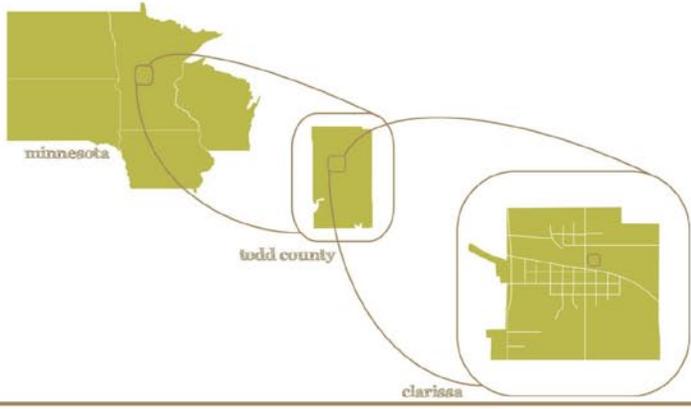
minnesota design team

- Small Size and Geographic Isolation
- Economic Specialization
- Limited Human Capital
- Dependency and Disadvantages
- Children are the Future

This thesis goes on to answer the question of whether a piece of the past can be used as a catalyst for growth in a small community. By adapting a current piece of architecture into a tool that can be used by the residents of Clarissa, MN. Linking the past, present, and future. By creating a place for members of the community to learn, gather, and experience.

community planning

abstract



location

site



clarissa, mn



cooperative
creameries

maker
spaces



-The structure may relate to the revitalization of the community and multigenerational relationships.

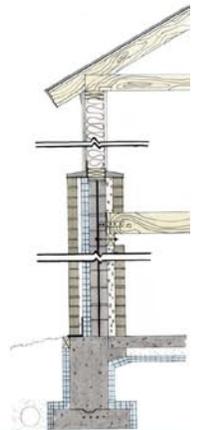
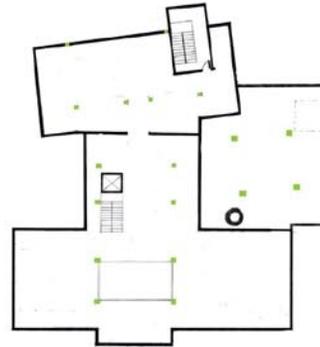
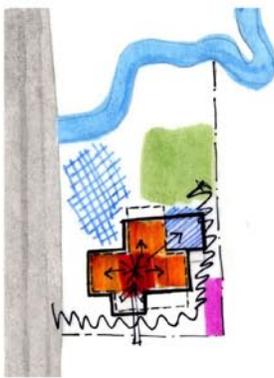
-The design should respond to its surroundings-both natural and built.

-The design could be a display of architecture being used as a tool to renew the sense of community.

-The spatial organization may speak of the nature of a cooperative relationship.

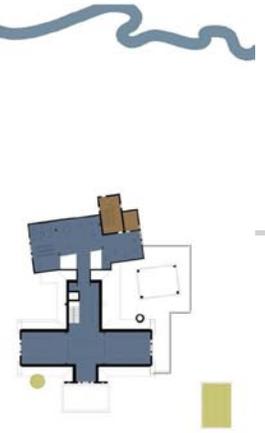
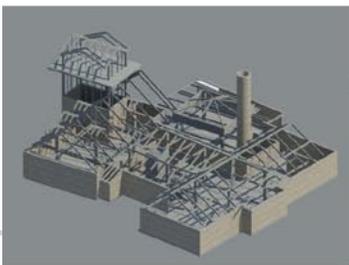
randall, mn

design directives



design process

spatial & structure



ground floor

second floor

plans



social

sewing & woodworking



technology & market

interpretive



site plan

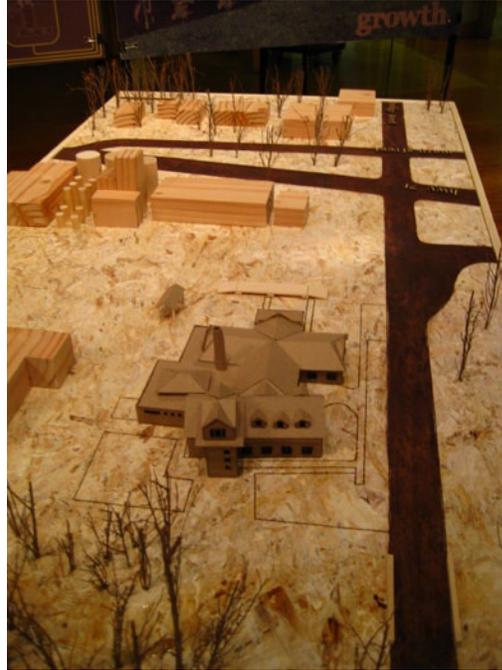
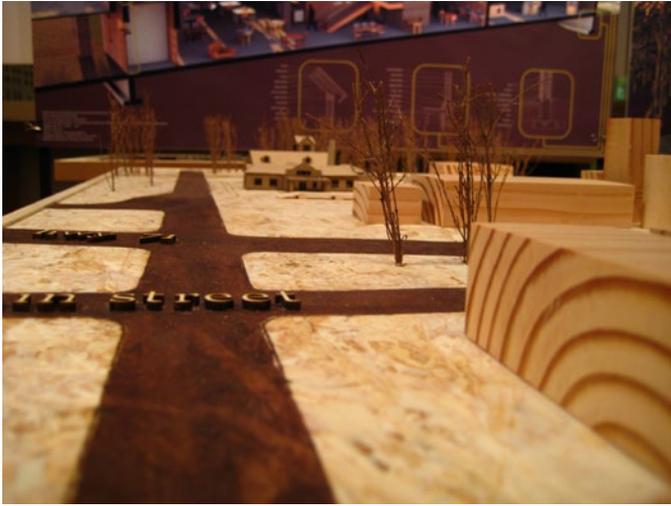


thank you

garden

thank you

questions?



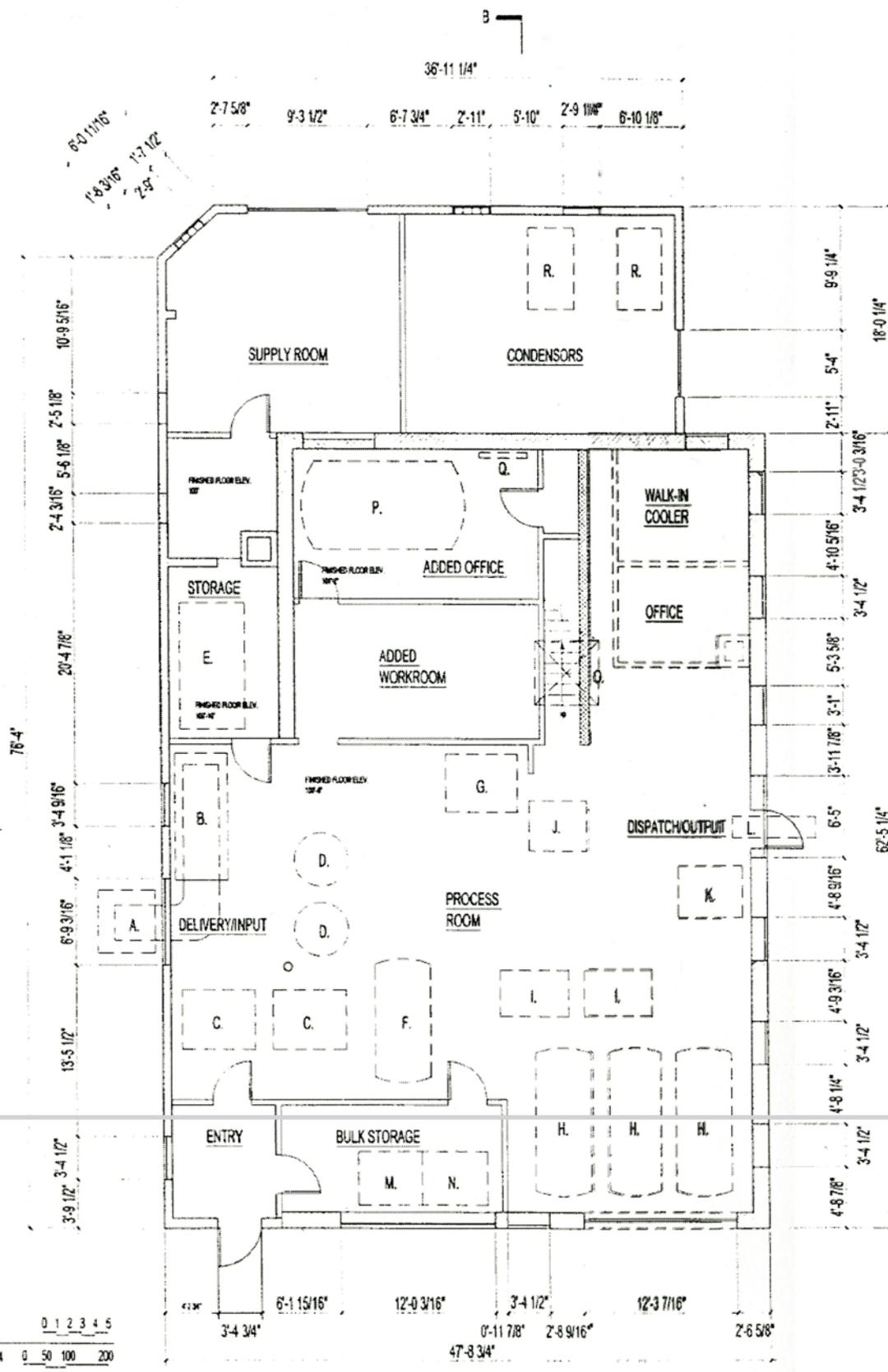
installation





appendix
creamery drawings from
the research of:
Steve C. Martens, Architect
& Associate Professor

- A SCALE
- B CAN WASHER
- C 1000# RECEIVING TANK
- D SEPARATOR
- E SKIM MILK BULK TANK
- F HOLDING TANK (PASTEURIZING)
- G VERTICAL HOLDING TANK
- H VAT
- I CHURN
- J BUTTER PRINTER
- K WRAP TABLE
- L TRACK
- M BUTTERMILK
- N SKIM MILK
- O ELEVATOR
- P BOILER
- Q ELECTRIC SERVICE PANEL
- R COMPRESSOR



FIRST FLOOR PLAN



FEET 3/16" = 1'-0" 0 1 2 3 4 5
 CENTIMETERS 1:24 0 50 100 200

B

Material Fabric:

Creamery buildings are often recognizable on the agricultural landscape by chimney stacks and distinctive fire-resistive masonry construction. Locally-manufactured "Chaska Brick" was the clear choice of material at Chaska and many other creameries throughout the Minnesota River Valley, both because of its fire-resistivity and also for reasons of sanitation. The original building interior was essentially a free-spanned, open room allowing maximum flexibility in arrangement of equipment. The "through-put" axis of the industrial process generally flowed from west to east, with boiler and refrigeration equipment located at the building's rear. Ventilation of creamery interiors was an important consideration, achieved at Chaska first by a hand-built cupola and later replaced by a premanufactured, somewhat ornamental metal ventilating cupola.

Industrial Process:

Few more prominent examples can be found of industrial structures in rural areas of the upper Midwest. "Process" type creamery buildings represented a significant investment in industrial production in small communities. In terms of form and detailing these buildings reflect ingenuity, consistency, and variation on the part of their designer/builders, with each cooperative association clearly seeking a strong expression of its identity. Oral histories of people with direct experience working in creameries provides first-hand understanding of the planning, operation and economic significance of these institutions to surrounding agricultural production.

Whole milk was delivered (independently by farm wagons until the 1920s, then by milk-hauling trucks), weighed and separated. Butterfat was the essential, valuable commodity in the entire process, so the skim milk was often returned to farmers and taken back to farms where it was fed to livestock. In addition to buttermaking, Sugar City creamery was able to utilize both the skim milk and buttermilk by sending them to a nearby milk drying plant. Using steam processes and electric-motor driven equipment, the butterfat was churned and formed into one-pound blocks or larger bulk containers at the "butter print" machine. Production was stored in a walk-in cooler until it could be dispatched (by rail or truck) to national distributorships, usually located on the East Coast until the Minnesota-wide association was well-established. In the Sugar City creamery, a hand-operated hoist was used to elevate supplies to the storage area on the upper floor.

Selected Bibliography:

Edwards, Everett E. 1938. "T.L. Haecker, the Father of Dairying in Minnesota", in *Minnesota History*, (v. 19). St. Paul: Minnesota Historical Society, pp. 148-161.

Jarchow, Merrill E. 1946. "The Beginnings of Minnesota Dairying", in *Minnesota History*; (v. 27); pp. 107-121.

Land O' Lakes. 1934. *Land O' Lakes Creameries, Inc.; Its Organization, Nature and History*. St. Paul: (private publ.)
Martens, Steve C.

Ruble, Kenneth D. 1947. *Men to Remember; How 100,000 Neighbors Made History*. Chicago: Lakeside Press/R.R. Donnelley & Sons Co., (1947).

DRAWN BY: ANN JOHANNES, PAUL RYE, ADAM SOLOMONSON, TIFFANY STANTON, JON WIRTH (OCTOBER, 1998)

PROJECT NAME
NATIONAL PARK SERVICE
NORTHERN PLAINS ARCHITECTURE OF THE WESTERN

SUGAR CITY COOPERATIVE CREAMERY
140 EAST SIXTH STREET (HIGHWAY 212) CHASKA CARVER COUNTY MINNESOTA

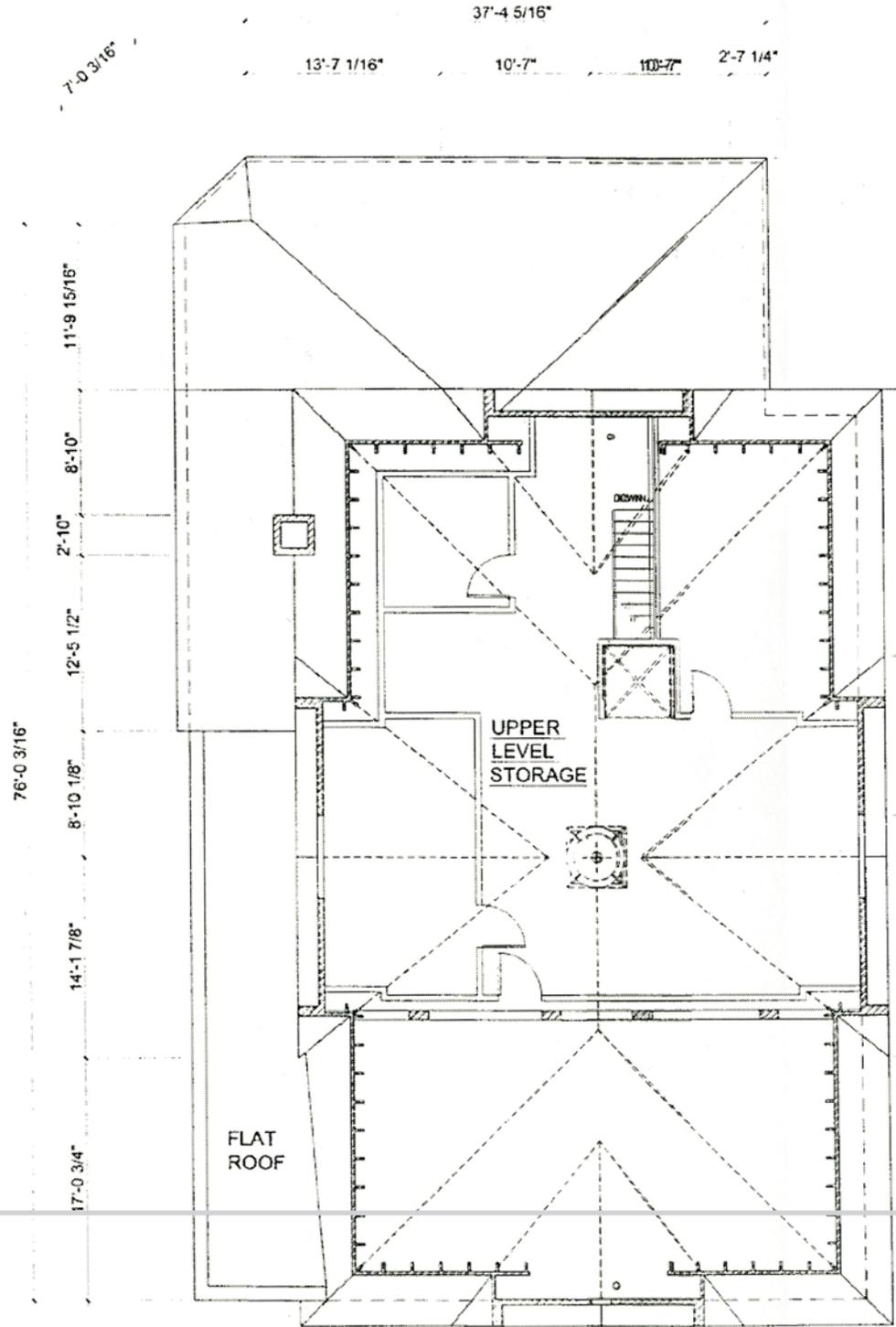
PROJECT NO.
XX-00

HISTORIC AMERICAN
BUILDINGS SURVEY
sheet 2 of 6 sheets

IF APPROVED, PLEASE CREDIT THE HISTORIC AMERICAN BUILDINGS SURVEY, NATIONAL PARK SERVICE, BUREAU OF ARCHITECTURE, STATE OF MINNESOTA

Project Information:

Background research, field recording, and documentation of the Sugar City Creamery were made possible thanks to the interest, concern, and financial support of the City of Chaska, Minnesota. HABS documentation was completed during the Fall of 1998 by a team of students from North Dakota State University, comprised of Ann Johannes, Paul Rye, Adam Solomonson, Tiffany Stanton and Jon Wirth working under supervision of Steve C. Martens, Associate Professor of Architecture. The information gathered at the Sugar City Creamery provides an important contribution to an ongoing photographic survey documenting more than three-hundred creamery buildings known to still survive in Minnesota in 1998.



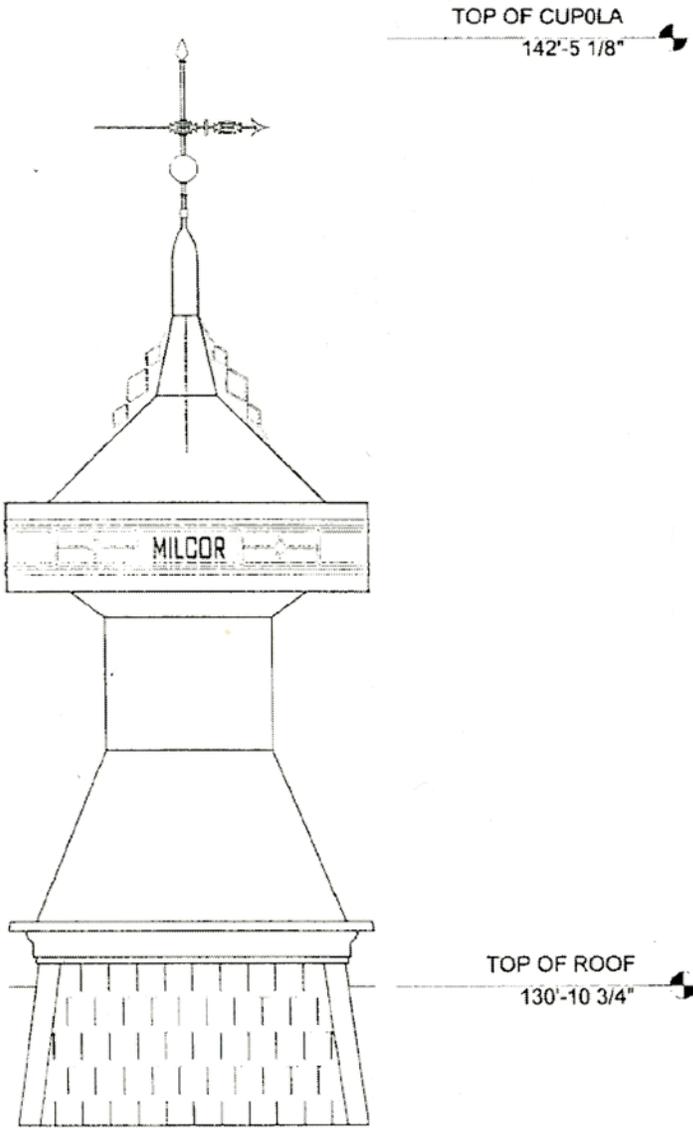
SECOND FLOOR PLAN



FEET 3/16" = 1/4" 0 1 2 3 4 5
CENTIMETERS 1:24 0 50 100 200

7'-4 3/4" 10'-6" 9'-1 3/8" 9'-1 3/8" 10'-6"
2'-11 1/4"
49'-6 3/4"

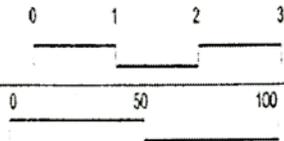
16'-10 3/4"
 11'-2 5/8"
 5'-10 1/2"
 11'-2 5/8"
 16'-10 3/4"
 82'-7 1/2"



CUPOLA

FEET 3/16" = 1'-0"

CENTIMETERS 1:24



DRAWN BY: ANN JOHANNES, PAUL RYE, ADAM SOLOMONSON, TIFFANY STANTON, JON WIRTH (OCTOBER, 1998)

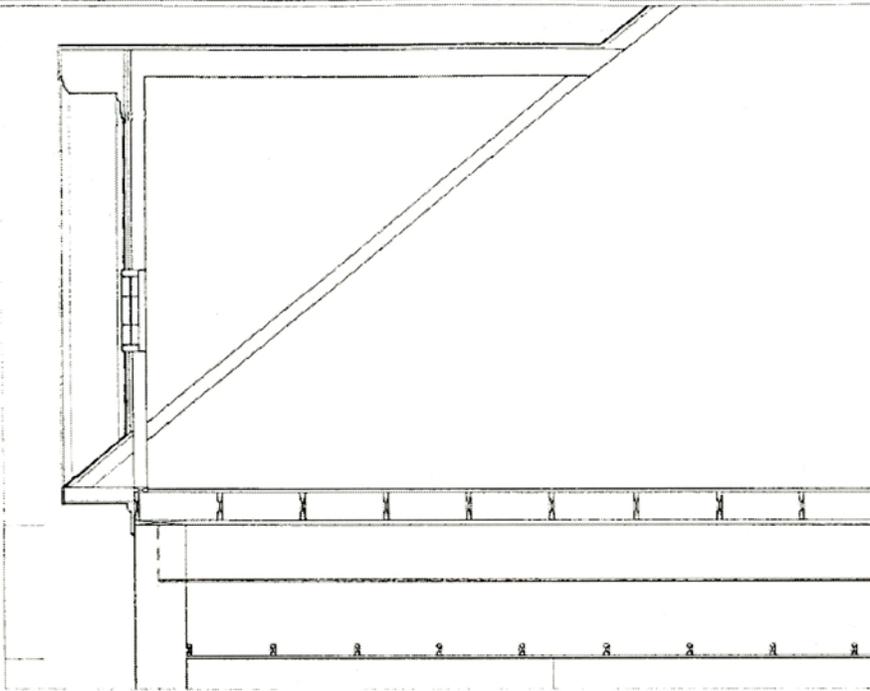
PROJECT NAME
 NATIONAL PARK SERVICE
 UNITED STATES DEPARTMENT OF THE INTERIOR

SUGAR CITY COOPERATIVE CREAMERY
 140 EAST SIXTH STREET (HIGHWAY 212) CHASKA CARYER COUNTY MINNESOTA

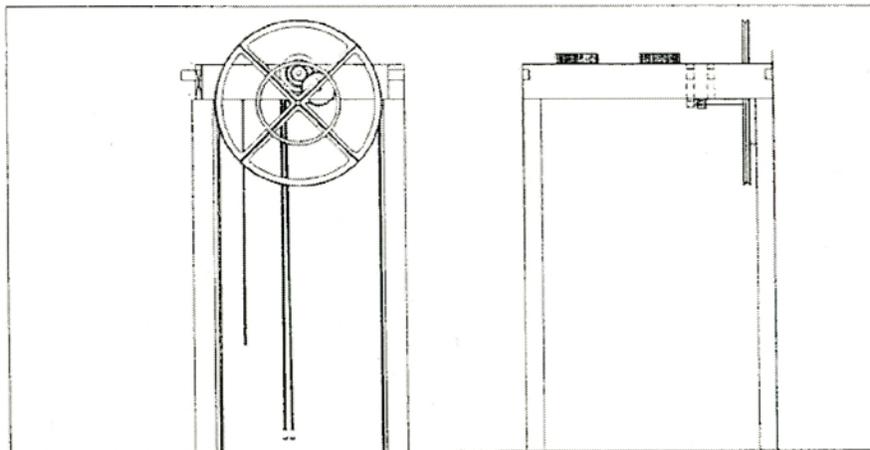
HISTORIC AMERICAN
 BUILDINGS SURVEY
 SHEET 3 of 6

SHEET NO
 XX-00

IF REPRODUCED, PLEASE CREDIT THE HISTORIC AMERICAN BUILDINGS SURVEY, NATIONAL PARK SERVICE, NAME OF SURVEYOR, DATE OF DRAWING



DORMER & WALL DETAIL
SCALE: 1/2" = 1'-0"



HOIST DETAIL
SCALE: 1/2" = 1'-0"

Materials:

Roof: Wood framing with asphalt shingle roof replacing original shingles of unknown composition.

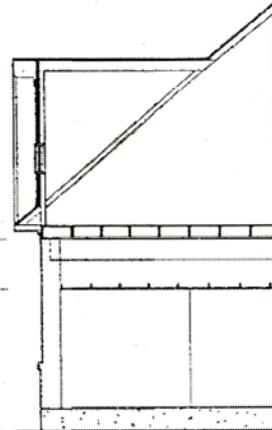
Exterior Bearing Walls: Locally manufactured, cream-colored Chaska brick three wythes thick. Brick unit size 8-1/4 inches long x 2-1/4 inches high x 3-5/8 inches front to back. Header courses occur at every eighth course. Stucco and diagonal wood facing at the bottom of exterior walls are additions to the original material fabric.

Interior Partitions: Light wood framing. The majority of interior partitions have been added within thirty years prior to the building's documentation, and are not part of the historic fabric. One significant structural truss exists in the attic space which is constructed of five layers of dimension lumber.

Foundations/Floors: Below-grade constructions were inaccessible at the time of documentation, but there is an indication inside the building that foundations are site-cast concrete. First floor is concrete slab-on-grade and upper floor is light wood framed.

↖ CEILING
112'-1-3/4"
↖ DROPPED CEILING
109'-3"

↖ GROUND PLANE
100'-0"



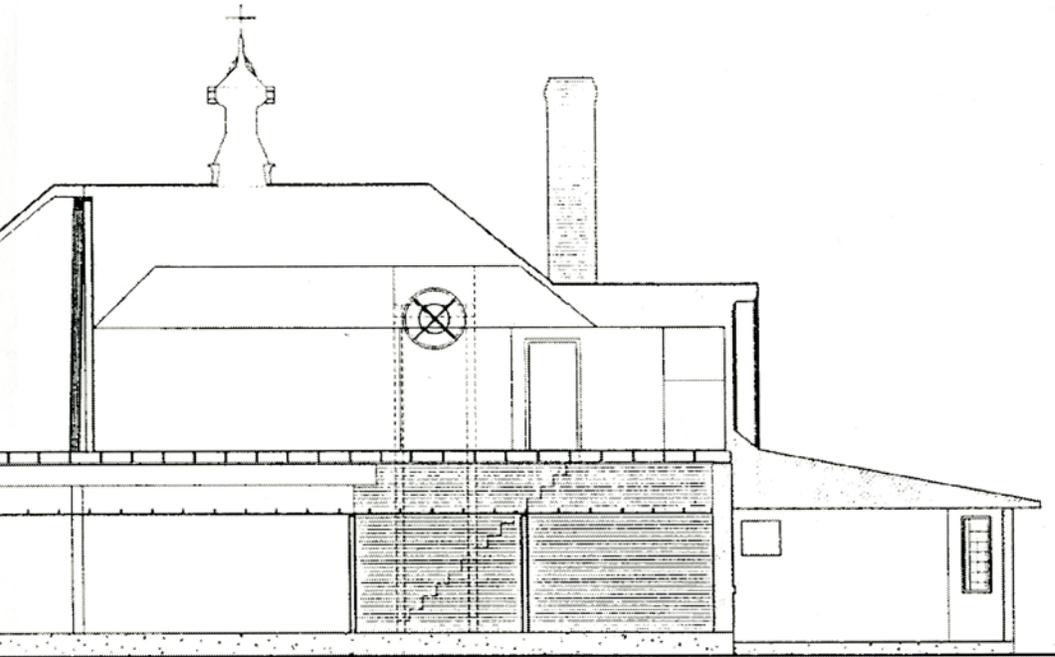
SECTION

↖ T.O. HOIST FRAME
122'-10-1/2"

↖ CEILING
114'-3-3/4"

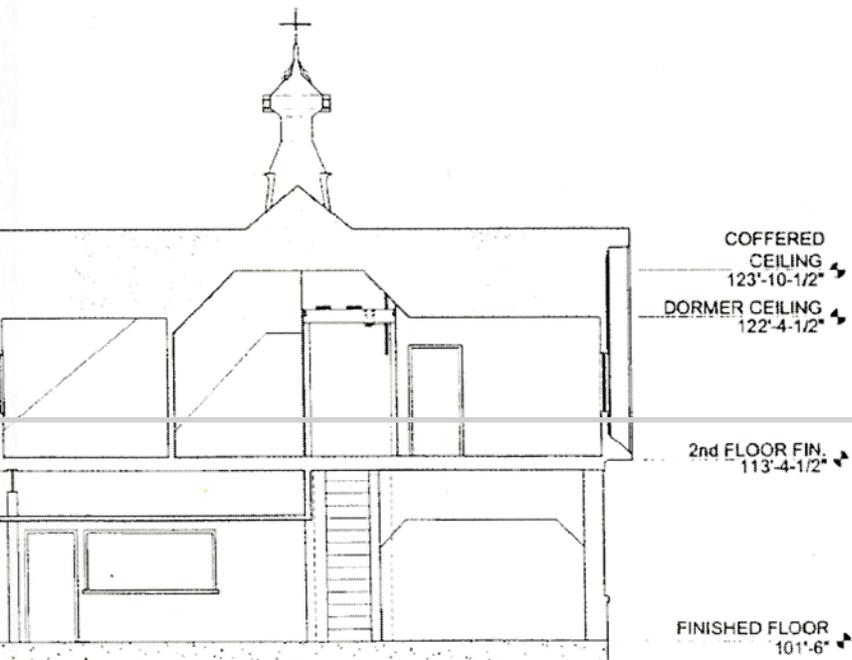


SECTION



N B (LONGITUDINAL)

FEET 3/16" = 1'-0" 0 1 2 3 4 5
 CENTIMETERS 1:24 0 50 100 200



A (TRANSVERSE)

FEET 3/16" = 1'-0" 0 1 2 3 4 5
 CENTIMETERS 1:24 0 50 100 200

DRAWN BY: ANN JOIANNES, PAUL RYE, ADAM SOLIMONSON, TIFFANY STANTON, JON WIRTH (OCTOBER, 1990)

HISTORIC AMERICAN BUILDINGS SURVEY
 SHEET 6 OF 6 SHEETS

NO. XX-00

SUGAR CITY COOPERATIVE CREAMERY
 140 EAST SIXTH STREET (HIGHWAY 212) CHASKA CARVER COUNTY MINNESOTA

PROJECT NAME
 NATIONAL PARK SERVICE
 UNITED STATES DEPARTMENT OF THE INTERIOR

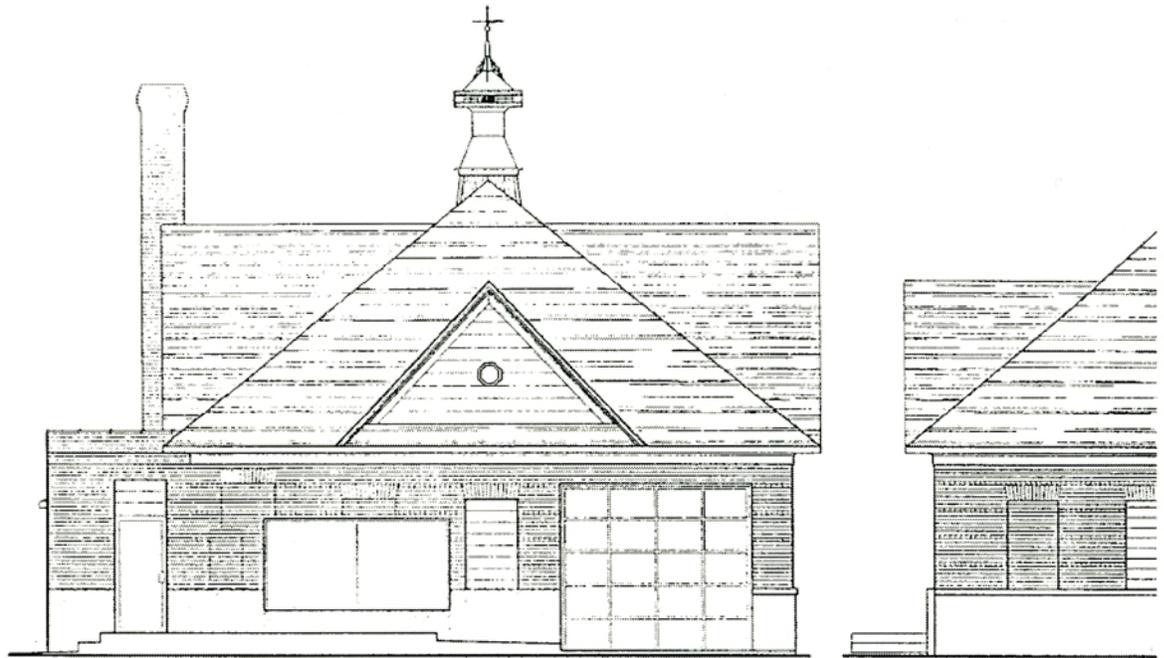
IF REPRODUCED, PLEASE CREDIT THE HISTORIC AMERICAN BUILDINGS SURVEY, NATIONAL PARK SERVICE, NAME OF EDUCATIONAL DATE OF DRAWING

TOP OF CHIMNEY
137'-2 7/16"

TOP OF DORMER
128'-0 13/16"

PARAPET HEIGHT
114'-8"

FINISHED FLOOR
101'-6"



SOUTH ELEVATION

FEET 3/16" = 1'-0" 0 1 2 3 4 5
CENTIMETERS 124 0 50 100 200

TOP OF DORMER
128'-0 13/16"

BASE OF TRIM
112'-4 1/4"

SILL HEIGHT
104'-4 1/4"

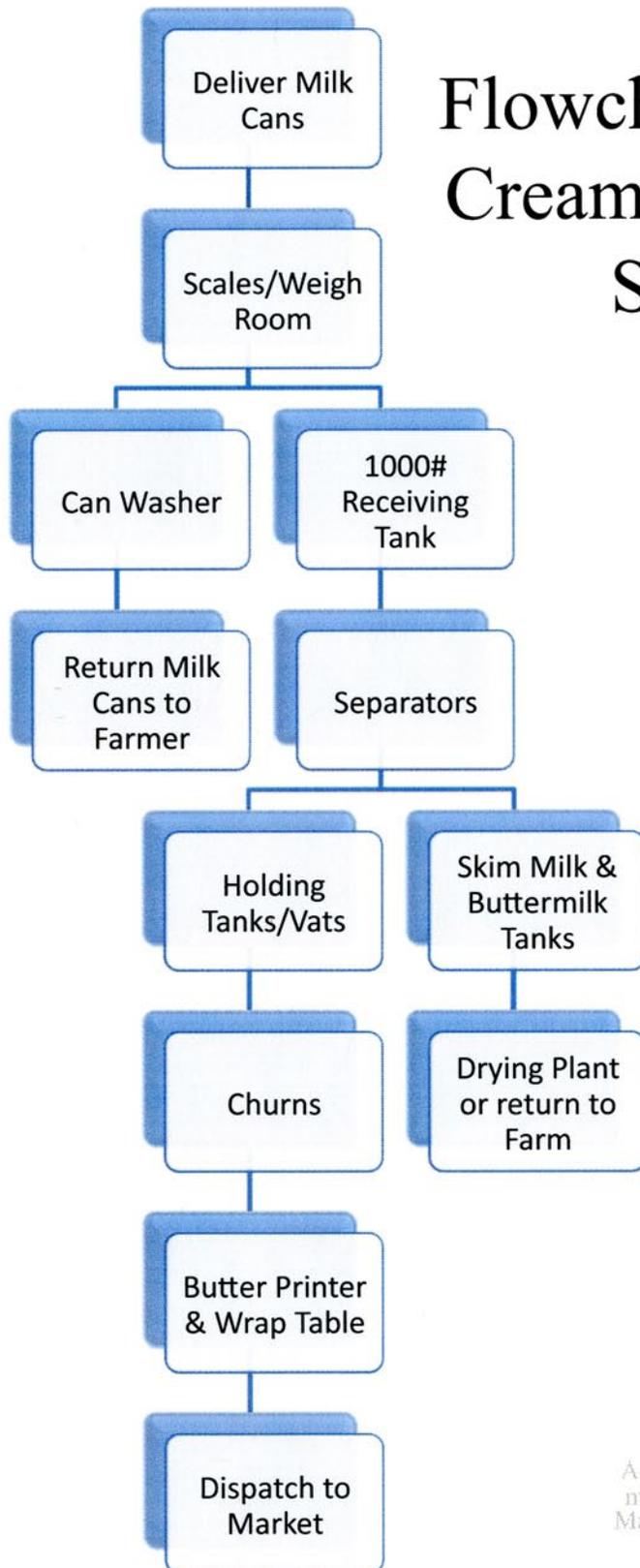
GROUND PLANE
100'-0"



NORTH ELEVATION

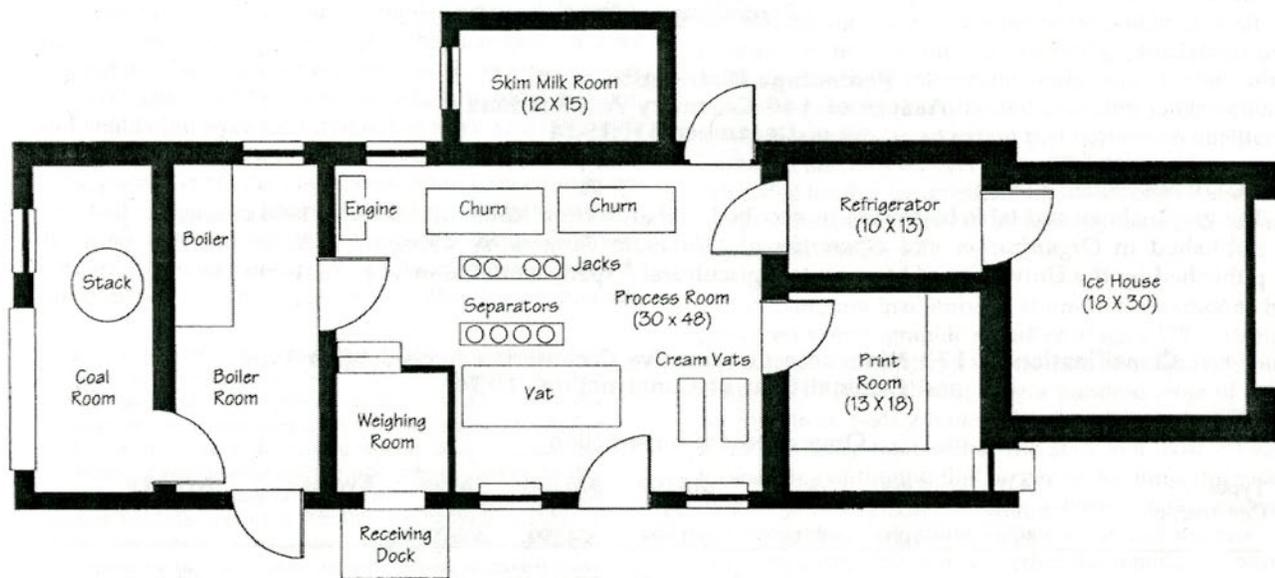
FEET 3/16" = 1'-0" 0 1 2 3 4 5
CENTIMETERS 124 0 50 100 200

Flowchart of Typical Creamery Operating Sequence

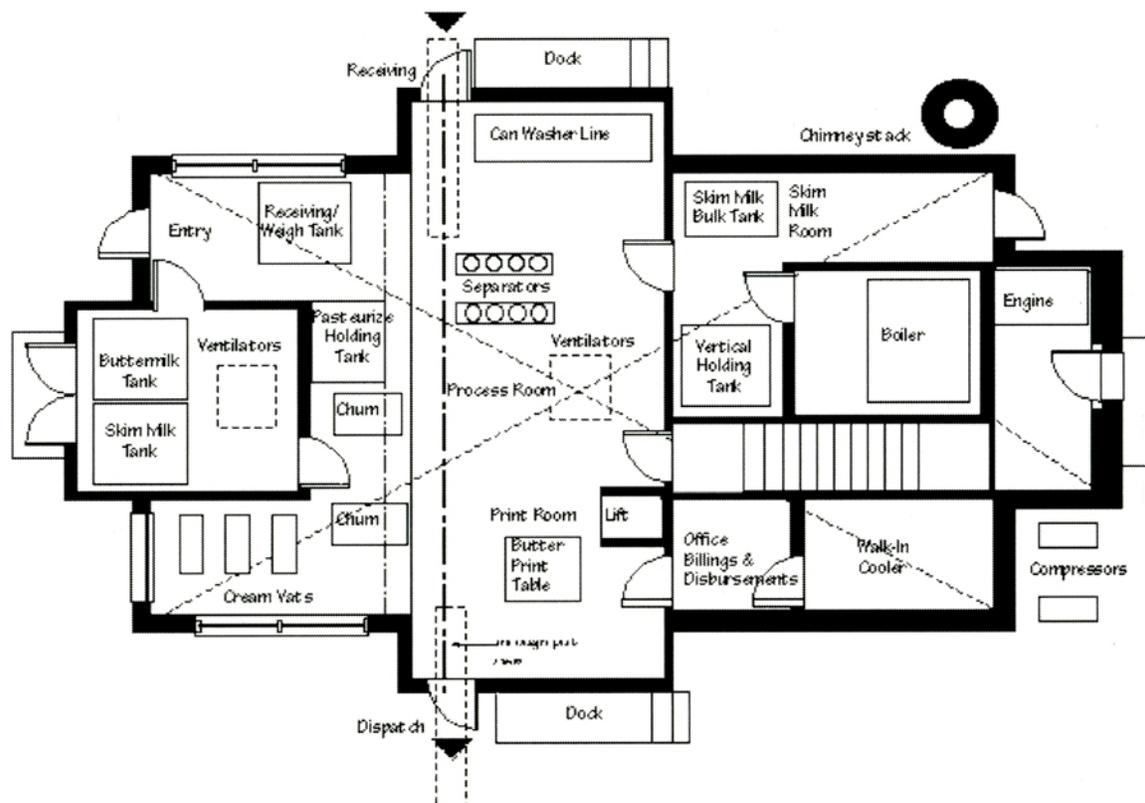


Adapted from flowchart within an unpublished manuscript on Minnesota creameries by Steve Martens (1999), professor of architecture, North Dakota State University, Fargo.

(Continued from Page 15)

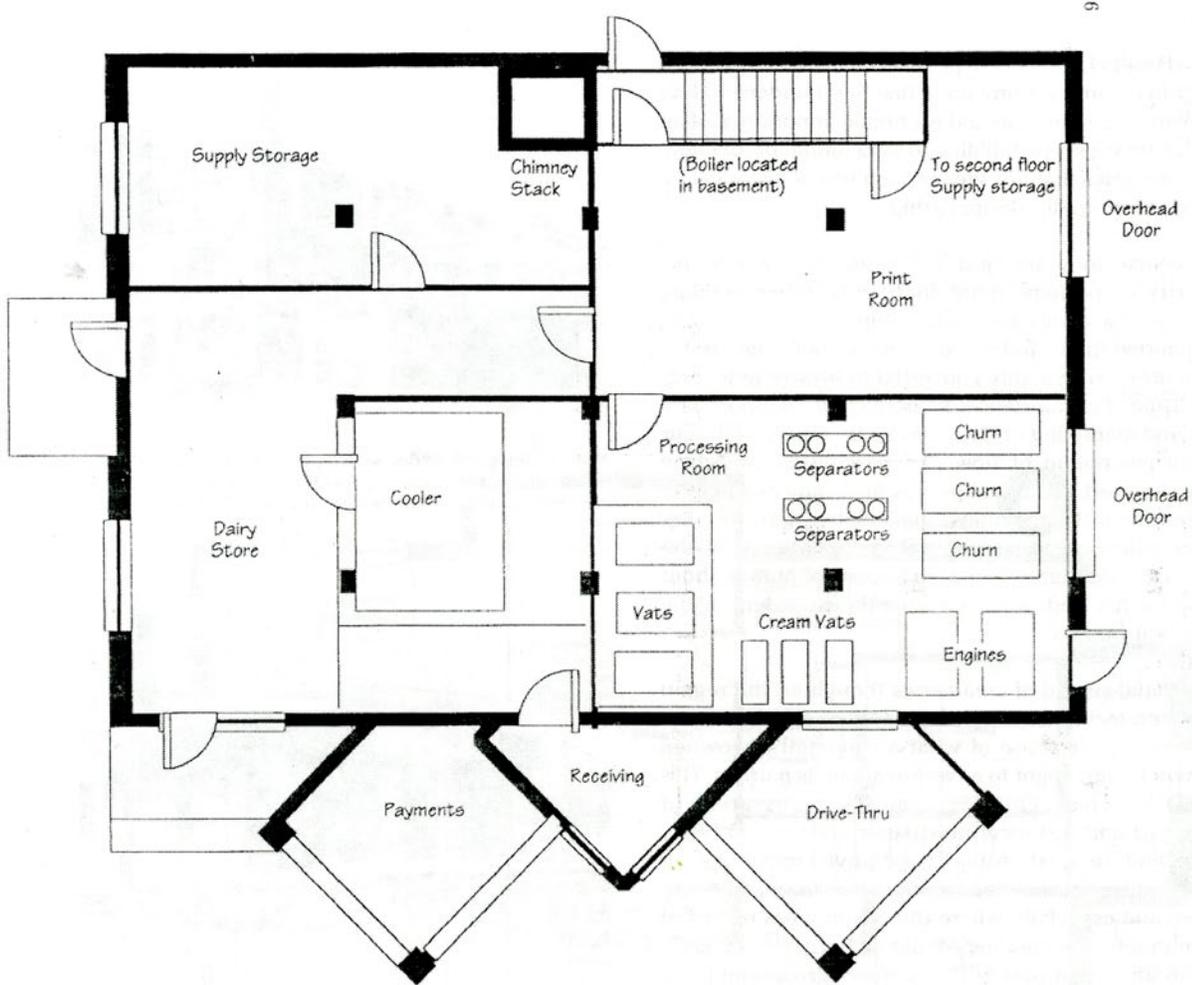


Early Creamery Layout - Simple, Linear Plan from the period 1890-1900
Based on a composite of Alden & Lerdal (Riceland) Creameries in Freeborn County



Middle Period Creameries (ca. 1905-1921)

Based on composite of Chaska (Sugar City), Clarissa & Vasa



Industrial Type of Creamery (ca. 1915-1930)
 Based on composite of Eagle Bend, Frazee, Clarks Grove and Meire Grove

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studio
experience

2009-2010

Fall Semester: Joan Vorderbruggen

Teahouse -Fargo, ND

Boathouse-Minneapolis, MN

Spring Semester: Darryl Booker

Montessori School-Fargo, ND

Birdhouse Competition

Dwelling-Marfa, TX

2010-2011

Fall Semester: Milt Yergens

School Bus

Center for Celebration-Gloucester, MA

Snow Competition-Winnipeg, Manitoba

Masonic Lodge-Pipestone, MN

Spring Semester: Mike Christianson

Sixth Street House

2011-2012

Fall Semester: David Crutchfield

High Rise-San Francisco, CA

KKE Competition

Spring Semester: Don Faulkner

Marvin Windows-Fargo, ND

City of Kindred-Kindred, ND

2012-2013

Fall Semester: Mark Barnhouse

Water Research Station-Linton, ND

Spring Semester: Steve C. Martens

Growth Through the Past: A

Cooperation of the Past, Present, and

Future in Revitalizing Clarissa,

Minnesota

**3124 65th St.
swanville mn 56382**

320.360.4115



**education is the
ability to listen to
almost anything
without losing your
temper or your self-
confidence.**

-robert frost

upsala, mn

mallery.johnson@my.ndsu.edu