Ruin:
The Library
Reimgained

Ruin: The Library Reimagined

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Contents

List of Tables and Figures

HISTORIC RE-USE

TRANSPARENT

PROGRESSIVE

SUSTAINABLE

ENTREPRENEUR

ABSTRACT

In his essay, "On the Uses and Disadvantages of History for Life" Friedrich Nietzsche discusses how a "critical approach to history" allows the past to be used as a vital force for future life and action. Such assumptions have led me to consider how the ruins of the old Hamm's brewery complex in St. Paul, Minnesota is a compelling site for the design of a new rare books library, inspired by Bazon Brock's notion that "one can only understand the known from the new; one can only experience the new with a new view of the old."

The design of the new library will support the experience of the past by giving precedence to the sharing of knowledge and ideas. This will occur within spaces that explore paradoxical relationships between past and present: where the ruin of the old brewery is supported by new architectural renovations, and where the foundations of the old design support the new program.

Likewise, the sophisticated systems of technology needed to house many of the very rare books and old manuscripts may create tensions between the traditional understanding of a library and its inevitable future. This poses a challenge to modern assumptions regarding time as something progressive and linear.

MOVEMENT

COMMUNITY

HUMAN CONDITION

SENSE OF PLACE

N A R R A T I V E

We live in a world in which we are engaging our senses constantly, because of this, we are caught in a balancing act. This act is an integral part of our development as humans, if we do not understand this balance, we are not fully realizing what is around us.

Technology and the natural world are in a constant struggle, a battle of balance. If we do not find this balance between the two, our world will be skewed. Even now we see the effects of this struggle. People are becoming one with technology, forgetting to interact with what lies around them. Physical Human interaction is becoming less prominent, being defeated by forms of social media. Social Media is meant to connect us more than ever before, but when we are at dinner with one another, and instead of interacting with each other, we opt out to access the wondrous expanse of friends on the Facebook. How is that bringing us closer together?

This is where a balance must be formed. Technology is truly a beautiful thing, never before have we seen this social change that has occurred. But now its time to realize how technology and the natural world can come together, through the built environment.

The built environment is the canvas on which Architecture is executed. As designers we have the ability to create bridges between problems, forming a solution. I believe designers can use this to form

a bond between nature and technology. If we combine these aspects we are engaging the full range of senses. From this we can reinvent how we learn and interact with our environment.

To learn we must interact with what surrounds us. And as we move forward with the promise of combining nature and technology, education must change too. The American education system is failing (quote or something). We are stiffened by classrooms with no windows, only textbooks and few computers to entice kids to learn. We have lost our connection with nature within our schools, and technology is becoming more prominent, in the worst of ways. The balance must be realigned. Through a building program that promotes the best of both worlds, we can achieve such a goal. Integrating nature and technology within the classroom. By doing we are creating a social environment in which creativity and learning can flourish.

Thus we must blend nature and technology to form a new typology of education. An education system that promotes the integration of technology and the nurturing inspiration of nature. Children and adults both can have a positive outcome from this solution. This can be done by allowing the built environment to interact with nature, incorporating landscapes and rooms that become transparent to the outside world. Innovation and creativity are needed to achieve this goal, and that is why these factors will also be included into the program that forms the typology of the building.

Figure 1.1

Entrepreneurs will form the backbone on which this new system is built upon. By feeding off of their energy and passion to learn, people will be inspired to follow in their footsteps. And by having this interaction with like minded people who knows what will be the outcome. Progress is an ever changing variable, and that is why we must be adaptable to change, we have to embrace it. An incubator of business and technology will form organically from this innovative process. To do this memebers of the community need to be involved.

The idea of community goes back to before humanity began to farm. Communities are groups of people that come together to help and guide on another. Today, our communities exist in two worlds. The physical, and digital. Many treat these two commuinites as seperate entities, causing favortism to one or the other. If the community is not cohesive, is it not then failing f the basic principals of which it stands for? People have lost their sense of place, a sense of community. But this gives us reason to reinvent what a community means. How can we combine both social and digital communites, utilizing the built environment as mortar to join the two? These questions will be analyzed and executed through the experimental building program that will be created. Education, Innovation, and balance will be key.

Similar to the balancing act between nature and technology, the cities of St. Paul, and Minneapolis Minnesota are themselves in a struggle of coexistence with there natural surroundings. The "Twin Cities" as they are referred to, are suffering from suburban sprawl, but yet there is movement in utilizing the existing urban areas, left vacant from the industrial era of the cities existence. Large swathes of land that were once heavy industry along the rivers and rail yards are now being utilized as urban reclaimation promoting sustainable growth and allowing a new sense of comminity that is much different than that of the suburbs. People are realizing that

the American dream does not lie away from the city, but within. And the Twin Cities area is no exception.

Although many of the industrial areas are seeing new growth, there checkered past is still present. Many of these areas border working class neighborhoods. These nieghborhoods relied on the jobs that industry provided, but when industry moved to outer locations or other countries, these neighborhoods lost thier sense of community. Soon the crime rose, and many suffered from abondonement and vandalism. Even up until the early 2000's very few efforts were made to reestablish a sense of community, and sadly many neighboorhoods and building were torn down because of this.

When analyzing both cities of Minneapolis and St. Paul, a conclusion was made that St. Paul would be the city chosen host the experimental building typology. St. Paul, the capital of Minnesota, is a city in the early stages of re branding itself as an urban oasis. It hosts many innovative businesses, and multiple modes of public transportation. Now more than ever St. Paul is looking to future by looking at the past. There has been successful urban infill projects that have allowed St. Paul to move forward. But one district that has been neglected is the "Swede Hollow" district where the old Hamm's brewery was located. This historic neighborhood has seen its fair share of hardships. The brewery once was the identity of the community, but it then abruptly left, leaving the area to become neglected and riddled with crime. Its proximity to the city core makes it a promising area, that has attracted the attention of many that believe it could once again, become a vibrant community. The industry that was once there, now will have the ability to re-invent itself as an Incubator of innovation, education, and sustainable solutions. Because of this, the experimental proposed building typology has selected this area to become the vessel in to exist.

Location of the "Swede Hollow" district has the potential to have wonderful permeability to the education, and entrepreneur community that already exist within the city. Utilizing these wonderful resources will once again, create a sense of community within the neighborhood. This opportunity will allow integration of nature and technology, using education as the tool to enhance our understanding.

All of these aspects will create and function in a new infectious built environment that will not only move people physically, but emotionally. As designers, we should help achieve a better world for future generations. By giving others the access to better their lives, we are promoting a sense of community and place, to others, who might have never been given the chance too. We are always engaging with what lies around us, our senses always stimulated. Let us observe the expressions of ourselves and that what makes us "Human," to better the built environment through experimental architecture and **expression**

"**The world is**... the natural setting of, and field for, all my thoughts and all my explicit perceptions. Truth does not inhabit only the inner man, or more accurately, there is no inner man, man is in the world, and only in the world does he know himself."

Merleau-Ponty, Maurice. *Phenomenology of Perception*. 1945

Educational

Adaptive- Reuse

Library

Sustainable

THE EMPHASIS of this project is to create an environment in which technolgy, and historical precedence can coexist and stregnthen one another through the process of learning. From this the innovative spirit of the project will show, enlightening the community in which it exists in. Learning and experincec create our reality, why not allow the built environment to reflect these values and improve upon them?

RESEARCH OF
THEORETICAL
PREMISE

Sensual Balance

Architecture has the promise to engage our senses throughout the design. But today many things that we observe and experience lack the multi-modal engagement of the five senses. As science understands them, we try to separate the five senses, but when we look at how people describe through the senses we see they are much more related than one would think.

Touch - "(...)while the tactile space separates the observer from the objects, the visual space separates the objects from each other (...) the perceptual world is guided by the touch, being more immediate and welcoming than the world guided by sight"
- Peter Zumthor

Smell - "The nostrils awakes a forgotten image and fall into a vivid dream. The nose makes the eyes to remember. "
- Juhani Pallasmaa

Hearing - "Sound is invisible but has the power to change the space characteristics we occupy"
- Julia Schulz-Dornburg

Sight - "The sight separates us from the world, while the rest of the senses joins him."
- Juhani Pallasmaa

Through our senses we are able feel emotion and movement. The more senses that are engaged, the stronger the connection is to that said object. Our dearest memories are the ones that have an emotional transcendence with our being. Architecture that creates memories and emotional ties is holistic; it does not just come to be. It is developed through method and technique that use the senses to further the meaning and under¬standing. Today architecture should not be understood as a single discipline, but as a multidisciplinary creative

process, that interconnects our physical and metaphysical experiences. Architecture should create memories for us, the ones who have the privilege to interact with it.

From the senses, we are able to experience architecture and space with balance. By definition balance means, "a condition in which different elements are equal or in the correct proportions." For many, balance is something that is tranquil, peaceful, but before tranquility, forces will be acted upon this balancing act. If we go back to the senses, we predominately see this tension between which sense will be dominant. As suggested by Juhani Pallasmaa, sight in architecture usually is the most dominant. But within the last thirty or so odd years, sight dominated architecture, has become the sole focus, that it is suggested practicing architects

Figure 1.2

When looking at the idea of balance, life becomes the grounds on which tension occurs. Technology and nature, the past and future, broken down can be considered polar opposites. Although if one defines the catalyst in which these things are related, a

duality between forces can exist. This balancing act can form the foundation on which experience can be created. Questioning these ideas promotes a dialogue for the understanding. Should technology be the driving force for our society and culture? What will be the effects upon us? Should we abandon the past and look to the future? Technology has the power to overcome nature but just because we can demand control, is it the path that we should take?

Balance within the senses is one of the ways that I believe deeper design emphasis could be achieved. Not only will it strengthen the overall design of any project, but especially in what has been proposed with the development of the Educational Incubator, where technology and nature will be displayed. As stated balance comes with tension, and this tension when applied correctly to the environment will cause a reaction ripe for innovative ways of learning, community involvlement, and the formation of ideas.

Idea

The power of an "idea" leads us to new discoveries about ourselves and how we view the world. First off though what is the definition of "Idea?" Many philosophers have considered ideas to be a fundamental ontological category of being. The capacity to create and understand the meaning of ideas is considered to be an essential defining feature of Human beings. (Audi, 1995) Plato a greek philosopher, is considered one of the earliest philosophers to develop detailed discussions of "ideas." Plato described ideas existing independently of anyone who may have thought these "ideas," suggesting these "ideas" distinguish mere opinion from knowledge. This gave power to the "idea," so those who had an "idea," had the bases of a more logical explanation of things than others. While confusing, Plato's "idea" was the basis of Rene Descartes explanation, one that is more related to architecture.

"Some of my thoughts are like images of things, and it is to these alone that the name 'idea' properly belongs." - **Rene Descartes**

Both art and science try to represent the events of the "idea". However, this is where the relation between art and science will and can differ. In Science, an idea is formed, but then it must be solved. Through proper testing and rigorous analysis the idea, must be explained. The scientific method represents beauty through data, a sequence of numbers and units, breaking down the idea through math¬ematical explanation. By doing this ideas once described through experiences and wonderment are now scientifically practiced, in this method, we lose the senses to numbers, experience to data.

I want to focus on how an idea is influenced through perception and experiences of the world. Humans interact with the physical world constantly developing our senses to the best ability take years of mastery. Our existence develops our consciousness, therefore not only do we think, we feel.

Dreaming is a sensation that gives us an existential experience beyond the physical world, but yet it is developed through the physical world. The dream captures the wonderment of our physical world, translating it into an intimate experience, special to the individual; thus forming the idea "Intimate Immensity." Through dreaming and our imagination we create our own world in which we exist. This sense of grandeur is special to just one person, you, it is our most intimate connection to ourselves. Immensity is within ourselves. It is contrived from us being, but to view it (dreaming) we have to be alone with our self. As soon as we become motionless, we are transported elsewhere, a dream, a fictitious realm of our minds created by our memories. Immensity is the movement of a motionless man. (Bachelard, 1994)

Because of this, inner immensity can be viewed as the catalyst for meaning to certain expressions with the visible world. For example, examining works of Architecture that move us, not only engage us with the physical senses, but it stirs something in us, beyond physical interaction. Good Architectural expression should reflect the hidden grandeur within us, the immensity that we all have. These poetics should be translated into architectural expression through the spaces that we create in design. In "The

poetics of space," Gaston Bachelard, develops the understanding of two kinds of space. "The two kinds of space, intimate space and exterior space, keep encouraging each other, as it were in their growth." (Bachelard, 1994) Intimate space allows for self- reflection, it's where we find ourselves, while exterior space is directed towards what others experience beyond themselves. This coexistence between the two kinds of spaces through experience develops the poetic imagination which is able to experience a fresh nuance that calls for uniformity which can be summarized into a single idea. (Bachelard, 1994) This single idea, inspired by space, is what architecture should and can influence. The spaces we design should have the poetics that allow us to lose ourselves within the space, for when we are lost is when we truly can develop an inner sense of being.

Through space, an rare books Library can have the ability to inspire and move the people that use the space. By understanding space in a poetic way, the design will reflect on certain values that will create a ritualistic relationship with the built environment and the observer, enhancing the culture of the space.

Figure 1.3

Culture

Our culture in which we exist has been formed by the countless technological innovations, and social constructs that we have deemed important. In America, we are a democratic nation founded on the principle, "liberty and justice for all." These ideals that we hold dear influence us every day, and we are truly lucky to be living in a world where we can practice these principals. However, this does not mean that we have come to epitome of culture. American culture dominates the internet and technological field, people want to embrace the culture and freedom that we have. Although it seems to me, that mainstream culture has developed a since philistinism lately, losing itself in the greed of a culture based off of entertainment and consumption.

Since the 19th century, the contemporary denotation of philistinism, as the behavior of 'ignorant, ill-behaved persons lacking in culture or artistic appreciation, and only concerned with materialistic values

"Philistinism-describes the social attitude of anti-intellectualism that undervalues and despises art, beauty, spirituality, and intellect; 'the manners, habits, and character, or mode of thinking of a philistine. A philistine person is the man or woman who is smugly narrow of mind and of conventional morality whose materialistic views and tastes indicate a lack of and indifference to cultural and aesthetic values."

Today being interconnected through technology, we have become a global society, suggesting the idea of a mass society. Before, societies were dictated by the surroundings and the experiences of the natural world. Even up to the mid-20th century, culture was dependent on these variables. With the introduction of telecommunications and such the age of modernity began. From this, beginnings of mass culture are seeded. We have gone from valuing the culture of society to the entertainment of society. (Arendt, 1958) How does today's culture make past and present things entertaining? How can architecture go beyond entertaining, and become meaning?

We get lost in the entertainment that is in front of us, consuming it because it is easy. Because of this Mass society consumes more and more, in what we are to believe means to become more "cultured." This culture that has presented itself has roots deep in the American way of life. A "consumers" culture cannot know how to properly take care of world that it belongs to a world of appearances. (Arendt, 1958) The 'consumers' culture suggests that objects will be consumed, spelling ruin for the Mass society that we are feeding.

In American culture, an example of a cultural object that is the basis of the "consumer" culture is the automobile. In America, our everyday activities rely on the automobile. As humans, the automobile consumes natural resources which are becoming scarcer every year. Not only that, it has changed how we plan cites; interact with others, and how we dwell. Since its invention it has given us the ability to own a piece of heaven, a yard. It allowed us to eradicate the cities we once called home. Through the automobile we changed our culture, introduced the efficiency of machines to our lives. (Jacobs, 1992) The interstates, considered to be America's greatest civil engineering feat, caused our once prized cities to be sectioned off for the sake of culture, acting as barriers unsafe for pedestrian traffic. Not only that, many of these interstate's divided the city racially, sectioning of the rich from the poor, by doing this, the interconnection of the cities was lost, eventually leading the demise of industry and jobs within the core. This cultural shift in America changed the way we interact with our environment, pushing us toward entertainment. Entertainment is a wonderful thing, but the way is experience however, has its deficiencies. Landscapes are viewed through a screen, instead of one just taking a step outside. The way we experience culture in this world can change, especially in architecture.

Through experience, maybe then, we can view architecture unbiased. To have an unbiased view, it is suggested that we separate ourselves to sheer the appearance of an object to have a greater appreciation. Sheering the appearance of architecture requires us as designers to back away from the design. We must go beyond the "architect point-of view." To do this it is recommended that we forget ourselves. In early societies, even when they were granted a release from necessity, beyond survival, they still found themselves concerned what to do with themselves. (Arendt, 1958) To stop and appreciate something is a foreign concept to society and culture even more so today.

Education

Through senses we can develop the ability to experience the shared world through intersubjectivity-conceptualize the psychological relation between people. It is usually used in contrast to **solipsistic**

(The philosophical idea that only one's own mind is sure to exist. As an epistemological position, solipsism holds that knowledge of anything outside one's own mind is unsure; the external world and other minds cannot be known and might not exist outside the mind. As a metaphysical position, solipsism goes further to the conclusion that the world and other minds do not exist.)

individual experience, emphasizing our inherently social -being. The educational incubator will promote intersubjective learning. Teaching will not base off of the traditional school teachings through methodology. The scientific system has its place in society and will be taught however, it is not the emphasis. Experiential data is gathered through the senses, "For the things we have to learn before we can do them, we learn by doing them" – Aristotle.

Experiences will not be categorized by grade, classes should not be organized this way, our senses develop individually and this individuality should be embraced and uplifted, thus forming an "active phase of learning." -Schools do not put enough emphasis on experiences, technology is substituted for interaction. However useful technology can be in education, the implementation of the techné is not there. Classes taught through experiences are based off of interests not age, emotional and intellectual development should be taken into account. This broadening of classes allows the students to interact with different cultures and age-groups, this broadening, not only promotes social exposure, but allows the students to interact with different types of cultural roots.

Experiential learning has been around since culture. It is basic method of learning from which our ancestors were taught. Being taught through experience allows the student to engage with the subject and much more "real" level. Compared to academic learning, which is through the more abstract, experiential learning actively involves the learner in a concrete experience. (Kompf, 2001)

David Kolb's learning model (ELM) suggests that to gain knowledge from an experience, certain abilities are required.

- The learner must be willing to be actively involved in the experience
- The learner must be able to reflect on the experience
- The learner must possess and use analytical skills to conceptualize the experience
- The learner must possess decision and problem solving skills in order to use the new ideas gained from experience

We shall not cease from exploration
And the end of all our exploring
Will be to arrive where we started
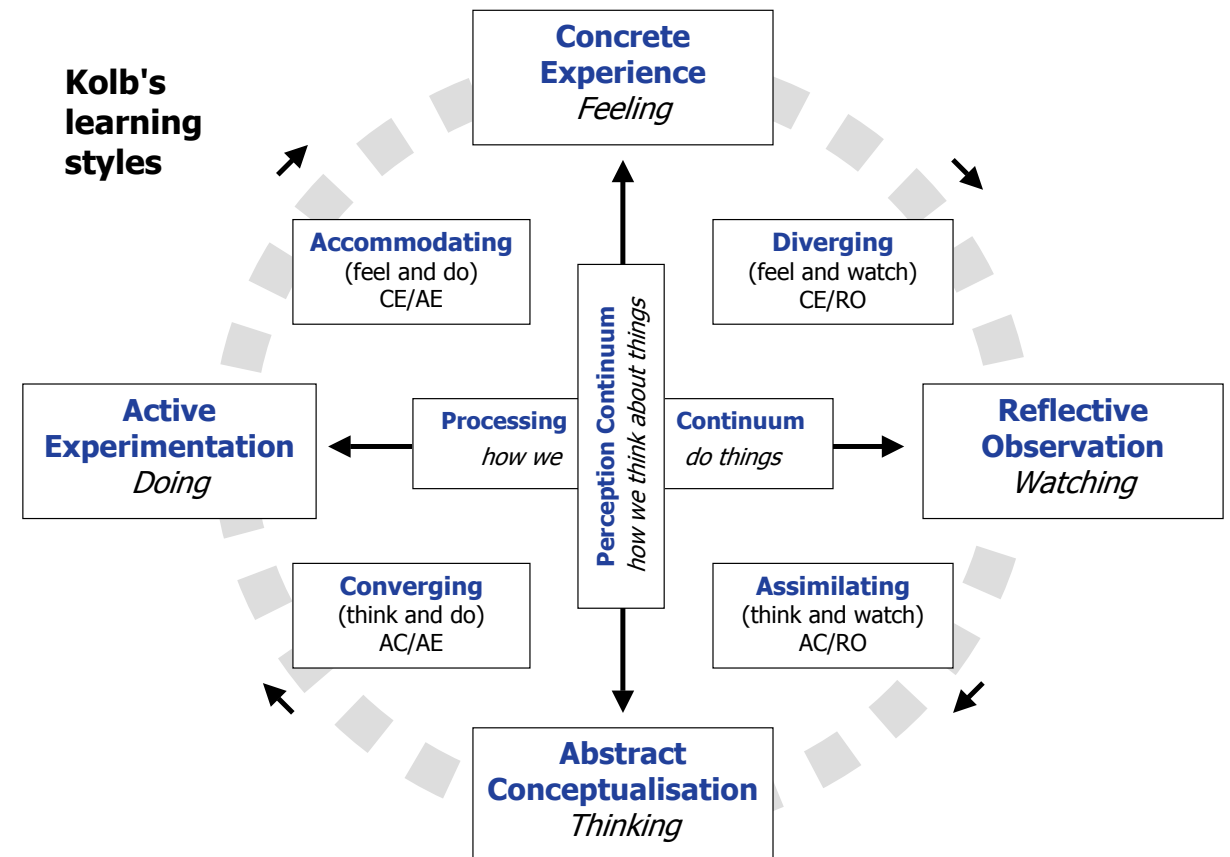And know the place for the first time

- T.S. Eliot

Kolb's learning styles

- **Concrete Experience** *Feeling*
- **Accommodating** (feel and do) CE/AE
- **Diverging** (feel and watch) CE/RO
- **Active Experimentation** *Doing*
- **Processing** *how we*
- **Perception Continuum** *how we think about things*
- **Continuum** *do things*
- **Reflective Observation** *Watching*
- **Converging** (think and do) AC/AE
- **Assimilating** (think and watch) AC/RO
- **Abstract Conceptualisation** *Thinking*

Figure 1.4

"Experience does not go on simply inside a person. It does go on there, for it influences the formation of attitudes of desire and purpose. But this is not the whole of the story. Every genuine experience has an active side which changes in some degree the objective conditions under which experiences are had. The difference between civilization and savagery, to take an example on a large scale, is found in the degree in which previous experiences have changed the objective conditions under which subsequent experiences take place. The existence of roads, of means of rapid movement and transportation, tools, implements, furniture, electric light and power, are illustrations. Destroy the external conditions of present civilized experience, and for a time our experience would relapse into that of barbaric peoples.

The word "interaction," which has just been used, expresses the second chief principle for interpreting an experience in its educational function and force. It assigns equal rights to both factors in experience-objective and internal conditions. Any normal experience is an interplay of these two sets of conditions. Taken together, or in their interaction, they form what we call a situation.

The statement that individuals live in a world means, in the concrete, that they live in a series of situations. And when it is said that they live in these situations, the meaning of the word "in" is different from its meaning when it is said that pennies are "in" a pocket or paint is "in" a can. It means, once more, that interaction is going on between an individual and objects and other persons. The conceptions of situation and of interaction are inseparable from each other. An experience is always what it is because of a transaction taking place between an individual and what, at the time, constitutes his environment, whether the latter consists of persons with whom he is talking about some topic or event, the subject talked about being also a part of the situation; or the toys with which he is playing; the book he is reading (in which his environing conditions at the time may be England or ancient Greece or an imaginary region); or the materials of an experiment he is performing. The environment, in other words, is whatever conditions interact with personal needs, desires, purposes, and capacities to create the experience which is had. Even when a person builds a castle in the air he is interacting with the objects which he constructs in fancy."

- **John Dewey, Experience and education - 1938**

Although a rather long excerpt from John Dewey's book "Experience and education," It sets the foundation in which experiential learning would be promoted. Even in 1938, John Dewey noticed the shift in how we learned and questioned if it was the right path to go down. Learning is gained from the knowledge of our past, that is why it is so important to have sense of grounding in how we teach.

The Ruin

Ruin-(noun) The physical destruction or disintegration or something or the state of disintegrating or being destroyed.

Origin - Ruere(Latin) – to fall

      Ruina (Latin)

      Ruine (old French)

      Ruin(collapse of a building)

The idea of ruin, begins with understanding when the word was the most popular. During the early 19th century to the 20th century the word "ruin" was used in many texts due the resurgence of interest in antiquity. This era was where archaeologists were unlocking the secrets to our past, searching for the remains of lost civilizations. George Simmel, a German author, and sociologist, observed this trend, and wrote a short but influential essay called "The Ruin."

What does it mean to be a "Ruin" in today's terms? In America, many of the ruins we have left over are from the industrialization of the nation. In Simmel's time, people were making trips to Rome, and Greece much like today, but this time period was the beginning our civilizations trying to preserve the ruins in a semi-decayed state. They didn't want to restore them, due to the fact, than the ruins are not ruins anymore, leaving no trace, of age and nature. "Architecture is the only art in which the great struggle between the will of the spirit and the necessity of nature issues into real peace, in which the soul in its upward striving and nature in its gravity are held in balance." (Simmel, 1959)

The ruins that we cherish are the ones that, that are not completely destroyed but the ones that are enough gone, we cannot know exactly what they were used for. It is a balance between nature and man-built structures that makes the perception of ruins appealing to most. It's the sense of wonderment, and nostalgia of a bygone era, that our culture has romanticized.

America's ruins are exactly that, they exist mostly of large industrial warehouse and manufacturing facilities that were the technological feat of their time. These buildings provided jobs, anchored neighborhoods, they became part of the culture of our cities. Sadly as time goes on, many of these buildings are left to decay because they could not keep up with technology. Also because the culture changed, companies, to keep up with demand of consumer products and to keep prices low, had to move to less developed countries to feed our own consumption.

America's ruins, unlike antiquities, have come and gone, we are in the presence of industrial charm, but vandalism and abandonment has left many beyond recognition. They represent an era in the American Culture, in which it seemed like anything can be done, in today's culture we long for that feeling. Once again, we are beginning to be fascinated by the ruins. We are romanticizing a bygone era, unlikely to come back to the American city, without drastic changes in how our society and culture operates. Now we are put in dilemma, what do we do with the existing ruins? Ruins have an almost mystic spell that they can cast upon people. There temptation is hard to deny, but that is their beauty, they are works of nature and man, coexisting together, forming something that can mesmerize its audience.

"Perhaps this is the reason for our general fascination with decay and decadence, a fascination which goes beyond what is merely negative and degrading. The rich and many-sided culture, the unlimited impressionability, and the understanding open to everything, which are characteristic of decadent epochs, do signify this coming together of all contradictory strivings. An equalizing justice connects the uninhibited unity of all things that grow apart and against one another with the decay of those men and works of men which now can only yield, but can no longer create and maintain their own forms out of their own strength."

– George Simmel

BALANCE
IDEA
CULTURE
EDUCATION
RUIN

Figure 1.5

The History of the Library

My thesis explores the typology of a rare books library that will support the experience of the past by giving precedence to the sharing of knowledge and ideas. This will occur within spaces that explore paradoxical relationships between past and present: where the ruin of the old is supported by new architectural renovations and where the foundations of the old design support the new program.

Stories and knowledge have been passed down from one generation to another, by shared experience, and human interaction. Because of Language, we were able to come together forming bonds with one another, our lives became interconnected. When civilizations began banding together forming the basis for ancient cities and governments, Language had to evolve to something more than just the spoken word.

Thus simple pictorial representations gave to a more sophisticated form, writing. In the Mesopotamian era, Clay tablets recorded the spoken language. In Egypt hieroglyphics told the stories of the gods, giving life to the lifeless, these stories, these writings, were alive in the everyday lives of the people.To be able to read, was a gift from the gods, It was the understanding that it was beyond just spoken language, it was the immortal connection to the past and metaphysical.

With the invention of the written language, libraries were built to store, and celebrate these writings. To better understand what the library was, we must look at the historic precedence. One the most famous libraries in ancient world, the Library of Alexandria.

The library of Alexandria was a major center of scholarship from its construction in the 3rd century BC until the Roman conquest of Egypt. With collections of works,

Summary

lecture halls, meeting rooms, and gardens, the library was part of a larger research institution called the Musaeum of Alexandria. The library was more than just the storage of shared knowledge, it provided protection and sense of dwelling for the written works that it contained. Some texts were celebrated as if the very gods wrote it themselves. The collective knowledge of such libraries was the heart of civilization. Not only did the written language dwell in the protection of the library, but it allowed the great minds of day, to come and incubate new ideas. This sharing and hatching of new ideas, allowed the library to be something much more, it was a place where the inventive spirit was celebrated and practiced.

Up until Renaissance much of how the library was viewed stayed within the understanding that the library was a living immortal collection of the past within the present. This changed due to the shifting of culture in the western world. From the understanding of experiential existences, to the scientific explanation of one's world.

In the early 20th century the library the civic pride of the city and tow. Many libraries built at this time were magnificent and beautiful examples of work of architecture, but much of this was just a facade. Long gone were the days that the Library was place of celebration and incubation of ideas, they became a means to an end. Martin Heidegger, A 20th century German philosopher, very much critiqued the modern era. A critic of modern day Technology, Heidegger suggested that the modern library lost its way, losing itself within the technology. In his essay "The age of the world picture," he suggests that

"The scholar Disappears. He is succeeded by the research who is engaged in research projects. These, rather than the cultivating of erudition, lend to his work its atmosphere of incisiveness. The research man no longer needs a library. Moreover, he is constantly on the move. He negotiates at meetings and collects information at congresses. He contracts for commissions with book publishers. The latter now determine along with him which books must be written."

Heidegger is criticizing the modern age's obsession with the new, the fresh, the incisive, at the potential loss of the possibility of "creative questioning and shaping out of the power of genuine reflection. The modern library as Heidegger suggests has failed to give life to the texts that are preserved, instead they seem to be treated as a "Standing Reserve." A Resource that is stored, until it is consumed later. Fluorescent lights replaced open windows. Closed rooms with white walls replaced the magnificent reading rooms that once were. The library became institutionalized, giving no imaginative qualities to the building itself, leaving behind the ruins of what were once the centers for learning, knowledge, and imagination.

The ruins that we cherish are the ones that are not completely destroyed but the ones that are enough gone, we cannot know exactly what they were used for. It is a balance between nature and man-built structures that makes the perception of ruins appealing. It's the sense of wonderment, and nostalgia of a bygone era, that our culture has romanticized. As Georg Simmel states, "Architecture is the only art in which the great struggle between the will of the spirit and the necessity of nature issues into real peace." (Simmel, 1959)

Through "Ruin," we can make a much stronger connection to the site. The brewery complex was once the identity of the neighborhood. The modern ruins that

Summary

are on the site, ground the site to the past. Allowing the past to be experienced today in the present. Through Heidegger we can see that the modern understanding of library needs to transition from the view of a "Standing reserve," to an architectural celebration of knowledge and creativity. To do this we must be anchored to the past of the site, giving meaning to the program in which the library will be built upon.

Friedrich Nietzsche was German philologist and philosopher who argued the importance of understanding the past, and relate to the present. He understood that one can view the past, through three different lenses, "Monumental, Antiquarian, and Critical." Nietzsche states that an encounter with the past is necessary, "every man and every nation requires, in accordance its goals, energies and needs a certain kind of knowledge of the past." We must look at the past with a critical approach to history. Understanding history critically means that the past is not what it seems to be in the present. The past has to be viewed through the aberrations of those who have lived in it. The monumental and antiquarian views of the past pick and choose, on which areas they focus.

Monumental tries to replicate, creating its own understanding foreign to the actual past. While antiquarian preserves the past, not allowing the present to grow. The critical understanding of the past, is a correction to these views. It suggests that the past is a living idea within us, and that it is necessary to forget aspects of our past that are cruel to fully move to the future.

A critical history of the site then means, that we must understand the site for what it was, and what it is. The brewery was the identity of the neighborhood, it gave it a sense of place. It provided jobs for the new immigrants that flocked to St. Paul for the promise of prosperity. Its location on the edge of downtown St. Paul was ideal. Close to the rail yards for product transportation, and close to the immigrant population that worked there. Today however, the palimpsest of the city has changed as a product of modernity and suburbanization. In the Ruin of the site, we can see the promise of what can come from it.

Through the site and historical precedence the program of the library can be formed. Books are the contextualization of the author, a library must be something more than viewed as a, "standing reserve" for knowledge. It should be viewed as living embodiment of knowledge, a connection to the past through the lived experiences through the books themselves. The ruins on the site will ground the function of the program, giving precedent to the sharing of knowledge and ideas. The library will contain rare books and manuscripts, but to preserve their knowledge, the programs asks for a sophisticated system of technology. A balance between the new and old has to occur to preserve our past, and move our history forward. Like the libraries of old, the site will be incorporated with the built environment, and the ruins of the old brewery will be on display and preserved. The library is a place where life is celebrated, through the works of authors, and the readers. The spaces within the library have to get rid of the notation of, "the standing reserve." The scholars will come back to the library liberating the gained knowledge of the past for the present, setting the grounds for the future

Project
Justification

Ruin, education, culture, idea, and balance form the foundation and pillars on which the site, program, and typology are influenced. Through the extensive research that was conducted, the conclusions that have been made based off of idea's developed from great minds and scientists alike. The site will be a host to an rare books library, that will inform the program and spaces of the building through the foundation and pillars that have been stated. To incubate means, "To hatch." In architecture, we are asked to design, similar to the definition of incubate, "to hatch," this thesis, gives me the opportunity to present the craft, and theoretical skills that I have gained through the experiences I have lived, developing into a full comprehensive project. Through the building and the theoretical research that was conducted, I believe that a rare books library, will not only impact the neighborhood in which it is built, but the whole city of St. Paul, Minnesota and beyond. Through the ruin, education, culture, idea, and balance of the building, we will hatch new and innovative ways of thinking, grounded in the traditions of the past, and through the experiences we perceive in this beautiful world. Architecture will be the medium in which we will explore these possibilities.

Hamburg, Germany

Toronto, Canada

Miami, Florida

Figure 2.1

Sustainability
From Germany

With a host of green features, the Univlever Headquarters is wonderful example of sustainable intergration, such a double envelope. The transparency of the structure expresses the openess to the public, allowing people to explore the public spaces within the atrium. The clever layout, achieves natural daylighting allowing office spaces to be completely open and organic.

Hamburg Germany, a city of 1.8 million people, is known for its rich industrial past. Situated along the Elbe river, a tributary of the north sea. Boasting one the busiest ports in Europe, Hamburg diverse city. Although much of the old port infrastructure is obsolete, so now, large swathes of industrial areas, are being opened to new redevelopment. One such area, "Hafencity," also known as Harbor City, began construction in 2003, calling for housing, shops, restaurants, cultural venues, and offices. Herzog & de Meuron, and Rem Koolhaas have already staked their architectural expertise upon this district, billed as Europe's largest inner-city redevelopment.

When it came to choosing a site, Unilever was drawn to the pioneering spirit of HafenCity, a new district built upon old industrial sites along the river. And the site is a slice of prime riverside real estate, on HafenCity's southern edge. "It was definitely a challenging and exciting site," says Stefan Behnisch, Hon. AIA, founding partner at Behnisch Architekten. "It's very prominent and exposed." The design team took its inspiration from the water, creating a building with a low profile, but yet its subsistent shape and white exterior resemble a hull of a ship.

>project   Unilever Headquarters
>location   Hamburg, Germany

>architect   Behnisch Architekten
>completed   September 2009

>gross area   409,000 square feet

Figure 2.2

Figure 2.3
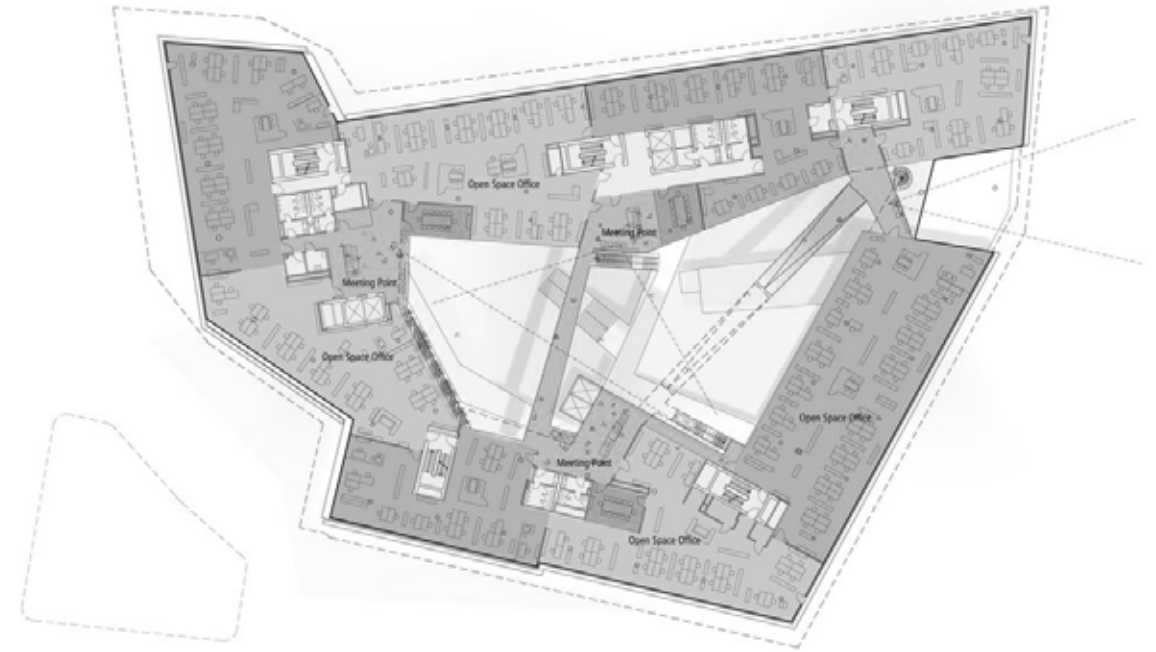
Figure 2.4

Figure 2.5

The program proposed that a certain amount of the building be open and explorable to the public, which inspired a dynamic layout not often found in office buildings. Visitors enter a light-filled atrium, criss-crossed by walkways and ringed by interior facades with operable windows. To create a connection to the public, the ground floor features an employee cafeteria and test kitchen. Also the public has access to such amenities like a cafe, small spa, and a grocery store stocked with Unilever products. Outside, a patio merges with stairs leading down to a riverside promenade, during a visit this promenade was filled with workers and the public interaction with each other, and the wonderful redeveloped water front.

At the center of the atrium is a glass elevator, in addition to a stairway that leads to Unilever's reception area on the second floor. The upper levels are home to open-plan offices, meeting rooms, and breakout areas that act as communal spaces that overlook the atrium. These "communication" areas, are utilized informal meeting spaces, furnished with tables and even kitchenettes. It allows for the employees to conduct business and chat with one another about ideas in a more laid back environment.

Developing a pleasant work atmosphere was integral to the Unilever corporation. Daylighting was a large concern, so the architects worked to develop a solution to achieve ample daylighting. In the end, they conceived a lower-cost double skin that gives the building its unique character. For the inner layer, the architects used a high-performance glass facade system with operable windows

Ground Floor

Public Space Ground

Amenities (yellow) and Offices (gray)

Third Floor

Breakout Spaces

Open Atrium to Floors below

Building Form

River Promenade

Skin Morphology

Figure 2.6

Figure 2.7

Waterfront

Elevation

Figure 2.8

Figure 2.9

Highest concentration of gatherings
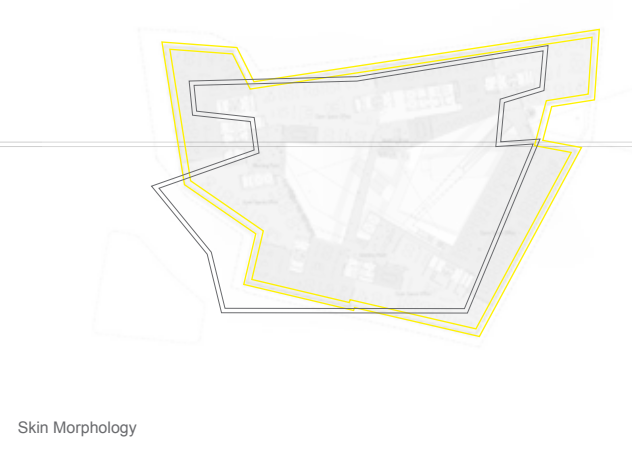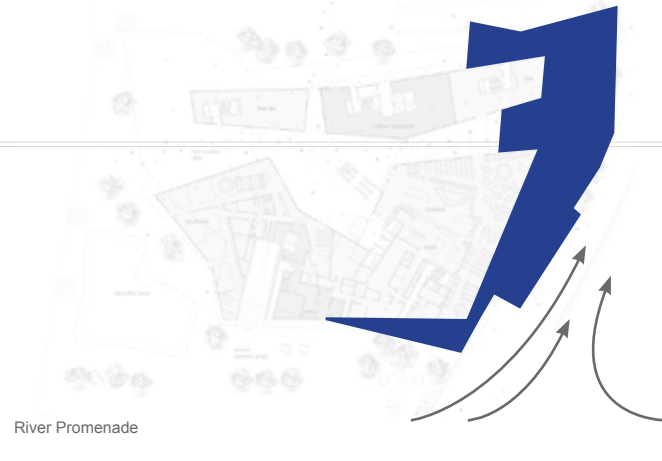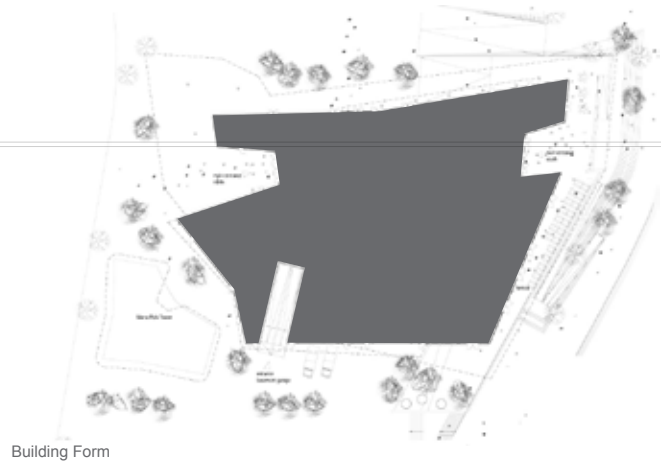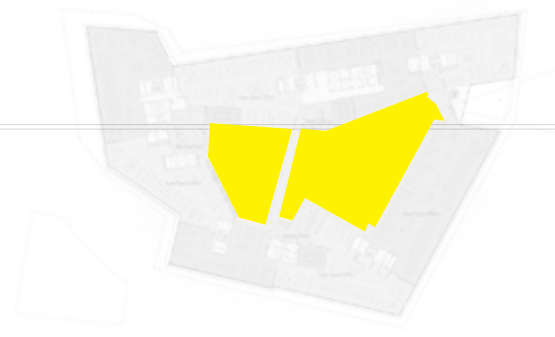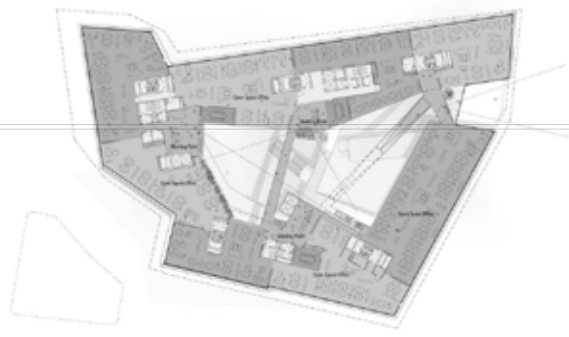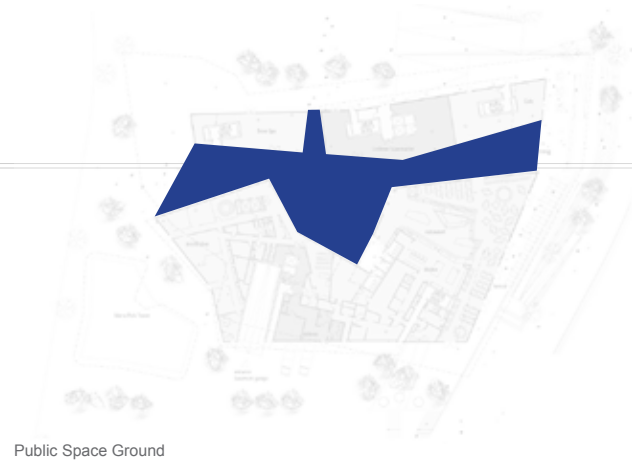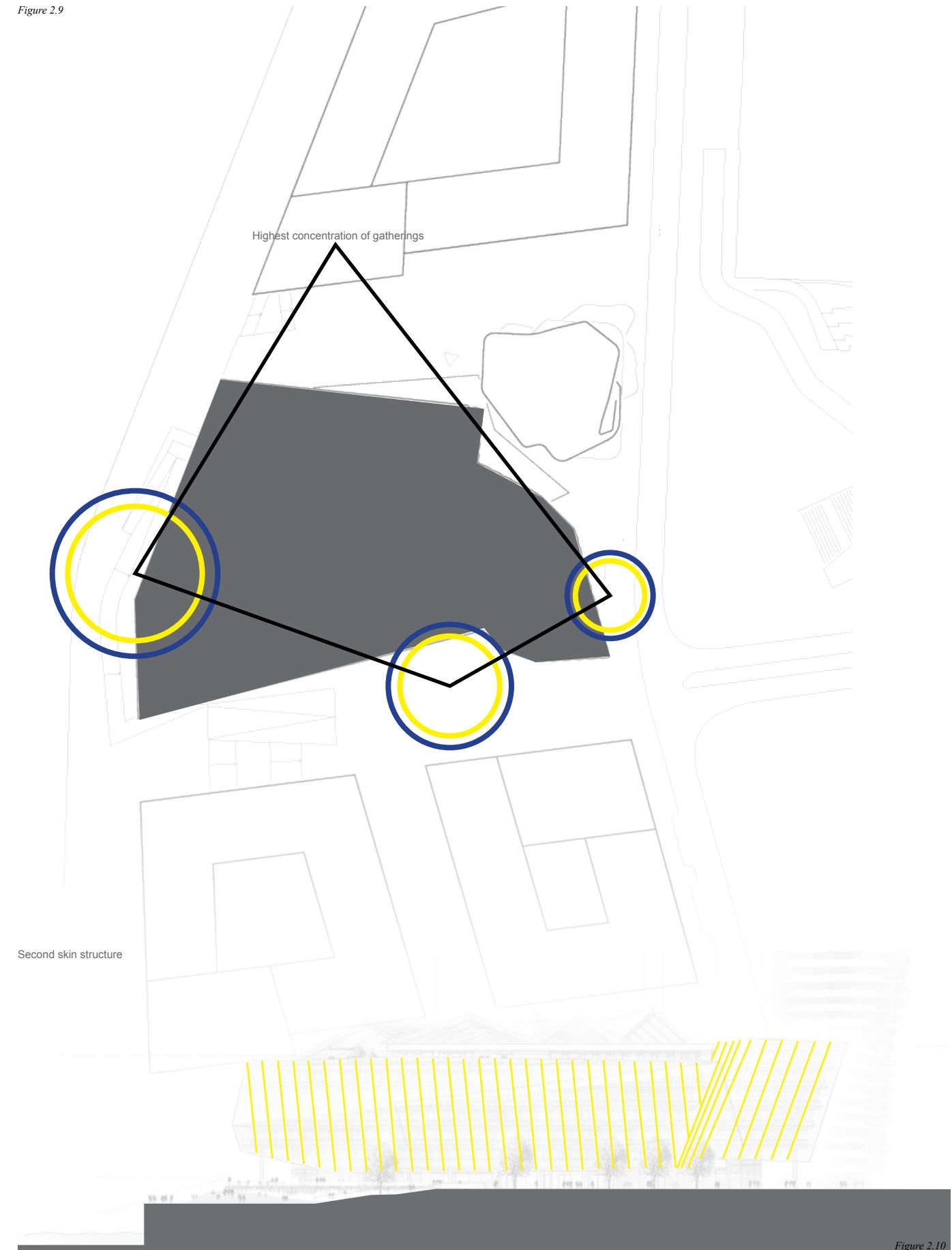
Second skin structure

Figure 2.10
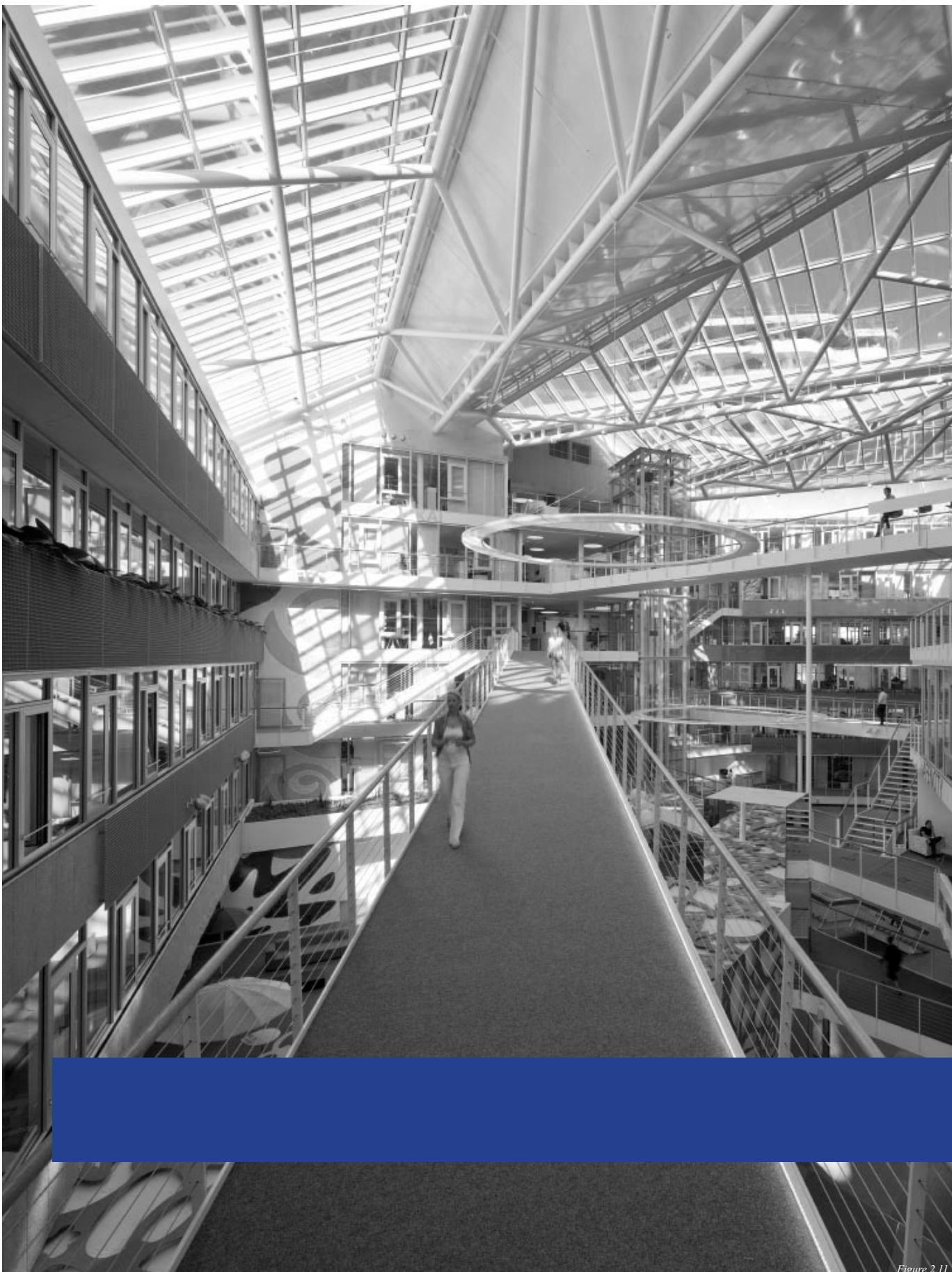
Figure 2.11

With quite a complex building measures were taken to reduce heat gain. Exterior Venetian aluminum blinds were placed on all elevations but the north, where direct sunlight is minimal. To control the blinds, a rooftop device was installed to track the sun. By having an automated system it becomes more effecient.

Due to strong winds in the area—up to 62 miles per hour—the blinds required shielding. So it was decided to wrap the facades in a clear foil made of ethylene tetrafluoroethylene (ETFE). This protective membrane sits 1 to 2 meters from the inner facade and is supported by a steel and aluminum frame. Because the gap between the two membranes is open on the top and bottom, fresh air is able to flow into the cavity and through the operable windows.

There is no overhead lighting in the offices, which allowed for the installation of a radiant cooling system in the exposed reinforced-concrete ceilings. Raised floors in the offices accommodate two vital functions: mitigating sound transmission and housing the ventilation system In the atrium, the radiant cooling system was installed in the floor slabs. Other green strategies that are implemented include waterless urinals, a graywater system, and a green roof, which also acts as secondary outdoor space.

All of these elements combine to form a design that succeeds on multiple levels, creating a unique and satisfactory work environment, allowing for public viewing and interaction, and reducing energy use. Unilever's Hamburg headquarters proves that office buildings can truly be multipurpose, shedding its skin of the cubicle workspace. As HafenCity progress's this building will serve as a benchmark, for others to follow and admire.

Figure 2.12

ReThinking Learning
in CANADA

Located in the heart of downtown Toronto on the corner of Yonge and Gould streets, the new Ryerson University Student Learning Center (SLC) is under construction. Ryerson University is one of the premiere universities the Toronto Metro area. By utilizing the urban environment, the "SLC" will promote a program that redefines how we use the spaces in which we learn.

Toronto Canada, is bustling world city based on the shores of Lake Ontario. It is located on one of the major trade routes on the Great Lakes of North America. Beacause of this Toronto has risen as the economic powerhouse of Canada. Trade and commerce fuel the economy, and with some of largest universities in Canada, Toronto has a vibrant culture. Compared to New York by many Canadians, Toronto in recent years has seen a building boom in the heart of downtown. Similar to Hamburg Germany, Toronto is renevisioning itself for the future, and Ryerson University is on the fore front of this vision with the SLC.

The site, located on the corner of Yonge and Gould streets, is considered on the most vibrant, people-freindly intersections in all of Toronto. The site was chosen to connect the University to commons of downtown. This will give the Ryerson community an outstanding environment in which it can promote itslef to the public.

Figure 2.13

>project   Ryerson University, Student Center
>location   341 Yonge Street Toronto, Canda

>architect   Snohetta & Zeidler Partnership Architects
>completed   Under construction, January 2015

>gross area   155,465 Square Feet

The SLC will be a state-of-the art learning facility, providing students and faculty with a variety of spaces for new forms of learning. Each floor has a certain program that is unique to that floor. This creates a custom floorplan and each indivudal floor. Each floor has a specific purpose and is designed for that purpose, creating heirachy in the structure. For example floor 7 is geared towards the Graduate students. Thif floor contains private rooms which can be used for studying and small meetings.

Because each floor of the building is unique, a great deal of planning and preperation was needed. Attention to detail was the reason why a project of this calibur is happening. The open areas that are accessible to students, act as informal gathering places. People learn in many different ways, some need quiet, others need areas to participate in hands on activies, while some just need a social atmosphere to throw ideas around with others. The SLC has the abiliry to provide all of these options.

The Student Learning Centre, "Will provide bright, open, technologically rich, barrier-free spaces for individual and collaborative study that will accommodate our students' different learning styles and our faculties' different teaching practices."

(Alan Shepard, Provost, Ryerson University)

Student Capacity: approx. 2300

Student Space for individual or group study and collaboration (eg. carrels, tables, soft seating areas, group study rooms): Multiple floors

Classrooms and video conferencing enabled seminar rooms: Floor 5

Cafe: Lobby

Bridge to Library and Library admin area: Floor 2

DMZ and Digital Media Experience Suite: Floor 3

Student Learning Services (Access, Math, Writing, Test Centres and English Language and Learning Success Services): Floor 4

Graduate Student study area: Floor 7

Retail Space: Ground and lower level floors

Budget: $112 million

Funding: Capital Support Program (Provincial Funding): $45 million Fundraising: $22 million Internal Sources: $45 million

Figure 2.14

Second floor bridge to library
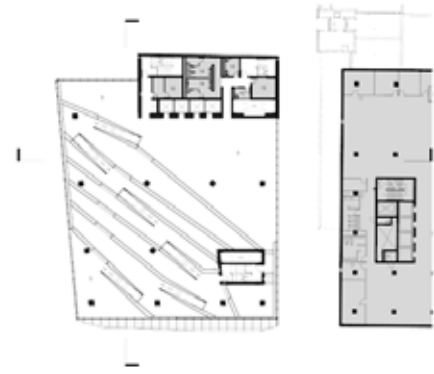
Sixth floor open collaboration space
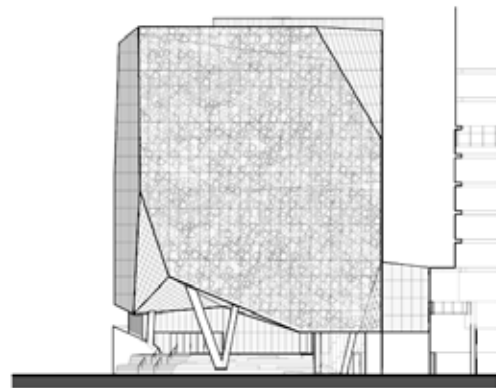
Building facade

Vertical structural members
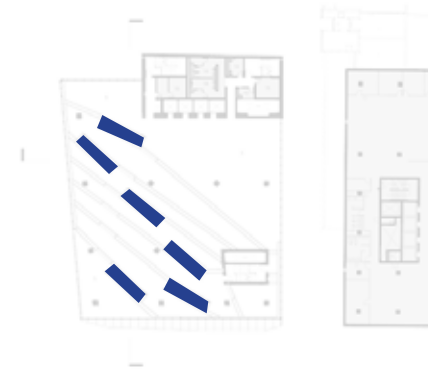
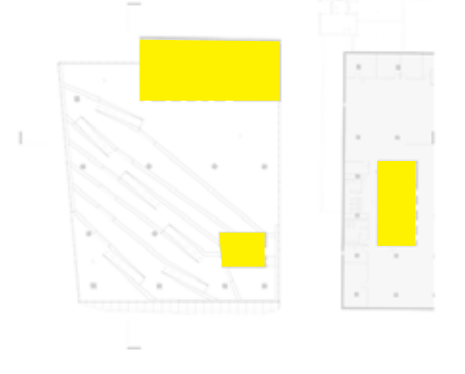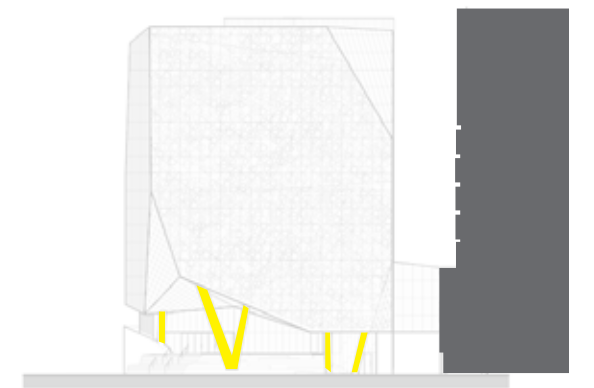
Ramp circulation
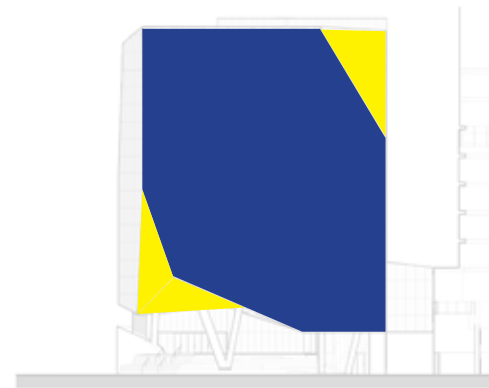
Dual skin overlay

Dual skin study

Shear core location

Vertical structural members

Figure 2.15

Figure 2.16

As the image above shows, the public space is anything but ordinary. By using a system of Ramps and modular furniture, a studying area is created. The wonderful thing about having such an open space, is that it can be configured for the use of students. An informal atmosphere promotes creaticvitiy, and exploration beyond just the norm. This idea, can lead to a new way educating people, getting rid of the hated whiteboard and desks. Because of its modularity it can also be used for large events such as Gala's. By incorporating ramps into the backbone of the design, Snoetta develops a hiearchy of movement throughout the space.

"**The notion that learning is a static**, solitary activity is outmoded," said, Craig Dykers, principal architect and co-founder, Snøhetta. "While it remains important to find places of introspection, it is also vitally important to create places where people can more actively seek knowledge, where social connections can intertwine and where all forms of activity, quiet and loud, can find a suitable home. The design of the Student Learning Centre is foremost about providing these new and diverse functions. "The Student Learning Centre will be a very special place where ideas are shaped and dreams come true. It will be a destination of choice for undergraduate and graduate students alike." *(Minner, Kelly 2011)*

Strength within form
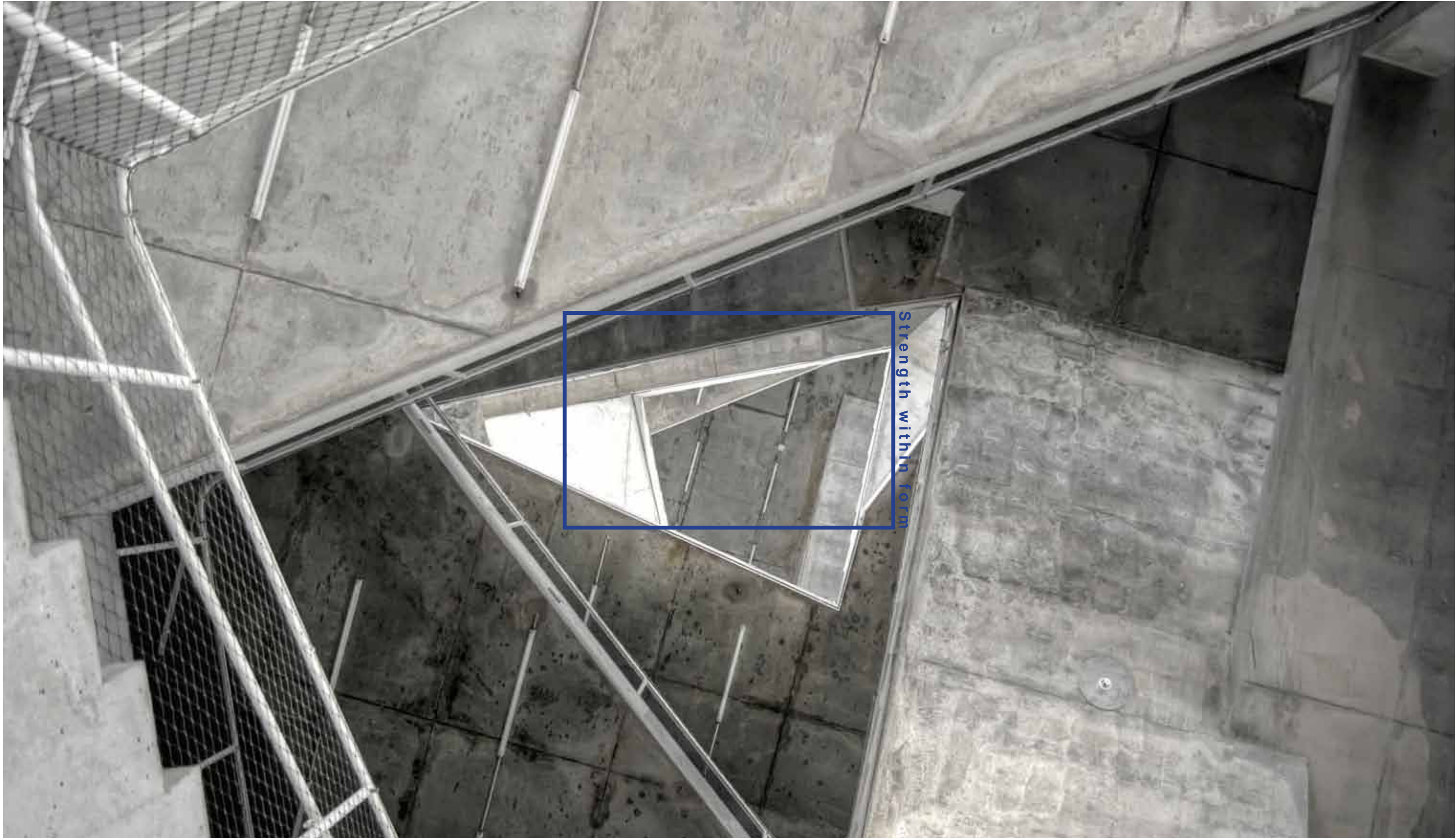
Figure 2.17

Figure 2.18

Structural

EXPRESSION

>project   1111 Lincoln Road
>location   Miami, Florida

>architect   Herzpg & de Meuron
>completed   2010

Building Components:

Car Park Structure, Existing Building, Suntrust Building, Promenade and Public Plaza

Building Data Car Park Structure:

Site Area: 2,510sqm / 27,000sqft

Building Footprint: 2,125sqm / 26,486sqft

Building Dimensions: Length 51.5m / 169ft, Width 49.5m / 162ft, Height 37.8m / 124ft

Gross Floor Area: 22,575sqm / 243,000sqft

Number of levels: 7 levels, 1 mezzanine

Program:

- Car Park: 300-space multilevel parking facility
- Retail Concept Stores: Car park structure (ground floor and level 5): Total Area: 3,716sqm / 40,000sqft.

- Office Space:
Existing building: Total Area: 10,220sqm / 110,000sqft.
Suntrust building: Total Area: 1,115sqm / 12,000sqft

- Residencies:
Suntrust building: 4 apartments (approx. 220sqm / 2,400sqft per unit)
Car park structure: 1 roof house and garden (approx. 490sqm / 5,300sqft)

- Restaurants

- Event Space: Level 7: 2,360sqm / 25,400sqft including circulation

- Promenade and Public Plaza: Mature cypress and oak trees, black and white pavement pattern composed of pedra portugesa stones

- Glass pavilion by artist Dan Graham

Figure 2.19

Figure 2.20

Figure 2.21

Figure 2.23

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Architecture is a language that can expressed through many modes of exploration. When talking about architecture, architects speak of the success of architectural design through terms of context. Sadly, many forget what it truly means to build around the context, it goes beyond adjacent buildings, it dives into society, and culture. Herzog & de Meuron, through 1111 Lincoln Road, vividly show how context can create a strong design. They recognize these contexts through a program developed around Lincoln Road parking garage. This project as they realized had many complex contextual relationships, that could only become clear by spending time at the site, and experiencing what interacts with it.

When designing within a historic context a designer is faced with dilemma. Should they replicate the historic design, or should the structure capture the "spirit of the times?" 1111 Lincoln Road faced this problem due to South Beach's Art Deco Historic District. 1111 stands out beyond the rest of buildings, but yet it has a demeanor about it, that suggests its presence. By being different, 1111 shines above the rest, but this opposite attraction becomes the energy that attracts us to such spaces.

"**The sharp angles** of the concrete structure contrast with the streamlined forms of the expensive parked automobiles and neighboring Art Deco structures. The historic forms of South Beach are solid masses that have been carved away, while the parking structure is a delicate exoskeleton, allowing light and air to penetrate deep into its core. While the neighboring Art Deco structures are concerned with surface, Herzog & de Meuron create a structure that is composed of line and edge. The poured in place concrete forms are left raw and exposed to the elements, in contrast to the brightly painted buildings found on every block." *(Robert Wennet, critiquethis.us)*
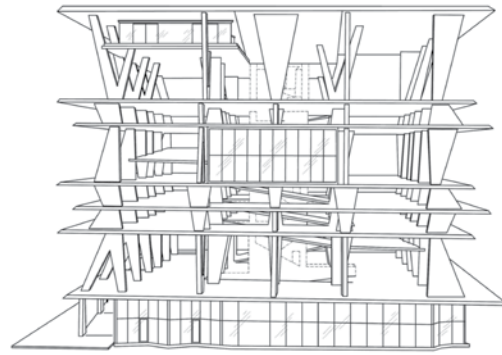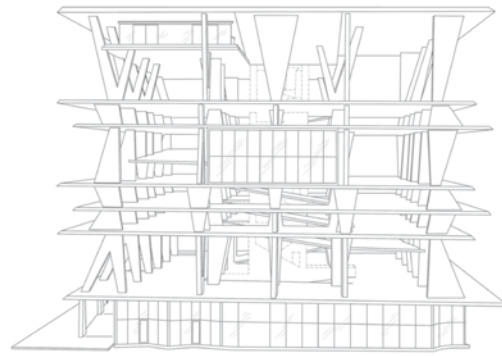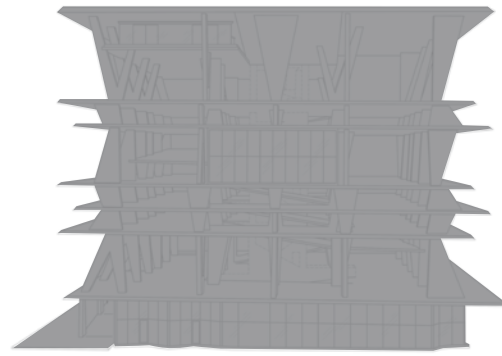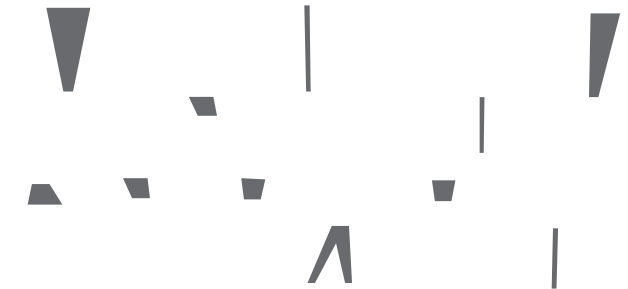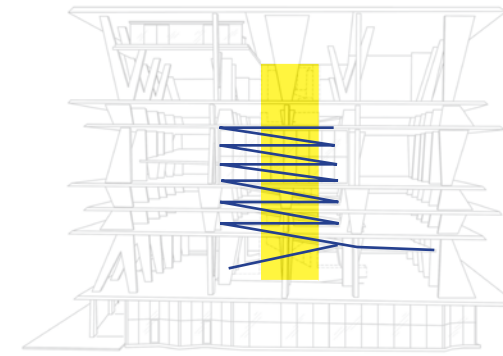
Building ISO
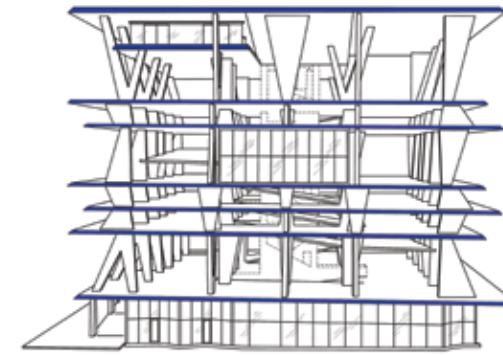
Building ISO

Form

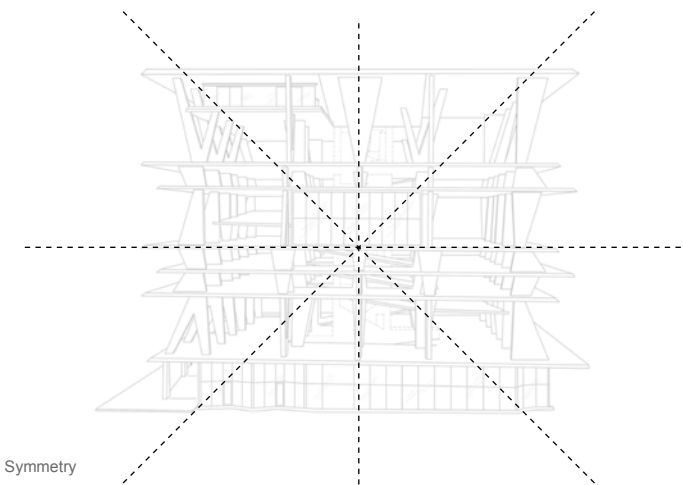Horizontal structure
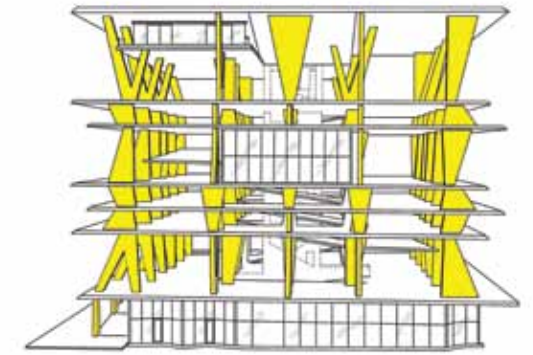
Vertical structure

Structural members

Circulation

Symmetry

Figure 2.22

The typological research that was conducted, provides insight into three unique typologies. At first glance, these case studies do not seem related. Each of them have aspects of the proposed typology of the thesis project. By understanding these aspects to the best of my ability, I hope to apply the strengths of each study into the thesis project. I want to begin understanding how different forms and functions can create a balance in the typologies that are formed. The areas of focus in the case studies include sustainability, adaptive-reuse, structural expression, innovative learning environments, and transparency of structure. All of these will form the poetics that will support the emphasis of the thesis project.

The Unilever headquarters in Hamburg, Germany was focused toward better understanding sustainable strategies that can be utilized in the built environment. When I was in Europe I had the privilege of discovering this building by accident during one our tours of the city. I was impressed by how much light the central atrium drew in.
This transparency from inside to out suggests the balancing between nature and technology, by using sustainable strategies and open spaces.

The SLC at Ryerson University, was wonderful example of how centers for learning can be re imagined for a more interactive way of experiencing education. Education is an important aspect of the typology,and the SLC is a building that specializes in modular learning environments. It focuses on informal gathering areas, from which students and faculty can gather around and discuss about new and innovative ideas. This flexibility of spaces produces a program that has the potential to influence incubator aspect of thesis project.

SUMMARY

1111 Lincoln Road is an example of a building typology that is do different from its surrounding context, however it captures the ideal's of the surrounding area in way that is expressive and new. The mixed-use parking garage allows itself to be shown as sculptural piece of art. It develops its poetics from the structure. The expressiveness of the concrete pillars forming the garage, engages people to interact with materiality of the building. Again, this is not directly related to idea of the thesis project, but the overall form of the building is in a balancing act within its physical context.

All of the building programs that were analyzed show how successful forms and ideas can be extracted and developed to better understand the balance of technology and nature with emphasis on the context in which they exist. This balance is important to develop a wholistic approach to the design solution. By emphasizing education, innovation, sustainability, and expressiveness, these case studies have provided insight and direction from where my proposed typology will go.

M A J O R   P R O J E C T   E L E M E N T S
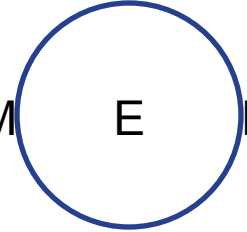
Private Spaces

Public Spaces

Offices

Private Labs

Permiable Exterior and Interior

Public and Community Areas

Programmable Spaces

Book Display

Library Exhibit

Small Auditorium

Modular Classrooms

Breakout Areas

Restoration Labs

PRIVATE SPACES

Livng quarters
- Private living spaces, where young professionals, families, and whomever qualifies, can choose to live

Private Labs
- Secure workspaces in which employees and volunteers can work

Offices
- Private areas in which employees can work without being interuppted by public interaction

PUBLIC

Permiable Exterior and Interior
- Exterior and Interior aspects of the design seamlessly transition between the two framing nature and technology

Public Community Areas
- Gathering places in which the public can interact with one another sharing ideas and inspirations

Technology Labs
- Public labs that contain the state-of-the-art learning tools for the users to interact with.

Nodal Circulation
- Promotes informal gathering areas that people can move around in without feeling the need to keep on walking.

Interactive Exterior Nodes
- Similar to breakout areas, but exterior nodes create protected environments outside in which users can congregate and interact with one another.

Breakout Areas
- Informal areas in which students, people and staff can talk and share ideas, without feeling stiffened by formalities.

Small Auditorium
- Interior space that can be utilized for larger lectures, presentations, and meetings

Modular Classrooms
- Modularity allows for adaptable learning environments. People respond best to things when it reflects the personalities of the interactor's. Modular classrooms allow for this opportunity to be utilized. The learning environment moves withe the students. Organization will be important to develop this new form of classrooms. Further analysis is needed to program the classrooms to the students.

Exterior Ampitheater
- A major exterior that ties technology and nature together through design influences. Events and other activities can take place to the publics satisfaction

Public Transit Integration
- The proposed site has access to public transit such as bus routes, as of now. In the future however, street car lines will extend to the site, so transit integration will be of the utmost importance in the buildings typology. In a sense a communal hub can be built around what is there.

Programmable Spaces
- Programmable spaces allows people to interpret the aspects of the built environment and modify them to the users specific need. This can be done by using modular, and interactive design influences. People naturally want to interact with their environment, the programmable spaces are then reactive to the response of the user. This creates a learning environment that is ever adaptable to the user, individualizing the common methods of learning.

User & Client Description

The design is proposed to be a collaboration between multiply parties, such as public and private owners. Because of this, the client of the project will be various users.

The primary public owners will be the City of St. Paul and the Metropolitan council. They will have influence in different aspects of the design throughout the process. However, collaboration between the private developers and the City will be important when developing a new typology involving education, technology, and Nature.

Public and private collaboration can be achieved through open lines of communication. The public community promotes the idea of the site, since the city of St. Paul owns the land. But the developers and private funds are needed to see the typology come into fruition. This democratic process will provide the tools for the community to become involved with the design process, giving them a voice on how and what will be utilized to achieve the set goals.

The usage of the site not only depends on the client(s) decisions, but is mostly dependent on the users. The users would be the technology staff, the educational supervisors, residents in staff, entrepreneurs, students, and community members. As one can see the site will be interacting with many different groups of people, but yet the idea is that there will be common goal between all groups. The thirst to learn. Learning is the over arching connection that these users have in common. That is why the new typology interacts with many aspects of the learning process. By integrating learning into the building, it will reflect the groups, developing a sense of community.

A sense of community will be built around the users and client(s). The program will have to learn to adapt to these aspects. The community will develop around these ideals. As stated earlier, this collaboration will give the neighborhood of "Railroad Island, and Swede Hollow," something to be proud of.

Site

Figure 3.1
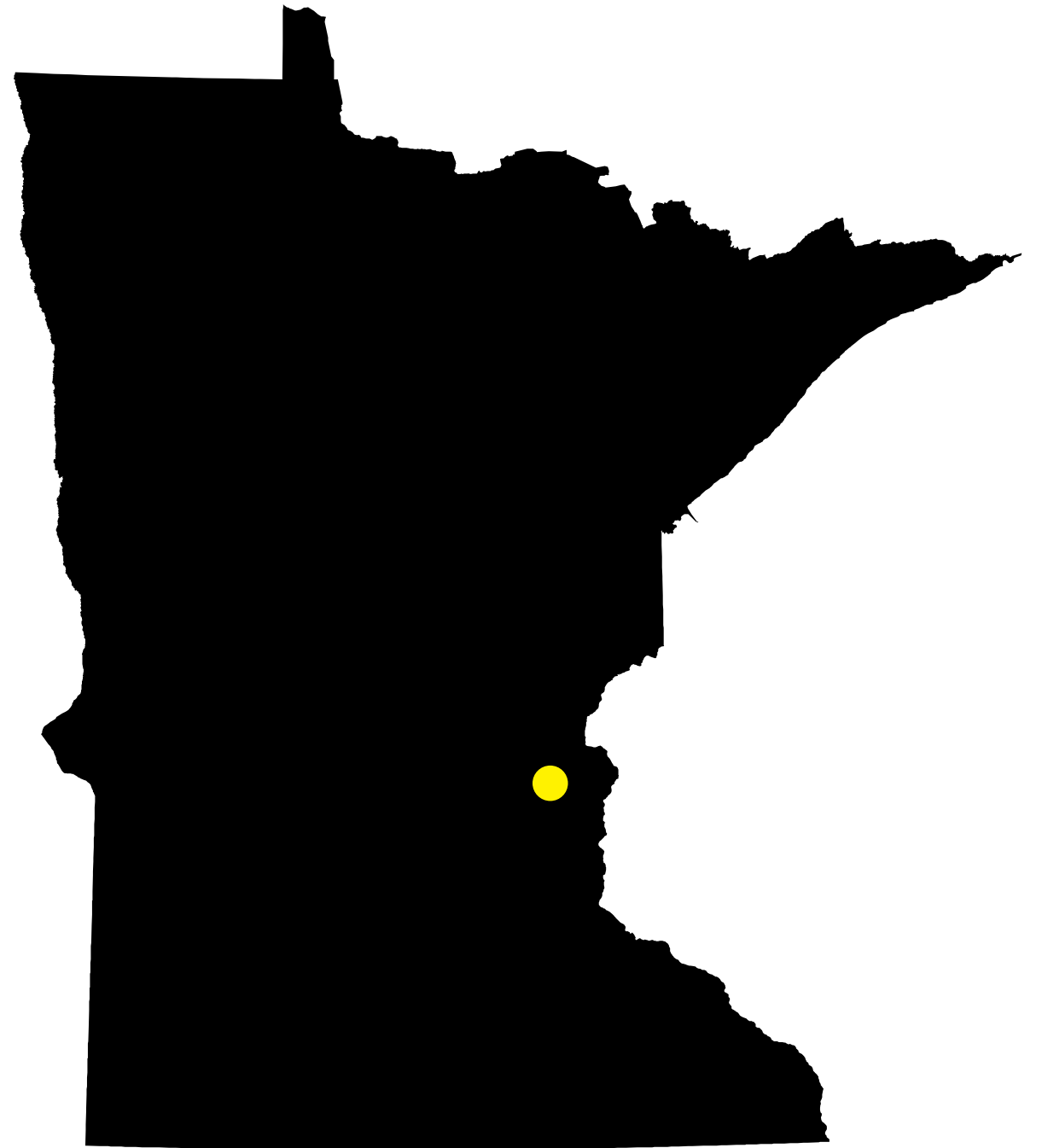
Figure 3.2

Figure 3.3

>location   St. Paul, Minnesota
>address   683 Minnehaha Ave East, St. Paul, Minnesota

St. Paul, the capitol of the wonderful state of Minnesota. Once looked upon as a booming metro area, the St. Paul city proper saw a mass exodus of industry and residents, migrating to greener pastures, the Suburbs. However, now the city is seeing new growth, upon which a strong diverse economy has been built. Many industrial sites are now being utilized for new housing projects and such, renewing interest in the areas just out of the downtown core. The site that has been chosen, is in this area. This analysis will dive in more depth of how a site can be of the utmost importance in the direction of the architectural project.

Figure 3.4

Figure 3.5

Figure 3.6

Figure 3.7

683 Minnehaha Ave East,
St. Paul, Minnesota

Minnehaha Ave East

Payne Ave

Direction of Downtown St. Paul

683 Minnehaha Ave East, was once the location of the power station for the old "Hamm's Brewery complex," which remnants of the brewery still exist. Settled in a mostly residential area, the Brewery complex was once the bearing heart of the community. Now, the vacant site is ridden with bullet holes, and graffiti. But due to it's proximity to downtown, developers have shown interest in developing these brown field sites, into mixed development. The neighborhood has had a rough past, but with new interest in the downtown, it is an up and coming area of St Paul, with wonderful connections to the built and natural environment.

N

Figure 3.8

Site Narrative

There are many ways in which you can approach the site located in the old Hamm's brewery complex adjacent to downtown St. Paul. You can enter the site off of one of the many accessible bike trails that lead to it through Swede Hollow Park. From the bike trails, you are welcomed by the decaying Richardsonian Romanesque remnants of the original brewery dating back to the late 1800's. Swede Hollow is a ravine that cuts the land adjacent to the site, creating a seemingly wild forest around while just above, exists the industry and bustle of the city. From the Bike path you ride under the bridge carrying the traffic Minnehaha Avenue, and on the right side is the site of the old powerhouse, which is part of the site for the educational incubator. To get access into the powerhouse, one has to break through a plywood barrier, covering a broken window opening into the array of rusted mechanical equipment. (Sadly I did not have my camera this day) Graffiti, dirt, and remnants of squatters, cover nearly every open wall, where most people see dirt grime and sadness… Others see the potential of the space; the ruins of what remains are astounding and tell the history of the place. Since access from the bike path is not at street level, stairs lead upwards, rusty chains, plywood, and metal bars block the path.

Approaching from Minnehaha Ave, you are welcomed to the structures that remain left of the brewery complex, many of structures are now gone, but the urban legend is that many of the maintenance tunnels and prohibition era storage cells lie intact, under cracked asphalt that was laid carelessly on top. From concrete to brick, to more concrete, it is a manmade jungle, void of any living things, until you reach the edge of the property where vines and bushes over grow the chain-link fences. Any of the buildings that are on the property line, seem to have at least one side covered with vegetation. Nature wants to grow within the perimeter, but any open areas on the site is covered with asphalt. The site is meant to host a new industrial landlord, but many of the neighbors want something that goes beyond just jobs, they want the area to have an identity again, a culture. Minnehaha Avenue cuts through brewery complex, it also acts as the property boundary for the site. On the south side of Minnehaha Avenue is the towering brewery complex standing six stories. This complex houses the urban organics farm, and is also home Flat earth brewing company. These two businesses brings together the neighborhood locals, and the traveling adventurer together under one roof. However, with this complex hugging the site boundary, there is a lack of southern light. But if one could climb to the roof of the old PowerStation, they would be welcomed with scenic view looking towards the Mississippi and downtown St. Paul, and from what I can tell, maybe one of the best views looking into the city.

The unique terrain of the bluff on which the site sits, has potential to create an oasis within the city. The mature trees surrounding the ravine of Swede Hollow Park envelope you, protecting from the hustle and bustle of the city.

During the day, the site seems safe, only the run of the mill graffiti and broken windows one would assume with a building being abandoned for 17 years. At night, however, the darkness presses into the site, creating an area that is unsafe. It is not well lit, and recent gang activity in the area, limits the nighttime exposure of the area.

Safety is an issue that needs to be addressed on the site, but that will come in time, when the neighborhood is able heal the wounds of abandonment that it has felt for many years. Surrounding the area, old buildings are being renovated, new storefronts are becoming alive once again. A school down the road, once considered unsafe, is now a magnet school for all of St. Paul. The Swede Hollow Park, is being revamped, and cleaned. Hope is revealing itself once again, but if the Brewery complex does not sustain itself, it will decay, leaving behind neighborhood with no identity.

Figure 3.9

The comparison of the two map show's the building density that surrounds the site. For being in an urban area, the density has suffered from abandonment and crime, leading to holes in the urban context.
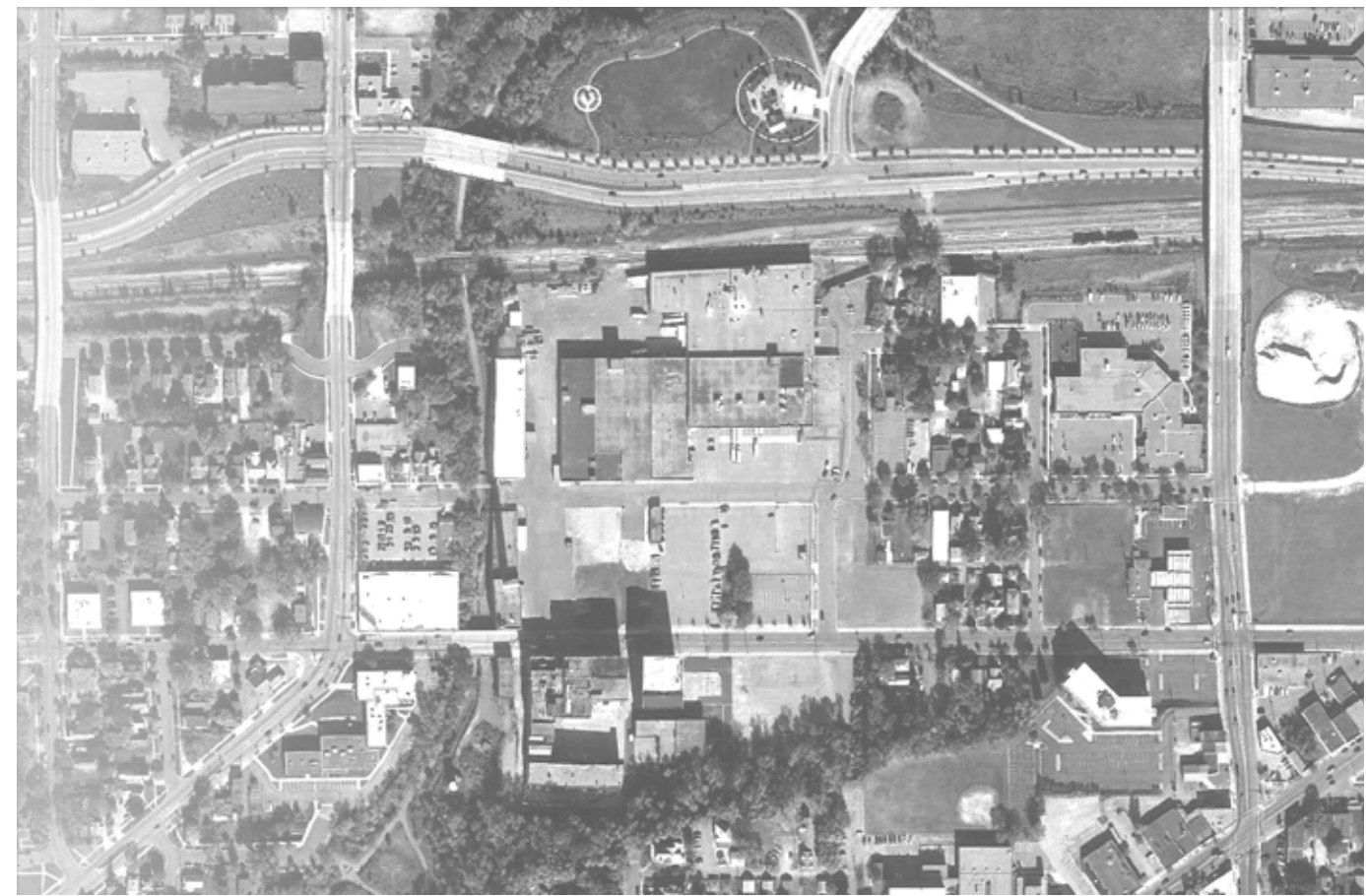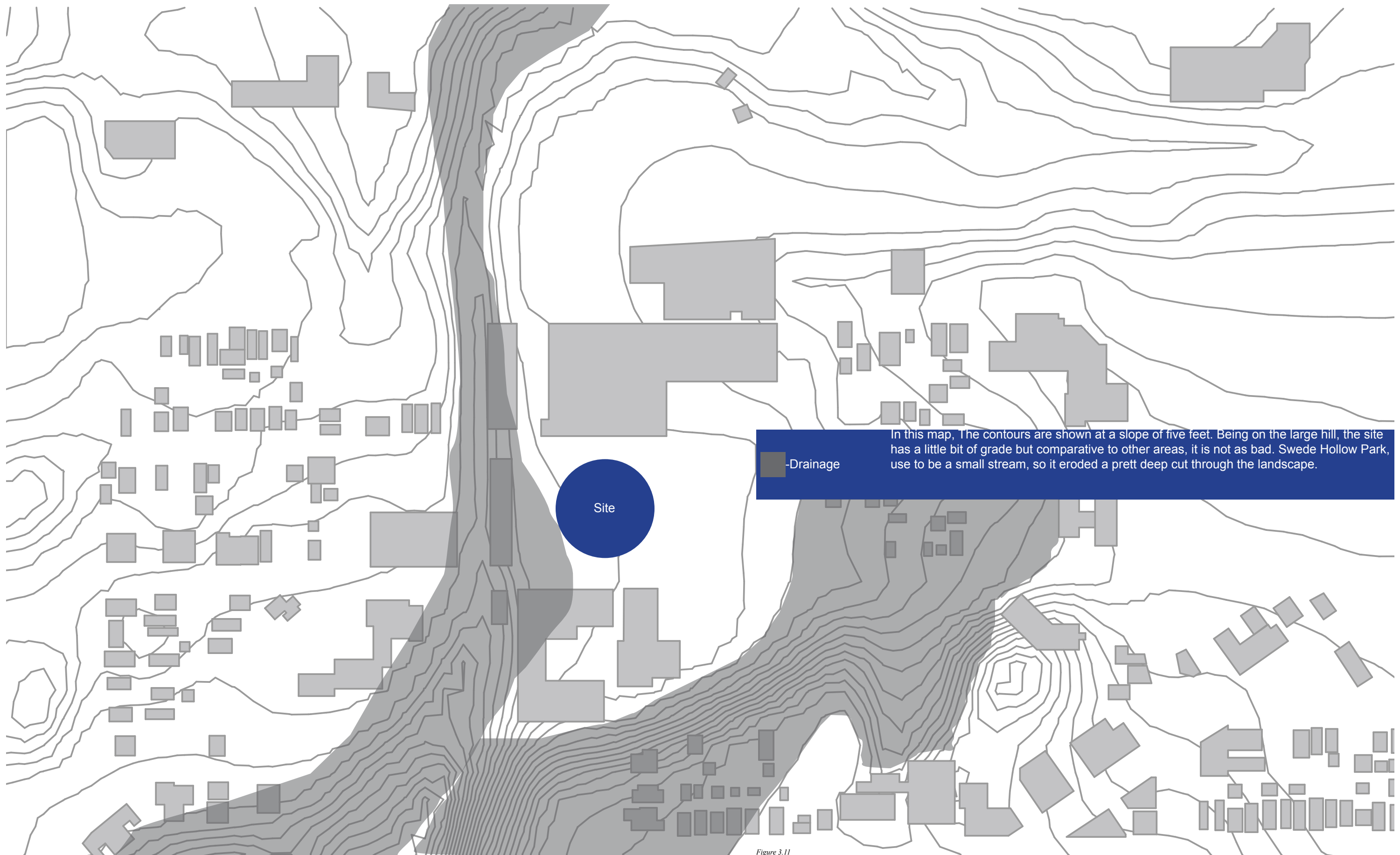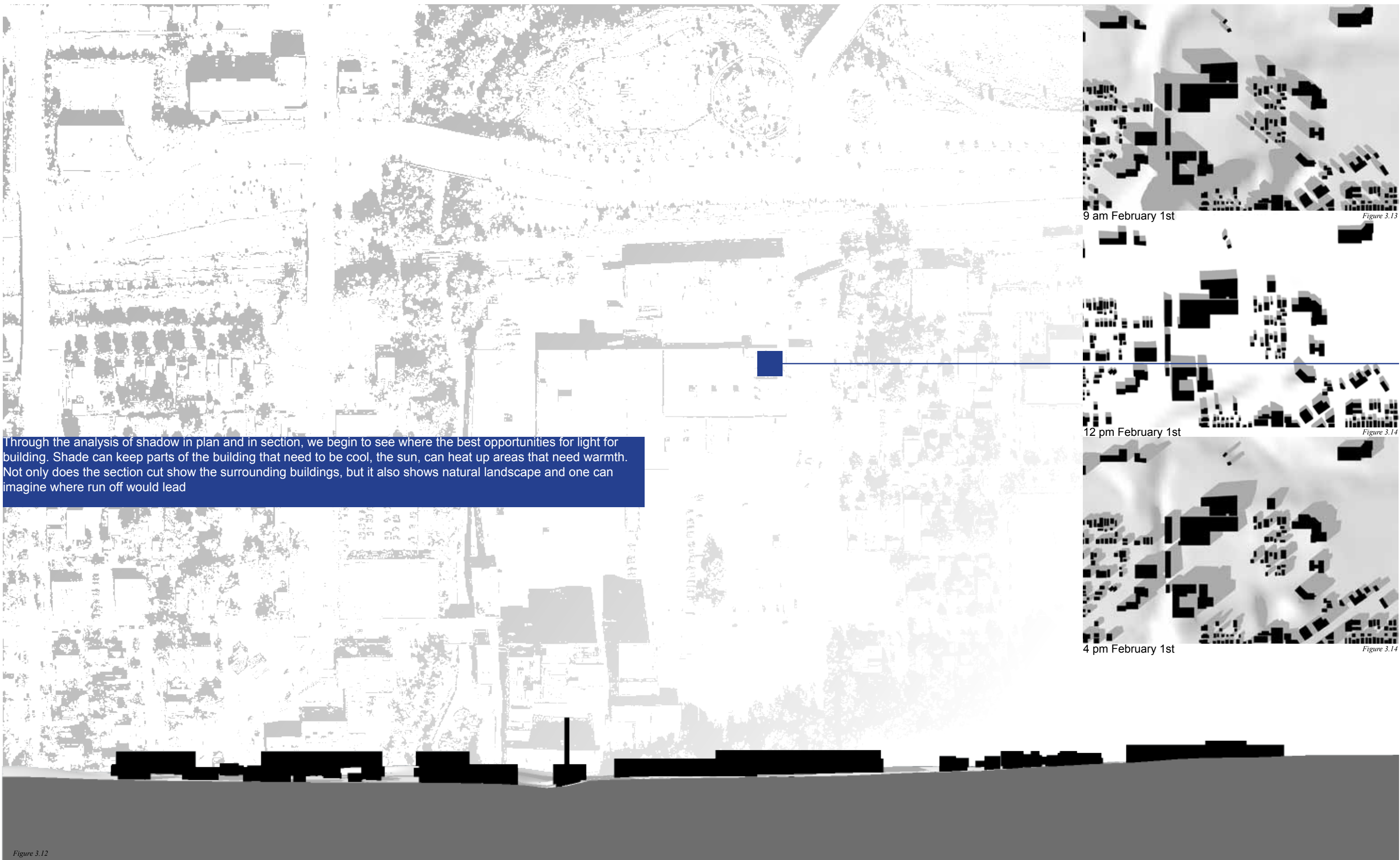

Figure 3.10

-Drainage

In this map, The contours are shown at a slope of five feet. Being on the large hill, the site has a little bit of grade but comparative to other areas, it is not as bad. Swede Hollow Park, use to be a small stream, so it eroded a prett deep cut through the landscape.

Site

Figure 3.11

9 am February 1st

Figure 3.13

12 pm February 1st

Figure 3.14

4 pm February 1st

Figure 3.14

Through the analysis of shadow in plan and in section, we begin to see where the best opportunities for light for building. Shade can keep parts of the building that need to be cool, the sun, can heat up areas that need warmth. Not only does the section cut show the surrounding buildings, but it also shows natural landscape and one can imagine where run off would lead

Figure 3.12

Figure 3.9

Figure 3.10

The site

Areas of Open water (rivers, wetlands, ponds, and small lakes)

Open areas such as parks, plazas, in proximity to site

These maps are meant to explore the connections between the site, and the macro aspects of the city of St. Paul. By simplifying the maps to focus on key aspects of the city, the connections can be understood. The map above shows the relationships between the waterways and parks and open areas. The white space represents the void or the misuse of space. How can these areas be utilized for the urban progression of cities? The void of space, or also known as Negative space, shows the potenetial of what can be. It's up to designers to be creative with these areas.

Structures and Buildings

The site

Areas of Open water (rivers, wetlands, ponds, and small lakes)

Open areas such as parks, plazas, in proximity to site
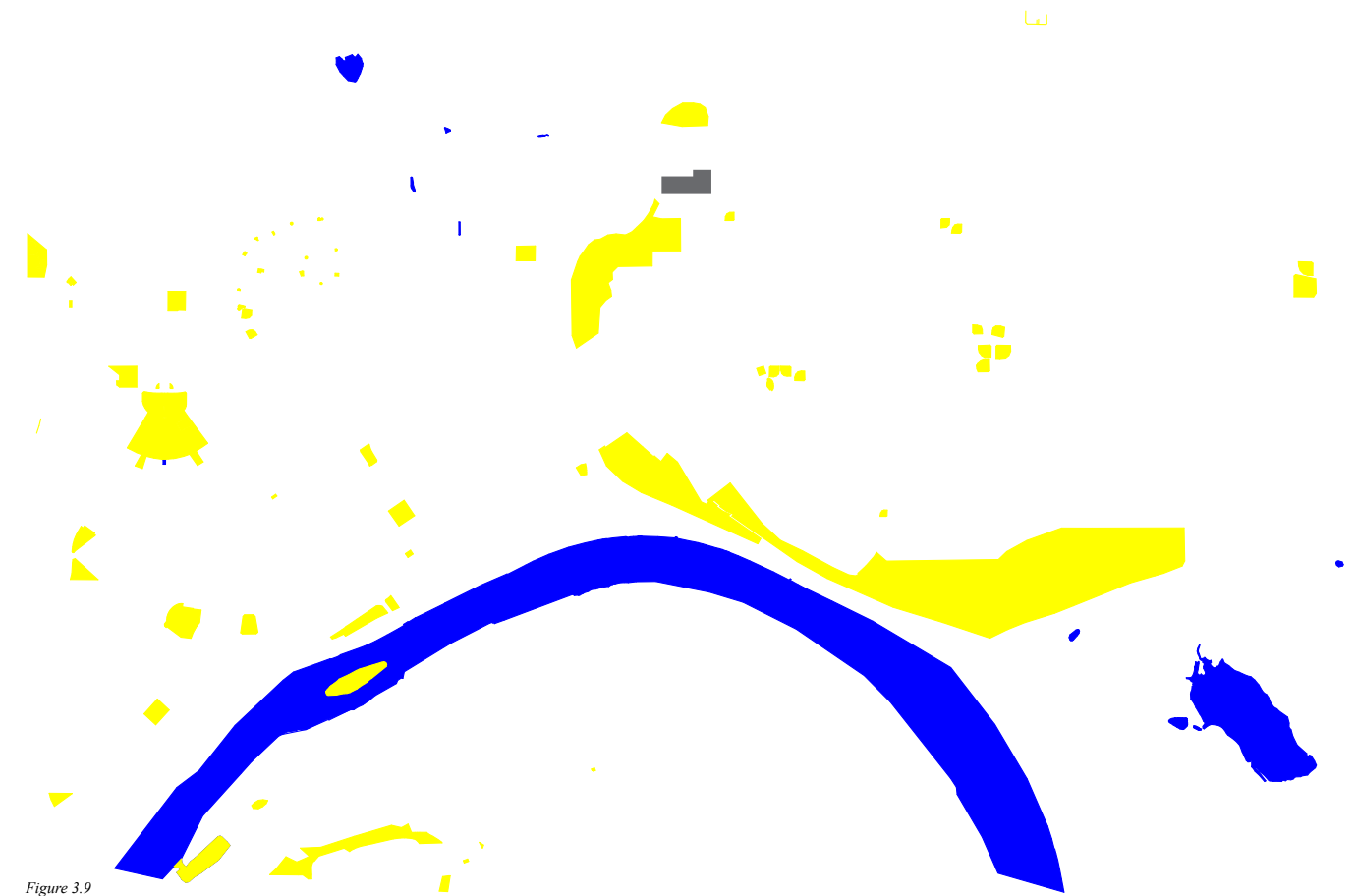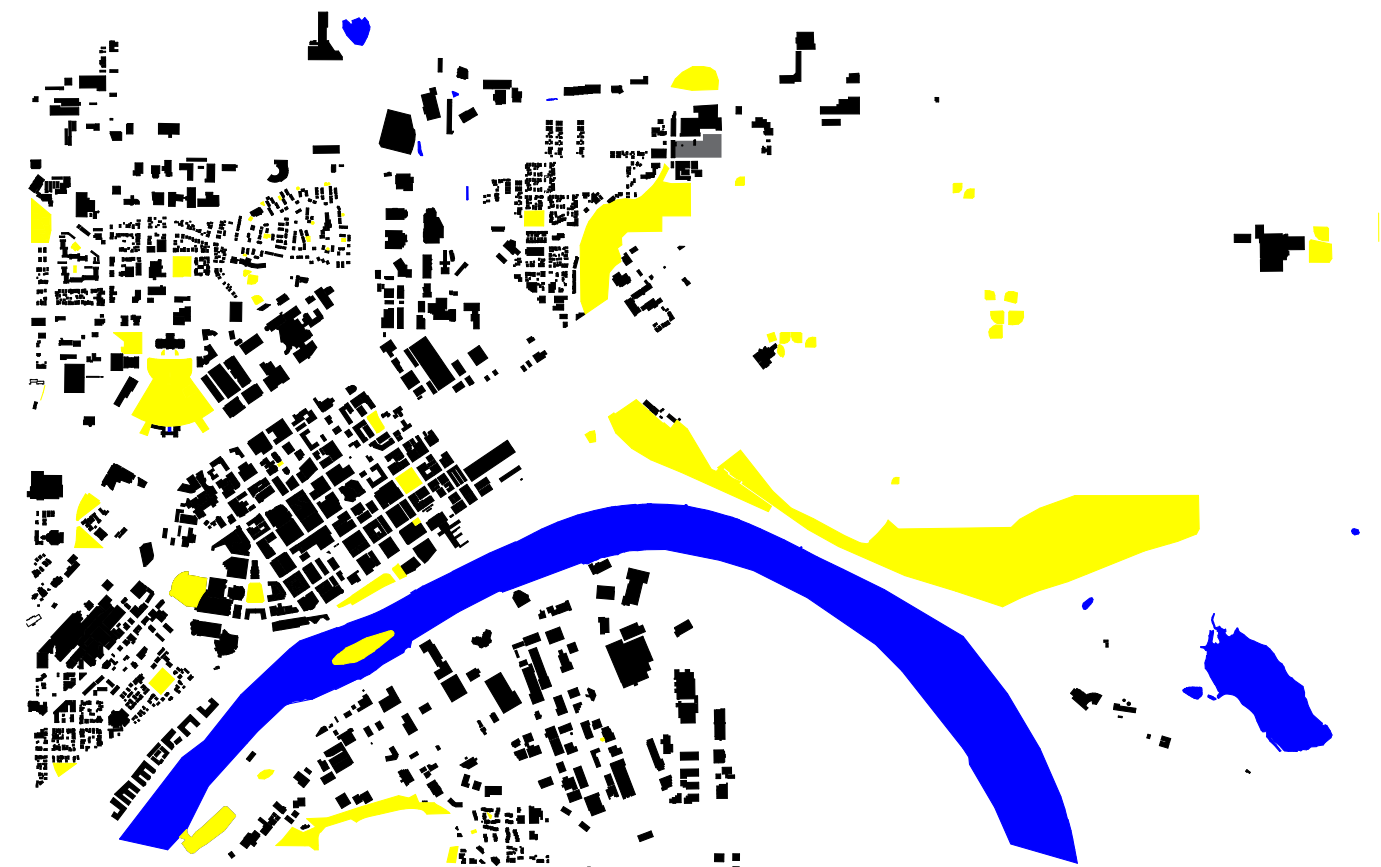
Heavy Rail Infrastructure

The site

Areas of Open water (rivers, wetlands, ponds, and small lakes)

Light Rail Transportation system

By understanding the transportation system of the city, we can begin to understand, what is needed and what is wasted. St. Paul was founded on the backbone of industry and Heavy rail transportation. Although not as prominent as it once was, Rail is once becoming integral in the future of the city, it allows for right of way public transportation, providing another form of access to the city. Roads, are quite wasteful as the maps show, what can be done to combat this? Is it possible to incorporate rail and roads in the same footprint?

Arterial Roads

The site

Areas of Open water (rivers, wetlands, ponds, and small lakes)

Highway, and Interstate system
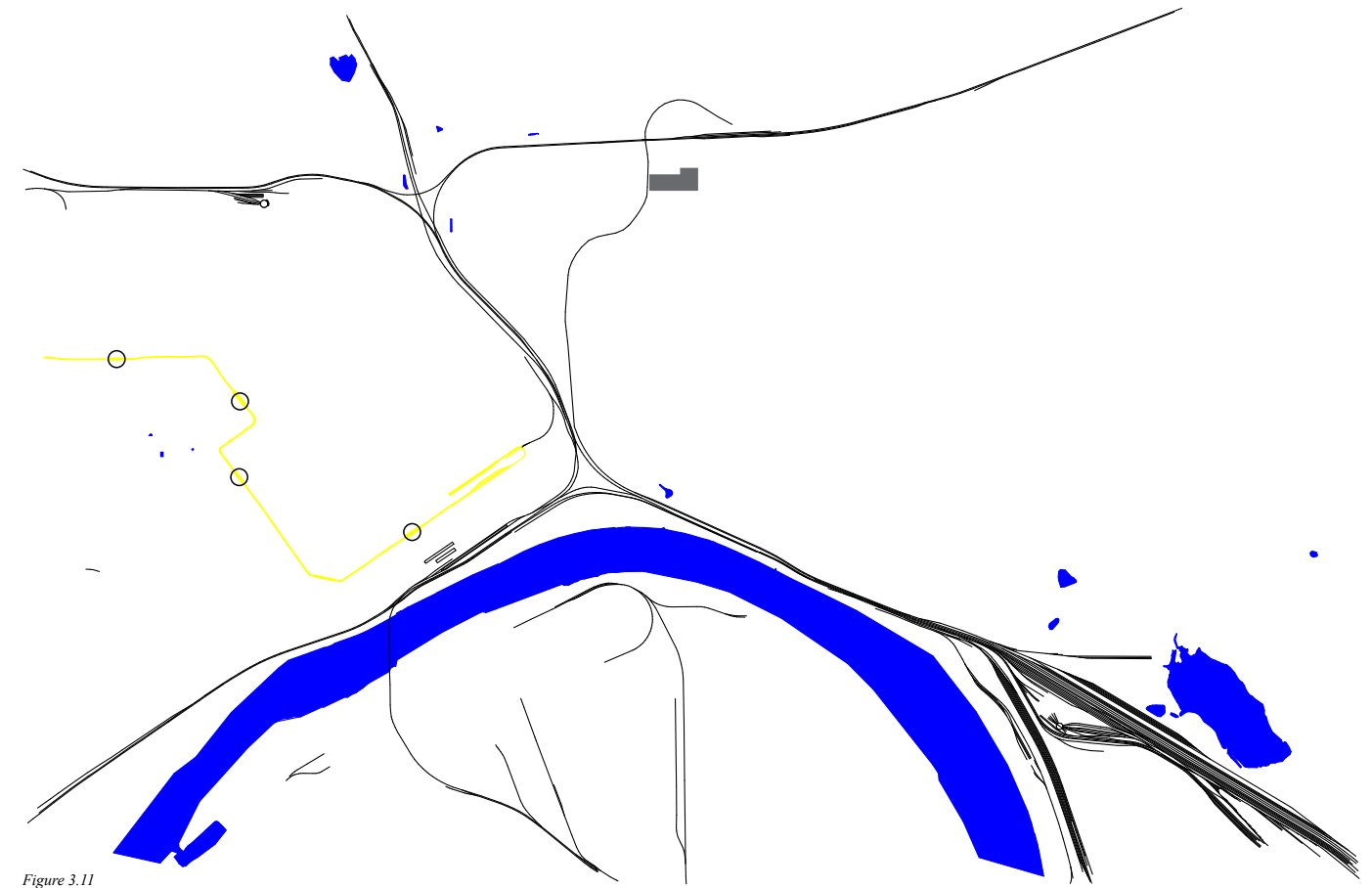
Figure 3.11
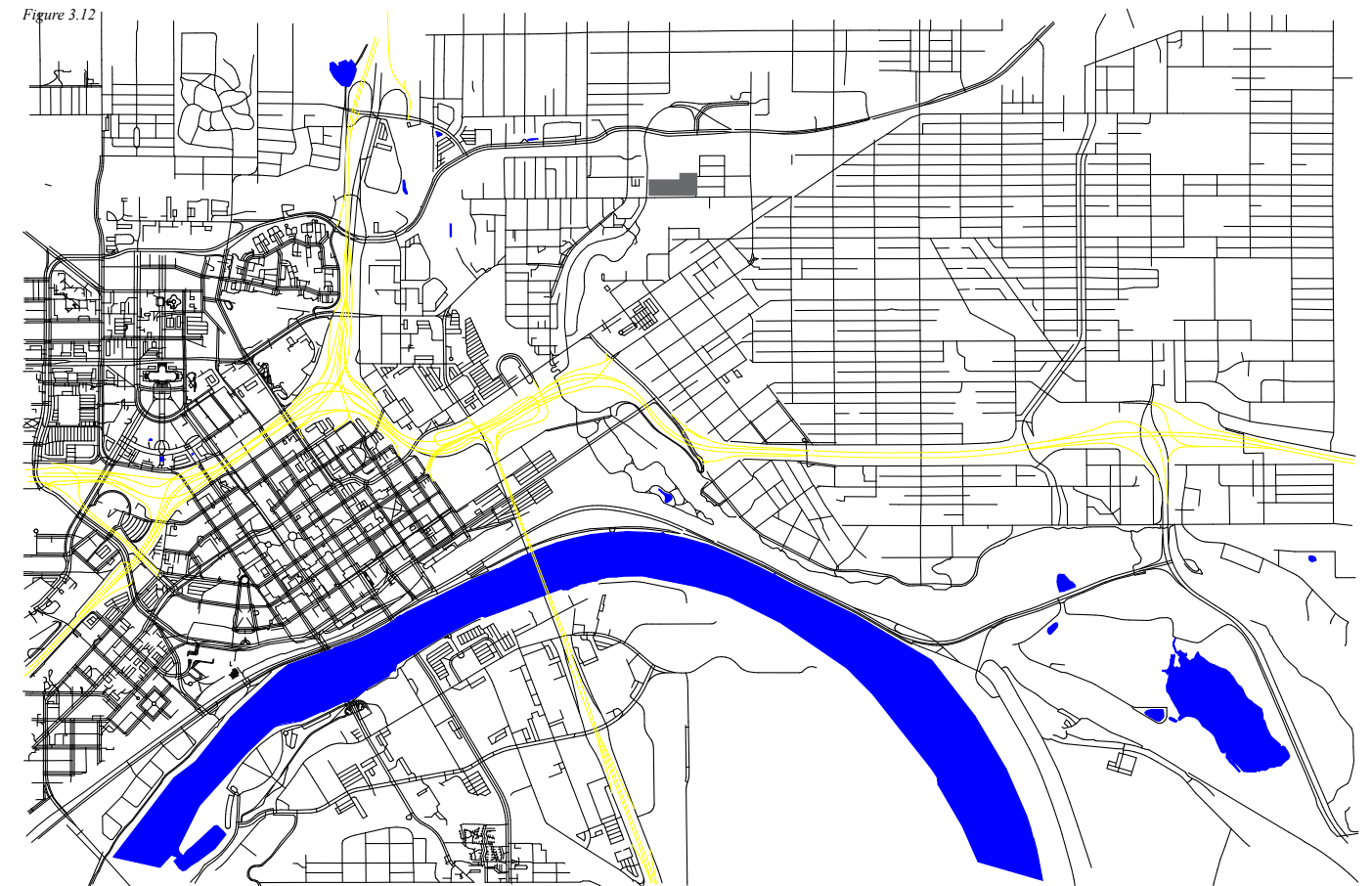
Figure 3.12

Figure 3.20

-Site
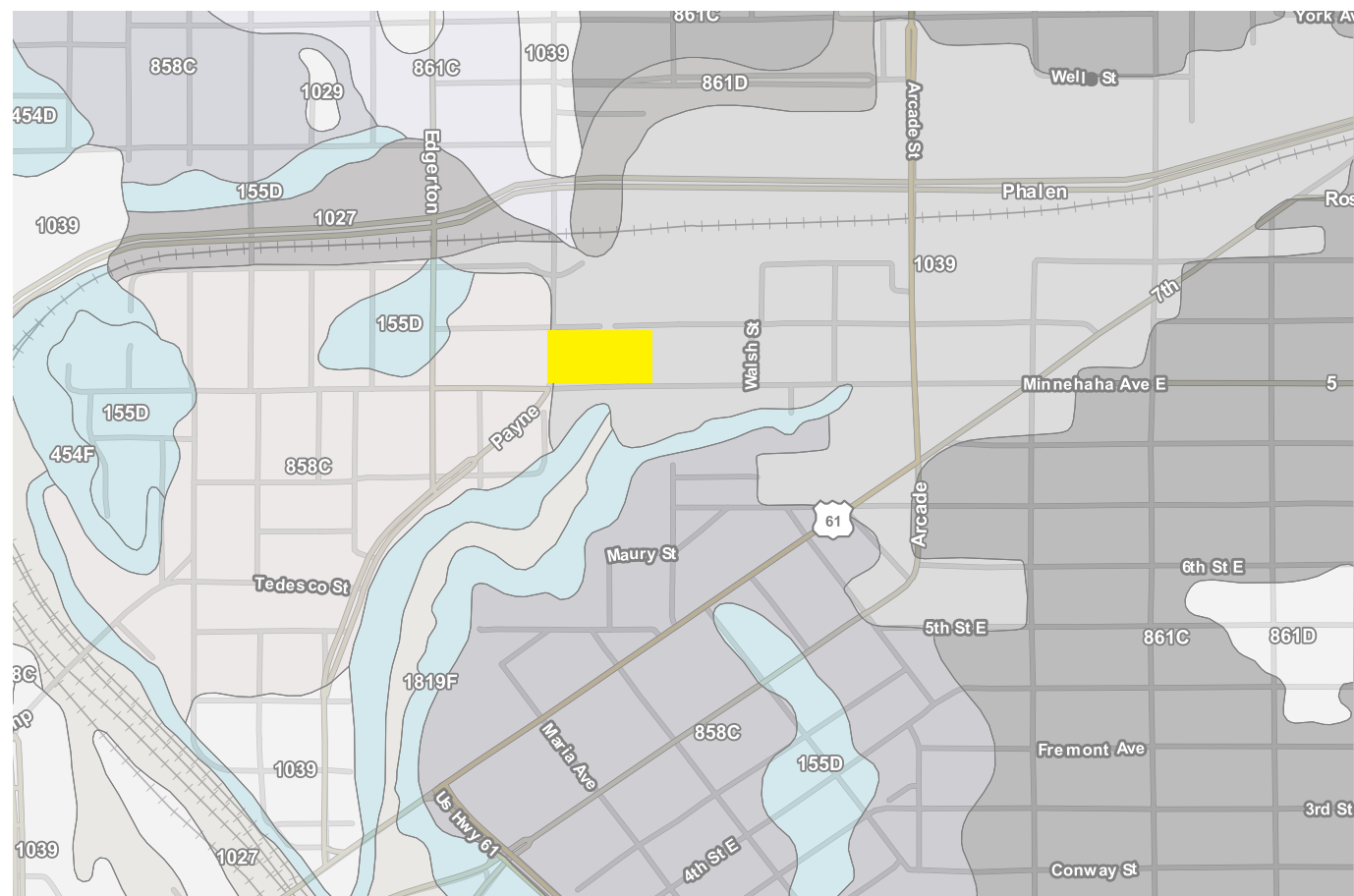
Unified Soil Classification (Surface)— Summary by Map Unit — Ramsey County, Minnesota (MN123)				
Map unit symbol	**Map unit name**	**Rating**	**Acres in AOI**	**Percent of AOI**
155D	Chetek sandy loam, 12 to 25 percent slopes	SM	41.0	4.5%
454D	Mahtomedi loamy sand, 12 to 25 percent slopes	SM	5.9	0.6%
454F	Mahtomedi loamy sand, 25 to 40 percent slopes	SM	11.8	1.3%
858C	Urban land-Chetek complex, 3 to 15 percent slopes		248.5	27.0%
861C	Urban land-Kingsley complex, 3 to 15 percent slopes		232.0	25.2%
861D	Urban land-Kingsley complex, 15 to 25 percent slopes		27.0	2.9%
1027	Udorthents, wet substratum	12 pm February 1st	74.8	8.1%
1029	Pits, gravel		1.5	0.2%
1039	Urban land		236.6	25.7%
1819F	Dorerton-Rock outcrop complex, 25 to 65 percent slopes	SM	40.6	4.4%
Totals for Area of Interest			**919.7**	**100.0%**

Figure 3.21

The Unified soil classification system classifies mineral and organic mineral soils for engineering purposes on the basis of particle-size characteristics, liquid limit, and plasticity index. It identifies three major soil divisions: (i) coarse-grained soils having less than 50 percent, by weight, particles smaller than 0.074 mm in diameter; (ii) fine-grained soils having 50 percent or more, by weight, particles smaller than 0.074 mm in diameter; and (iii) highly organic soils that demonstrate certain organic characteristics. These divisions are further subdivided into a total of 15 basic soil groups. The major soil divisions and basic soil groups are determined on the basis of estimated or measured values for grain-size distribution and Atterberg limits. ASTM D 2487 shows the criteria chart used for classifying soil in the Unified system and the 15 basic soil groups of the system and the plasticity chart for the Unified system.

The various groupings of this classification correlate in a general way with the engineering behavior of soils. This correlation provides a useful first step in any field or laboratory investigation for engineering purposes. It can serve to make some general interpretations relating to probable performance of the soil for engineering uses. For each soil horizon in the database one or more Unified soil classifications may be listed. One is marked as the representative or most commonly occurring. The representative classification is shown here for the surface layer of the soil.
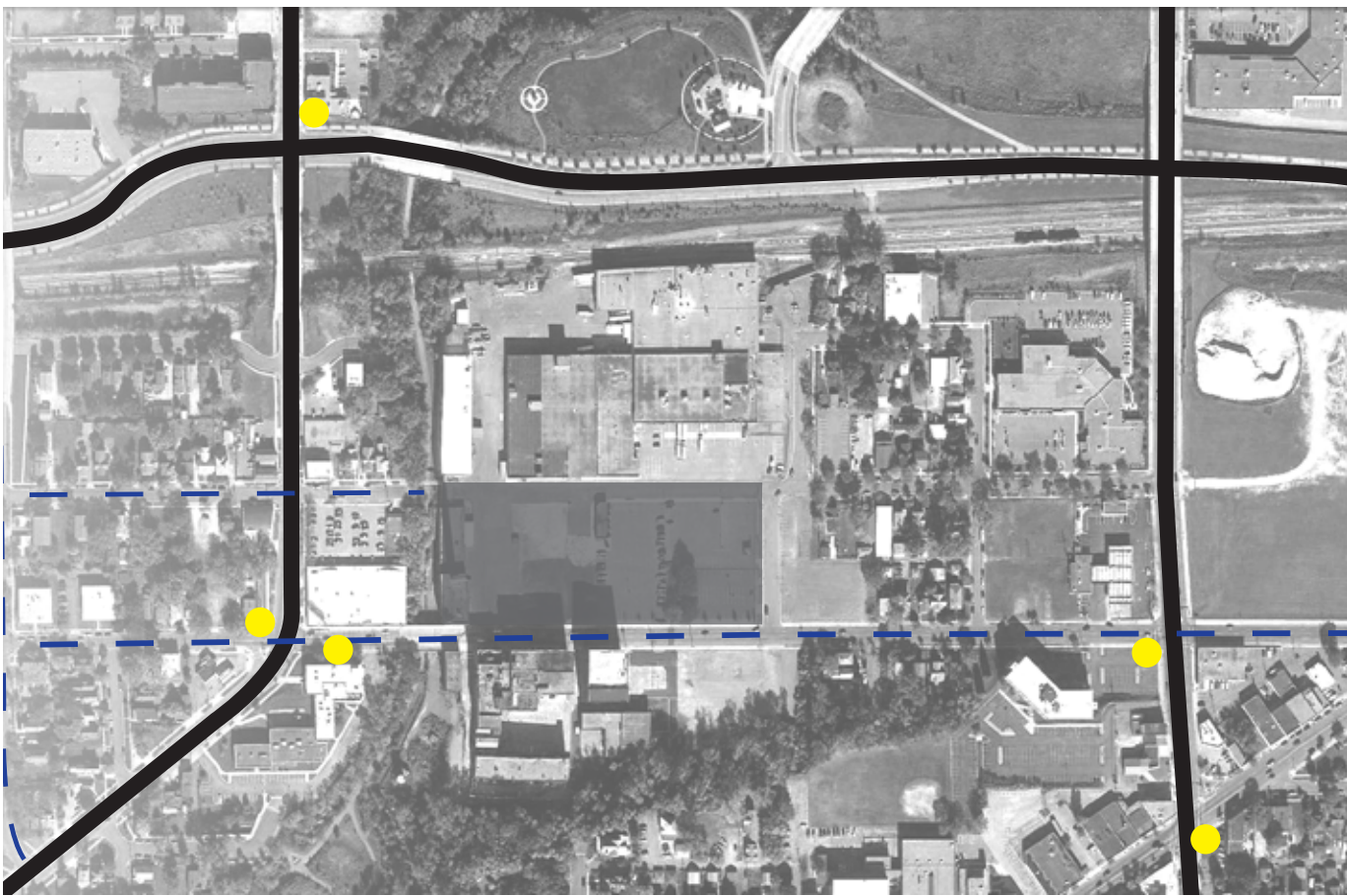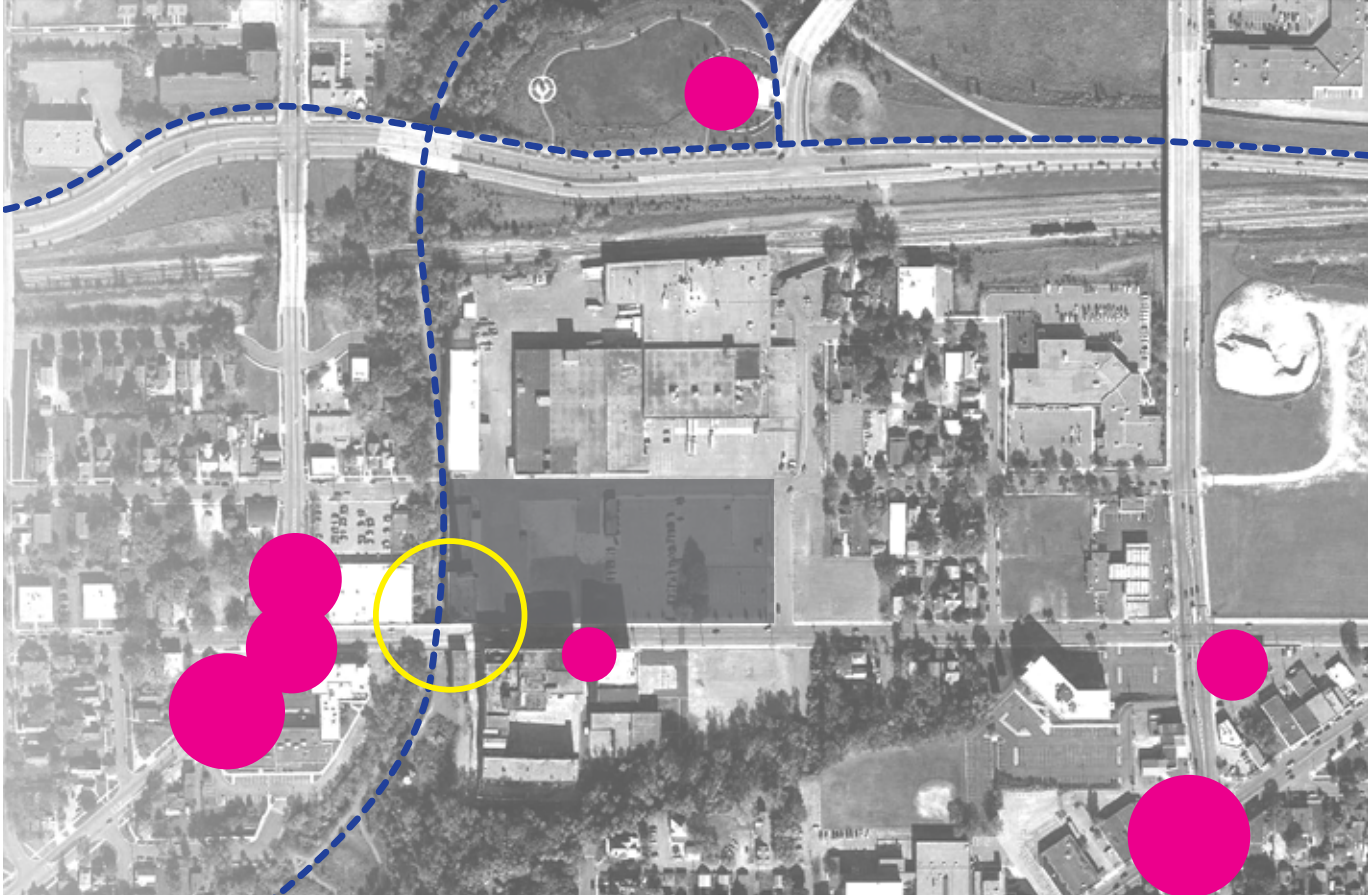
Figure 3.22
Figure 3.23

Arterial Roads

The site

Connector Roads

Transit Stops

These maps explore the relationships between roads and traffic, and pedestrians graphically. Pedestrian activity mostly occurs around the intersections of the roads, this is due to the fact, that mass transit stops here. From these nodes, pedestrian traffic disperses into the residential neighborhoods

Concentration of Pedestrian activity

The site

Bike path

Site and Bike path intersection

American Basswood
Figure 3.24

Bur Oak
Figure 3.25

Dwarf Red Blackberry
Figure 3.26

Flowering Spurge
Figure 3.27

Figure 3.28
Hazlenut

These are just a few examples of vegetation that can grow in the Minnesota climate. These were some of the species that I encountered walking through Swede Hollow Park, adjacent to the site
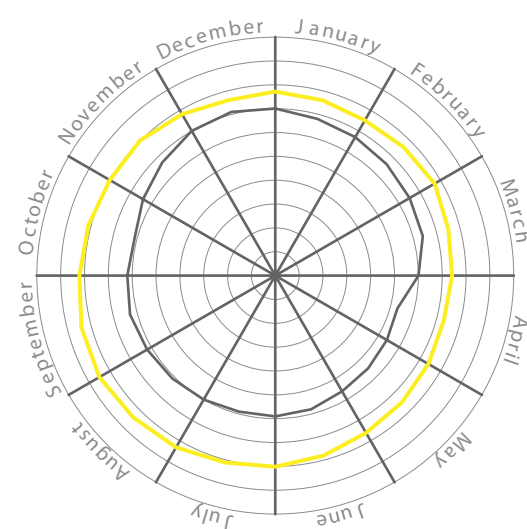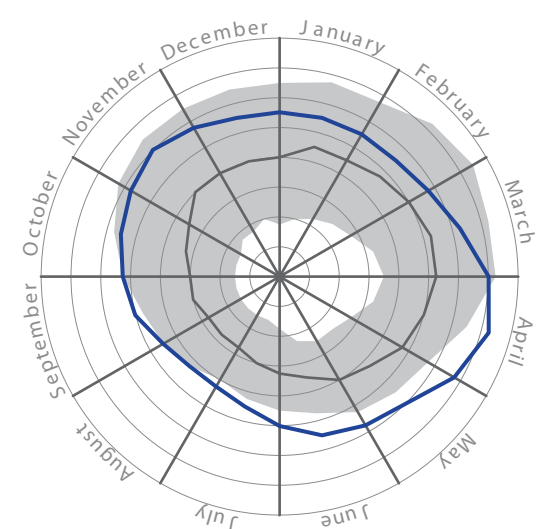
Plant cover

The site

Figure 3.29
Lowbush Blueberry
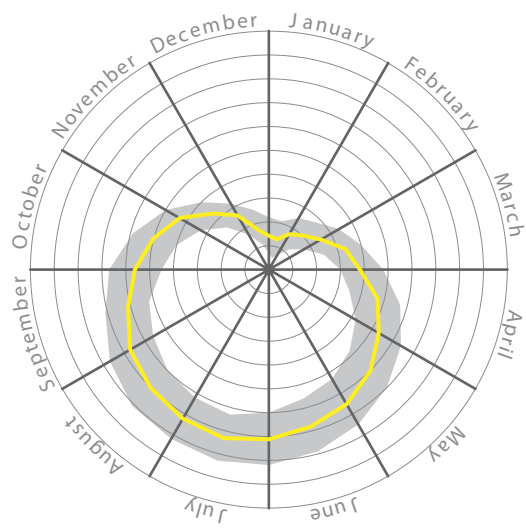
Figure 3.30

temperature [0-100 deg F]
— city average
☐ temperature range
Figure 3.31
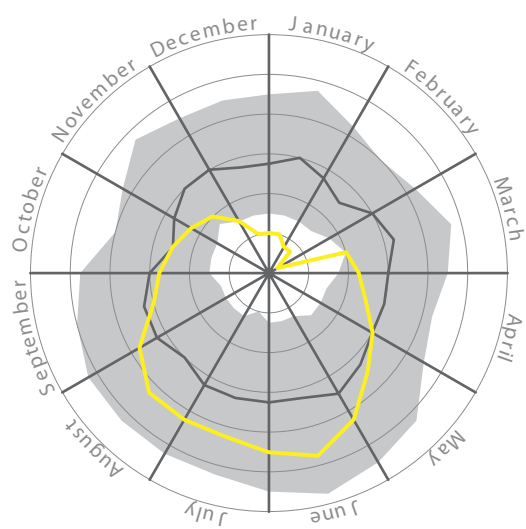
precipitation [0-6 in]
— city average
— US average
Figure 3.32

humidity [30-100%]
— city morning
— city afternoon
Figure 3.33

wind speed [5-13 mph]
— city average
☐ US average
Figure 3.34

The climate that is shown is for the city of St. Paul. Being a larger city, St. Paul can face some pretty rough winters, meaning buildings skin, and insulation values should be taken into account when designing.

Below wind diagrams show the average wind direction per month, but due to the topographic features, wind in St. Paul varies place to place.
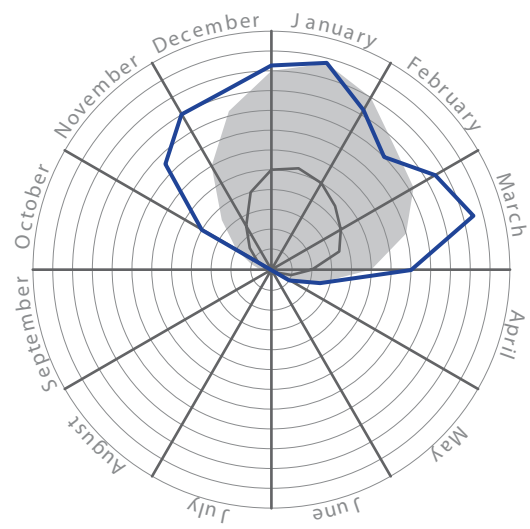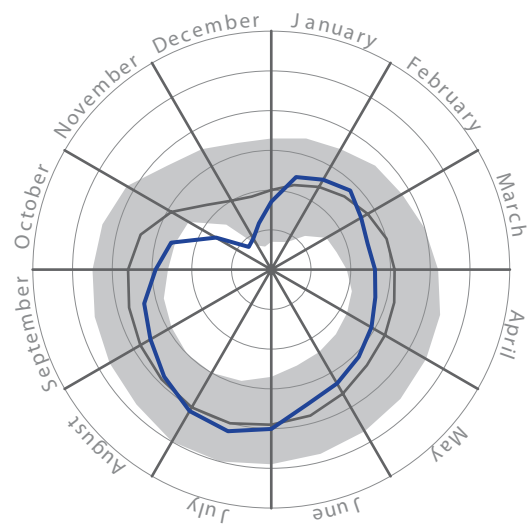

January 10.5

February 10.4

March 11.3

April 12.2

May 11.1

June 10.4

July 9.4

August 9.2

September 10.0

October 10.6

November 11.0

December 10.4
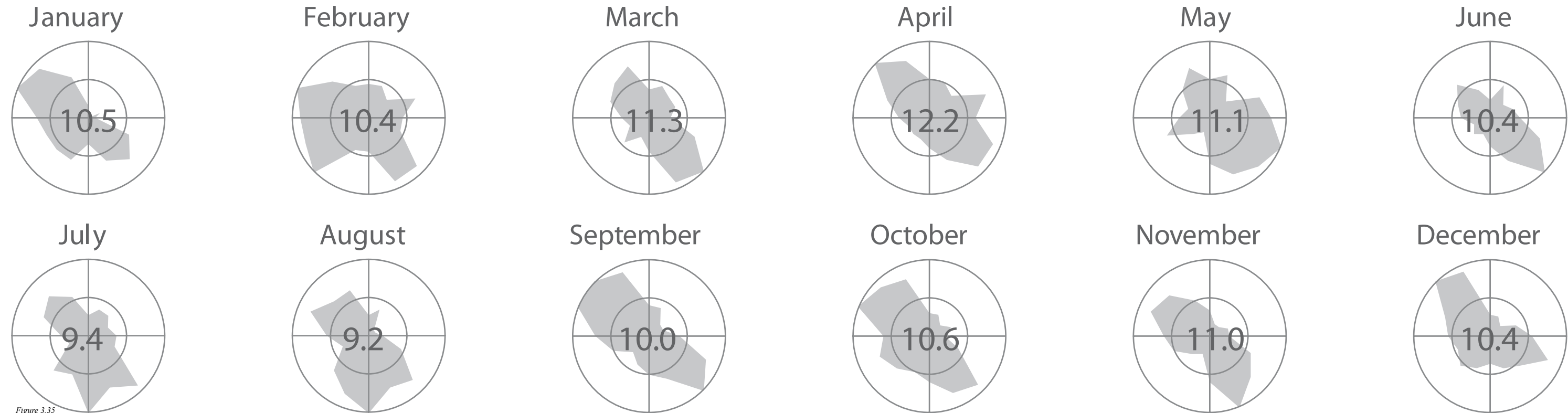
Figure 3.35

snowfall [0-12 in]
— city average
▬ US average
Figure 3.36

sunshine [30-90%]
— city average
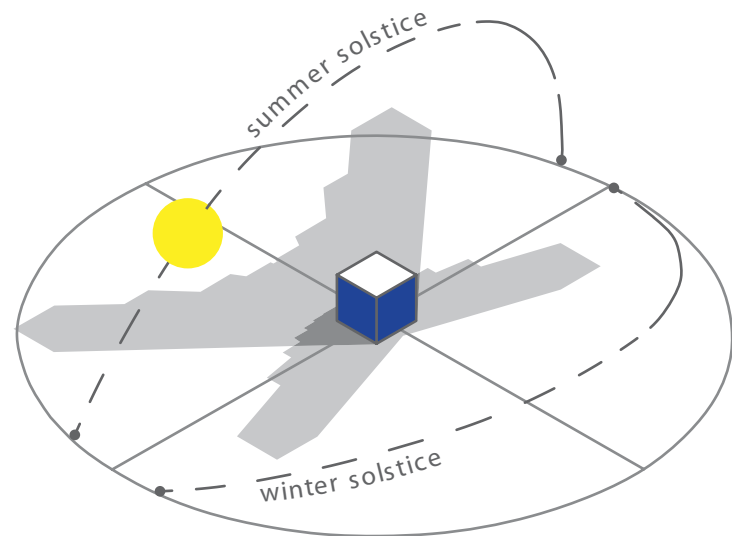▬ US average
Figure 3.37

Sunshine and Shading

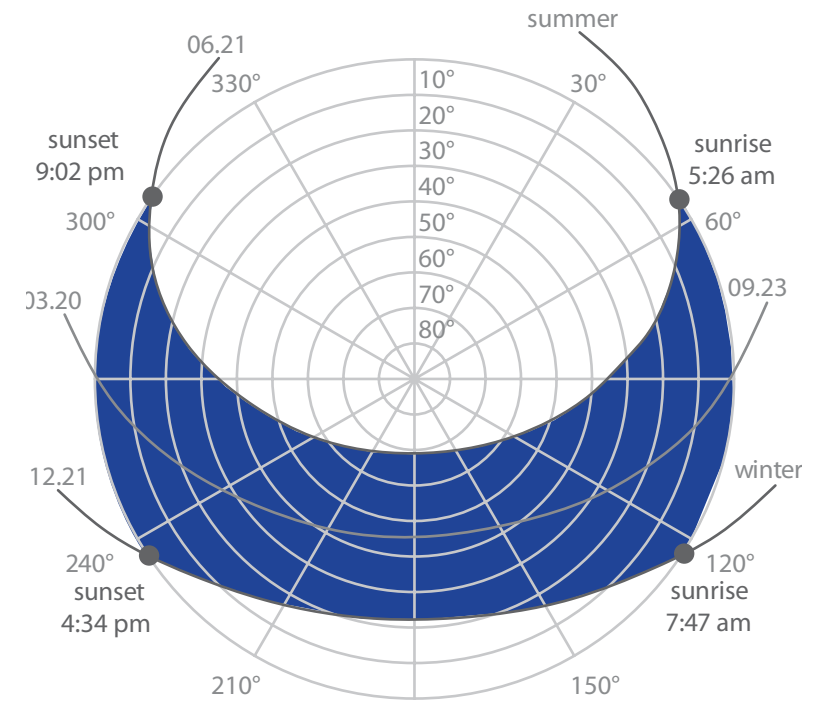*Figure 3.38*

Latitude: +44.89
[44°58'32.36"N]

Longitude: -93.03
[93°04'14.88"W]

Time Zone:
UTC - 6 Hours

St. Paul Shade Diagram [+44.89]
■ 1 x 1 cube
— solstice sun paths [06.21 and 12.21]
▬ solstice shadows

St. Paul Sun Path Diagram [+44.89]
■ daylight hours
— sun path solstice [06.21 and 12.21]
— sun path equinox [03.20 and 09.23]
● important times of day

summer noon time high altitude	68.21° degrees from horizon
winter noon time high altitude	21.61° degrees from horizon

Figure 3.39

With the information that is given, the site can be further explored through analysis, and site visits. Aspects of the site make it unique in a dense urban environment. Since it was an indsutrial site, it has swathes of open land, this promotes restablishing fragments of natural habitats. Years before St. Paul was setteled, there was plethora of wetlands. This site has the ability and size to incoporate such wetlands into the design.

The adjacent building, just south of the site, is what remains of the old "Hamm's Brewery," which is being redeveloped as a destination for organics and craft beer. This commodity will only strengthen the existing site informing the direction in which it goes. These variables come together in such a way that I was inspired to choose this area, for the building typology. It will give the neighborhood and surrounding area something to be proud of, it has the ability to become the identity of the community

Figure 3.13

Academic

This project represents all the gained knowledge since I began the Architecture program at North Dakota State University. Everything that I have learned will be applied to the project creating a comprehensive design that exhibits my ability and skills. Applying these methods in my most comprehensive project to date will provide grounds on which a degree of Masters of Architecture can be rewarded. By following the sets and guidelines of the Thesis Project, I hope to advance my understanding of Architecture and the built environment.

Pofessional

After graduating, I hope to join the workforce in the design field such as Architecture. The Architectural field is filled with many types of firms, and it is hard to say in which what kind of firm I will end up in. I am interested in firms that are geared towards user-oriented design, historic re-use, and sustainable practices. These areas are aspects of architecture that I believe to be key components in furthering my understanding of design. With my thesis, I hope to explore these different values, advancing my understanding of the subject matters; bringing it into the professional setting, developing the ideals into the projects that I am assigned to. As one that learns through interaction and experiences, I plan on developing as a designer based on these basic principles that have been brought to attention.

Personal

Since I can remember, I have been interested in helping others, providing caring for others who are less fortunate. When it came to deciding a career path, I still wanted to help and provide, but through means that remain behind the scenes. Architecture seems to the right tool for this. Through architecture I can inspire and provide for other. Architecture has the ability to change society and the way we think about things. I believe through architecture we can better the world, leading by example. People need to be provided with equal opportunities, and architecture can be the catalyst in which this can happen. Through this project, I hope to gain a better understanding on the balance of architecture, nature, technology, and how architecture can be bridging factor between two variables. We interact with built environment every day of our lives; why not utilize it to better ourselves and society?

GOALS OF THE   THESIS PROJECT

Direction of Research Definitions

Now that the dimensions of nature, technology, and the built environment have been established, the next step proceeds with in depth research in architectural strategies. These strategies should promote the balance of nature and technology. Since the building typology is a hybrid, extensive research will have to be conducted in related subject matter such as sustainability, adaptive-reuse, education, and historical preservation. All of these factors come together forming a typology that creates a unique building problem. Understanding these issues will allow for the proper layout and programming of spaces. Further analysis will be required to develop the site, and the historical context of the area. As stated earlier all these factors will be necessary to help inform the major design decisions that follow.

Design Methodology

Successfully gathering information and research will be garnered by utilizing the mixed-method research. I will use qualitative and quantitative to support the theoretical premise, and overreaching ideas. I will use the multimodal research tools to develop a well-rounded informative project. Quantitative data will be acquired from post-occupancy research, and individual research, such as surveys and questionnaires. Data will represented through different mediums, including a strong graphical layout, in which people are informed with the interaction with graphics instead of just reading endless amounts of data. The more we can visualize data, the better we can begin to understand it. Engaging the senses in the design methodology will strengthen the overall project, and speak to the essence of what the project is.

Design Documentation

The documentation process will provide an opportunity to preserve the research and exploration of the project. All aspects of the project including drawings, photography, models, digital media, and research will be recorded in this book and will be accessible through the North Dakota State University institutional repository. Throughout the design process, updates will be provided through website (under construction), allowing for a more informal display of the process, and design work. At the end of the design process, the thesis project will be presented in a formal matter so that the information and process can be shared with others.
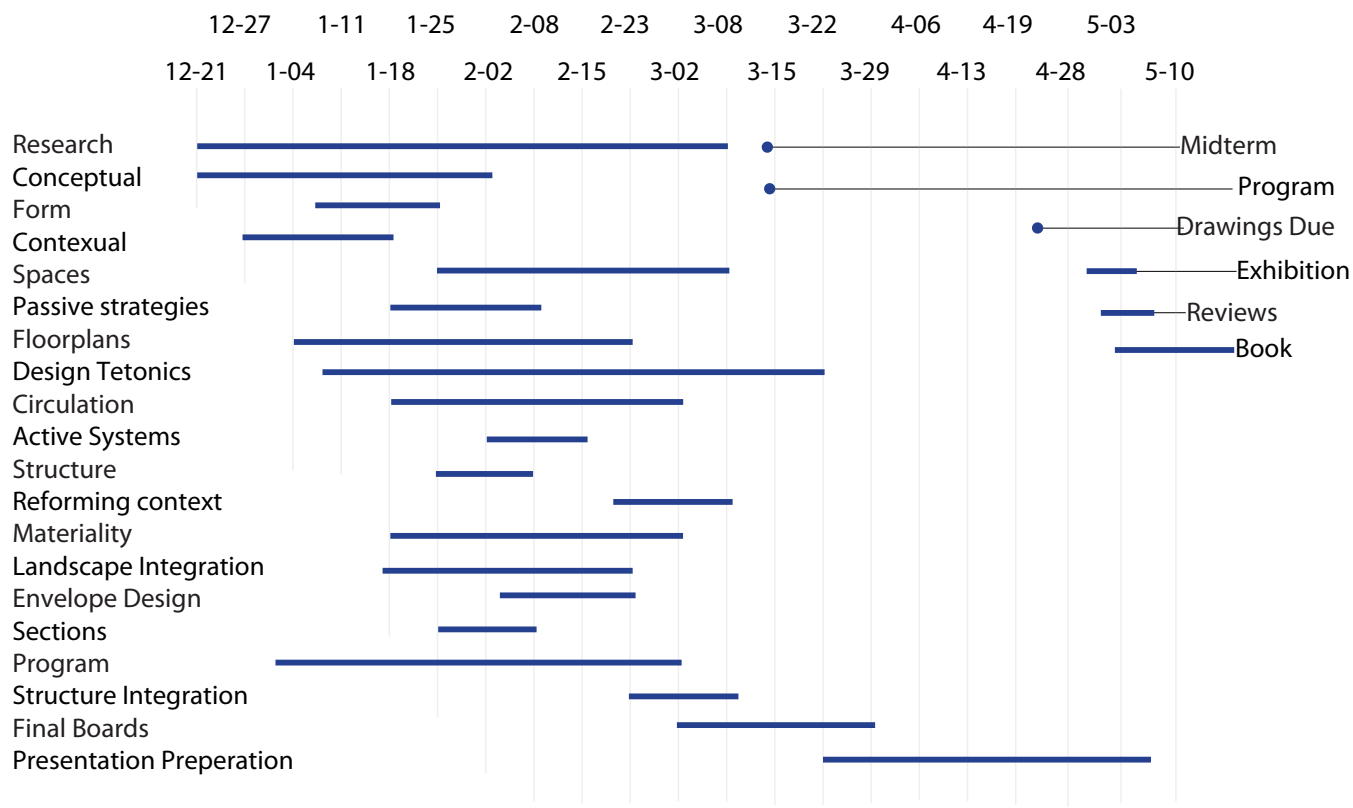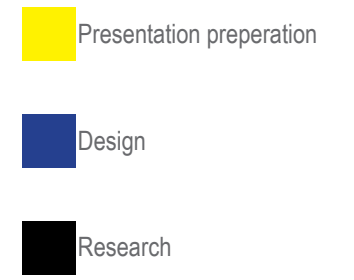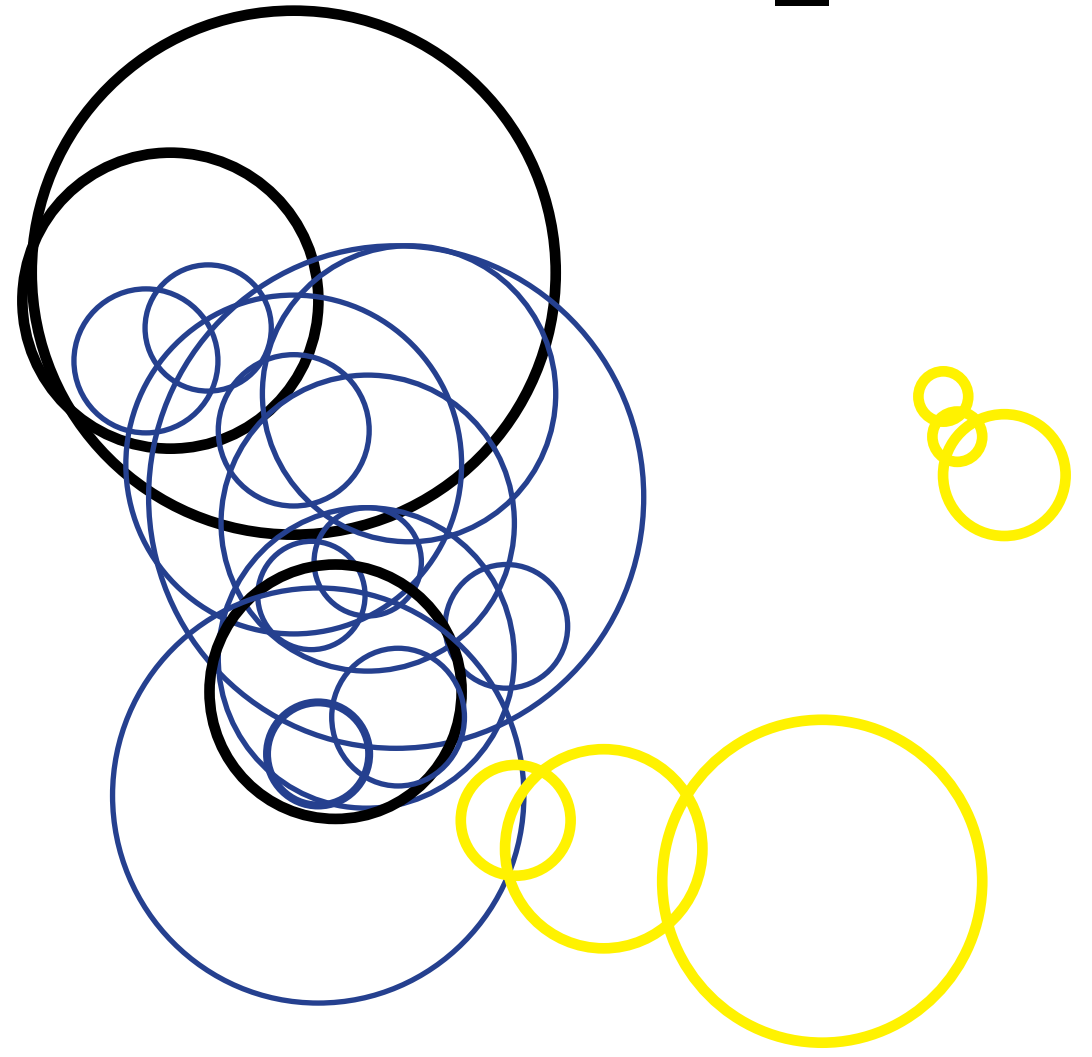
PIAN FOR THE PROCEEDING

Figure 4.1

Figure 4.2

Presentation preperation

Design

Research

| | 12-27 | 1-11 | 1-25 | 2-08 | 2-23 | 3-08 | 3-22 | 4-06 | 4-19 | 5-03 |
| | 12-21 | 1-04 | 1-18 | 2-02 | 2-15 | 3-02 | 3-15 | 3-29 | 4-13 | 4-28 | 5-10 |

Research — Midterm
Conceptual — Program
Form — Drawings Due
Contexual — Exhibition
Spaces — Reviews
Passive strategies — Book
Floorplans
Design Tetonics
Circulation
Active Systems
Structure
Reforming context
Materiality
Landscape Integration
Envelope Design
Sections
Program
Structure Integration
Final Boards
Presentation Preperation

S c h e d u l e

The two diagrams represent the schedule that is proposed. The diagram right above shows the how the semester would be organized by Research(black), Design(blue), and Presentation preperation(yellow). As you can see extensive overlap occurs in the middle of the diagram, this is when the most intensive work should be taking place. However, the schedule is subject to change.

POWER

Figure 5.1

Context

To better understand the site, and context of the urban environment. I will look at three major aspects that are influential to the context of the educational incubator. First a brief history of the city of St. Paul, Minnesota, secondly the significance of the Hamm's brewery, and its effect it had on the cities identity. Third, the trends on how suburbanization depleted the city center of St. Paul, leaving behind vacant blight, and once vibrant neighborhoods to ruin.

Following the Louisiana Purchase in the early 1800's, St. Paul was named the capital of the "Minnesota territory" in 1857. When Minnesota entered statehood in 1858, that year, more than 1,000 steamboats were servicing the city, making it one of the major gateways of the upper Midwest. But it wasn't until the expansion of the railways where St. Paul began to grow. With the introduction of the "Great Northern Railway, and Northern Pacific Railway," St. Paul became one of the trading capitals of the mid-west. With its sister city, Minneapolis, St. Paul became with heart of culture and wealth in Minnesota. Many of the wealthy populace settled adjacent to downtown, in the summit hill district. Anchoring this district is the third largest cathedral in the United States, the Cathedral of St. Paul, built in 1915. In the early 1900's, industrialization of the twin cities area was in full swing. Minneapolis surpassed St. Paul economically at this due to that it became the flour mill capitol of the United States. However, St Paul, had the one of largest rail infrastructures in the Midwest, providing jobs, and economic stability throughout the mid 1900's. The railroad was the heart of St. Paul, many took pride in the beautifully ornate Union Station, located in the city center. But it wasn't the heavy rail that made St. Paul famous. It was its shared trolley car system that it shared with Minneapolis. At its peak, the metro area, had over 524 miles of track. (Minnesota streetcar Museum)

This defined many of inner city neighborhoods at the time, it allowed the many of the new immigrants and poor, to have good accessibility to factory jobs if needed. The streetcar system of St. Paul, was considered to be one of the stimulus that allowed immigrant workers to get better jobs, eventually forming the middle class, which turned its back on the cities that once housed them. With the end of World War II, tremendous pent up demand for new housing and automobiles, set in motion the suburbanization of the St. Paul area. With the exodus of the middle-class many urban factories, once the beating heart of the economy began to look elsewhere to find workers. Soon agrarian fields were becoming housing developments, gravel roads, were place by expressways, everyone wanted to own a yard with a white picket fence, the "American dream," was in full swing.

The "American dream," at the time, was the modernization of the city, people who grew up in crowded noise filled corridors, now had the opportunity to leave it all behind, and many, many did. In St. Paul's case, although not as bad as other industrialized mecca's at the time saw a decline in population, most notable from the 50's to the 70's. This was an era in St. Paul, which saw heightened racial segregation. With idea of urban renewal in St. Paul, the downtown core once full of offices, and apartments, had become full of blight, The solution at the time

Figure 5.3

with the rest of America, was tear down the old, and build the new. But the new usually was mostly geared towards the automobiles. People didn't want to use public transportation, everyone wanted a car, and a roads, that could get you to point A to B in quickly. With the introduction Federal Aid Highway act of 1956, money was set aside to renew the inner city core. In St. Paul's case, the interstate was to be built on top of an African-American neighborhood, the Rondo. Too much protest from the community, construction commenced, racially dividing the city, this by many is considered one of the Cities biggest mistakes. The downtown core of St. Paul, is nearly separated by concrete and barriers from the rest of the city, for the means of urban renewal. Not only now do city planners look back and regret what has been done, but now, they are trying remediate the problem by promoting mass transit, and urban infill. Things the city already had, but for the sake of "new" are now gone.

Today, we are seeing a resurgence of moving back into the city, with the rising costs of fuel, the city is becoming a more economical and cultural venue than it has in the past thirty years. St Paul, is going through urban renewal now, but the city planners are trying to learn from the mistakes of the past. Recently opened, the green line, is light rail transportation option, which connects the downtowns of Minneapolis and St. Paul, to the suburbs of Bloomington, and the Airport. St. Paul is in the final stages of feasibility study to reestablish streetcars on specific routes. One of which is the Payne Ave Corridor, adjacent to the thesis site. This progressive thinking anchored understanding the past is one of many reasons St. Paul as a city was chosen for the thesis site. The Culture of St. Paul once tried to erase the past, but now it is looking for ways to embrace it. The Old Hamm's Brewery site, can be the catalyst in which the past present and future are celebrated.

Figure 5.2

Context

The story of the Hamm's Brewery is about the growth of small brewery through three generations of two families to national recognitions. In 1856, a young German immigrant named Theodore Hamm moved St. Paul, Minnesota, through humble beginnings, he had odd end jobs here and there, until in 1864 Excelsior brewery needed financials to help it expand. Theodore borrowed the money to brewery, but when they defaulted on the loan, Theodore Hamm was now the sole owner of the brewery. (Flanigain, 1910)

Located off of Payne Avenue, the Hamm's brewery, became the center of the new commercial and industrial district of "Swede hollow." Following the Civil war, swede hollow was settled by Swedish immigrants and soldiers. Swede Hollow would later be inhabited by the Irish, Polish, Italian, and Mexicans, until it was deemed unsanitary and burnt to the ground in 1956. The creek running through the ravine, was covered up during 1936, and 1958, converting it into a drainage and sewage system for the surrounding neighborhoods of Swede Hollow. Payne Avenue became the commercial district, while Hamm's Brewery, Whirlpool, and 3m formed the industrial backbone, giving people living in the surrounding areas, a place to work within walking distance from home. (Kunz)

As described in "Hamm's The Story of 100 Years in the Land of Sky Blue Waters," Theodore was generous to his employees, giving a Christmas basket filed with food and silver dollars to coincide with ones years of service with the brewery. His friends and workers called him "Bruderle Hamm","little

brother." And when he helped organize the first union for his workers, he found himself elected as president. (Curtis, 1958)

During Prohibition the brewery was kept open, but they produces and array products including soft drinks, this versatility of space, was one the things Theodore Hamm was most proud of. World War II was a challenge for the brewery but the wives of the workers were hired to replace the men at war, they continued the quality of the brew while the men were gone. (Curtis,1958.)

Between 1946 and 1954 a major expansion took place, by 1952 the brewery was fully integrated into the urban setting of St. Paul, covering over nearly twenty acres, and employing nearly 1,300 workers. This era, was the most prosperous in which the brewery was the identity of the Neighborhood. People took pride in knowing that that they worked at such large company, the neighborhood although poor, developed their own culture, creating a unique area within the city limits. In 1965, Hamm's was celebrating its 100th year as a family owned business, and the brewery now was the 8th largest in the nation. Family members were ready to diversify their funds, so it was decided that they would sell the brewery and focus on other areas of wealth. Sadly, this marked the slow demise of the brewery and the neighborhood surrounding it. The brewery was sold multiple times, but the last brewery to operate it as a brewery was the Stroh's Brewery in 1983. By this time, the neighborhood was torn apart. The companies that once provided jobs were all gone. The brewery was the only one left. 3m, and Whirlpool, vacated to the suburbs, leaving behind large swaths

of unbuildable land due to the harmful chemicals at the time. The brewery, once the jewel of the neighborhood was now remnants of its once proud self. In 1997 Stroh's Brewery abruptly closed its doors to the 350 employees that were left.

Since 1997, there have been proposals to tear down the labyrinth of structures, tunnels, and replace it with a new industrial park. But many residents still have emotional and nostalgic ties to the brewery. With the economic downturn of 2008, a few of the structures became so dilapidated that they had to be torn down. However, now more hope for the brewery than despair. An aqua-ponics company now occupies some of the industrial floor space. The idea of aqua-ponics is to be able to grow vegetables year round using Lighting, and cycles of water to keep nutrients flowing. Also a local brewery has opened shop in the old section of the brewery. Already, the surrounding neighborhood is the seeing the positive effects of having these two businesses located in their backyard. The rail road island neighborhood, just across the Payne Avenue, is now becoming one of the desired urban neighborhoods in St. Paul, due to its proximity to the downtown, and the proposed Streetcar line. The site of Educational Incubator involves including the ruins of the existing brewery into the design. This area, has the desirable factors to really make it a wonderful addition to the culture of St. Paul.

Figure 5.4

Figure 5.5

Figure 5.6

Figure 5.7

Context

Suburbanization –"the growth of areas on the fringes of cities. It is one of the many causes of the increase in urban sprawl." With the introduction of the automobile, to American culture, we were able to expand away from the city, without losing the ability to work in the city. Commuting back and forth between job and home, is what many of us do on a day to day basis. Back when the suburbs were first introduced it seemed like a good idea, nearly anyone if they work hard, could own a yard, and a house. But with exodus of the workforce from the city, we saw many industrial centers die. Sadly with leaving of the work force, many jobs left with them. And the people that couldn't afford to move to suburbia, were stuck in the city, where the economy stagnated leading to waves of crime, and inequality. Not only that, Automobile became a status symbol of our culture, and for many who couldn't afford one, they were judged causing animosity between the working class, middle class, and high class. This division fueled many of the conflicts between the suburbs and cities.

To combat the high crime rates, and urban blight, many cities opted for the urban renewal acts of the 50's and 70's. Many saw this an opportunity to re-invent the way we live in a city. Areas of blight were torn down, complete neighborhoods were replaced for throughways for the automobile. Parking lots replaced office buildings, and tall gleaming towers of glass were constructed to provide the jobs. But the factories and working class jobs were not in these tall glass towers. Many of these jobs, left the country due to our consumption of cheap goods. When wages would get to high, jobs would leave for

Figure 5.8

Figure 5.9

cheaper workers. This cycle is still happening today. "There is a widespread belief that Americans hate cities. I think it is probable that Americans hate city failure, but, from the evidence, we certainly do not hate successful and vital city areas. On the contrary, so many people want to make use of such places, so many people want to work in them or live in them or visit in them, that municipal self-destruction ensues. In killing successful diversity combinations with money, we are employing perhaps our nearest equivalent to killing with kindness." (Jacobs,1992) St. Paul as stated earlier, was not the only city to suffer from this cycle. But St. Paul is a great example of city that is in the transition of rebranding itself. It has come to its own Renaissance thanks to many of the residents and local politicians. However it does have a long ways to go, before it recaptures the sense of place it once had. The city is meant to diverse, it is this diversity that gives cities there life, excitement and culture. American Culture is not going to change anytime soon, but the individual city culture can. By understanding the social and historical context of the city, the city can be rebuilt, and defined with new and creative solutions unique to itself. This context is important in giving the city of St. Paul, a human quality in its existence

Building Program

Interaction Matrix

Connections
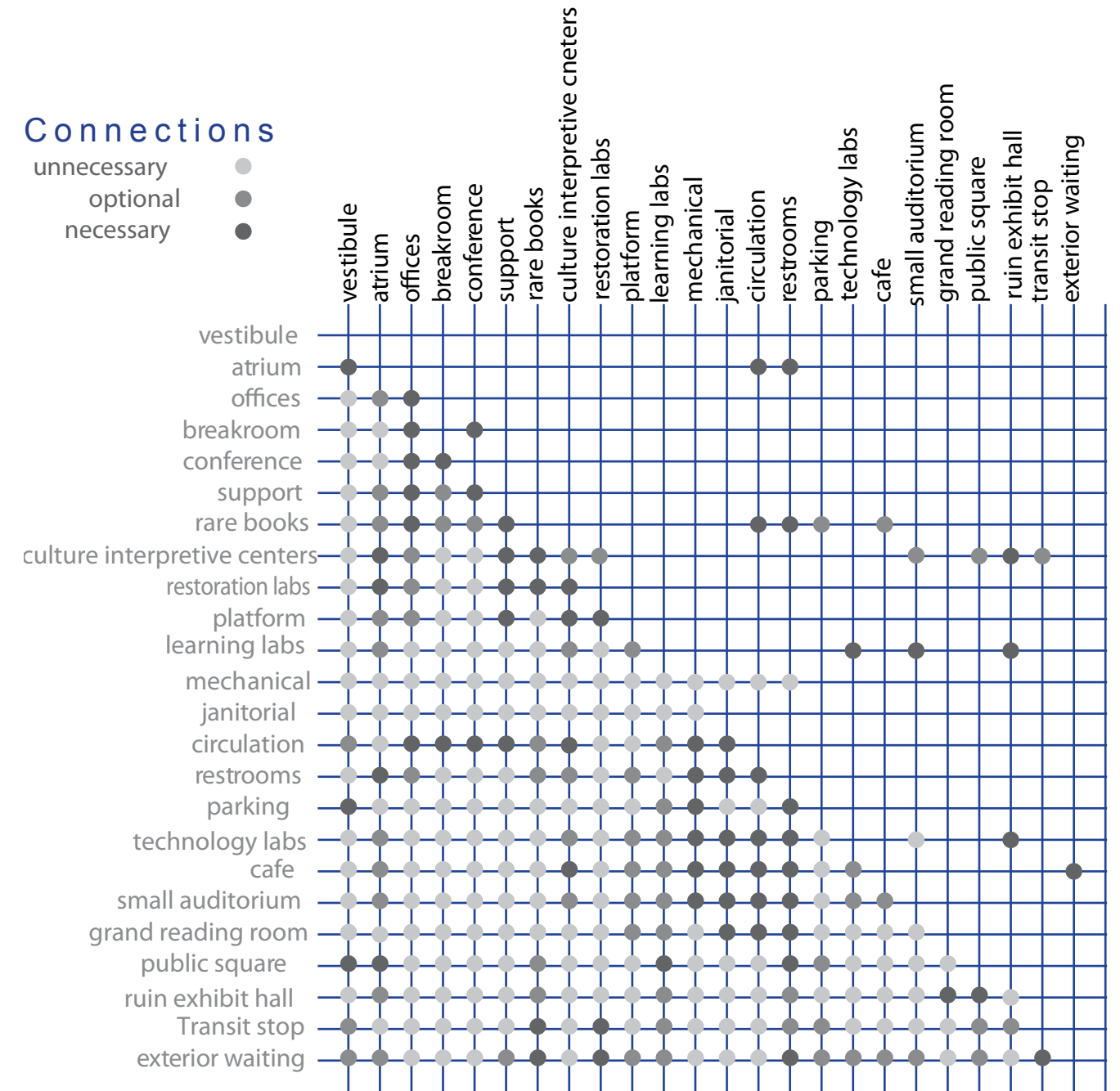
- unnecessary ●
- optional ●
- necessary ●

Figure 6.1

Interaction Net

Space Allocation - In Square Feet

Supporting – (22000+)
Mechanical
Janitorial
Storage
Circulation
Restrooms

Culture interpretive centers – (8500+)
Ruin exhibit Hall – (10000)
Small Auditorium - (3000)
Grand Reading Room - (34000+)
Restoration Lab - (10000+)
Rare Books Levels - (30000+)

Entry and Vestibule – (20000+)
Vestibule
Artrium
Cafe

Administration – (5500+)
Offices
Break room
Conference
Support

Extertior – (20000)
Amphitheater
Gardens
Open plaza
Transit stop
Waiting

Parking – (20000+)
Subgrade Parking

janitorial

mechanical

restrooms

offices breakroom

rare books

technology labs

ruin exhibit hall

conference

grand reading room

public square

support

small auditorium

Transit stop

atrium

circulation

restoration lab

vestibule

cafe
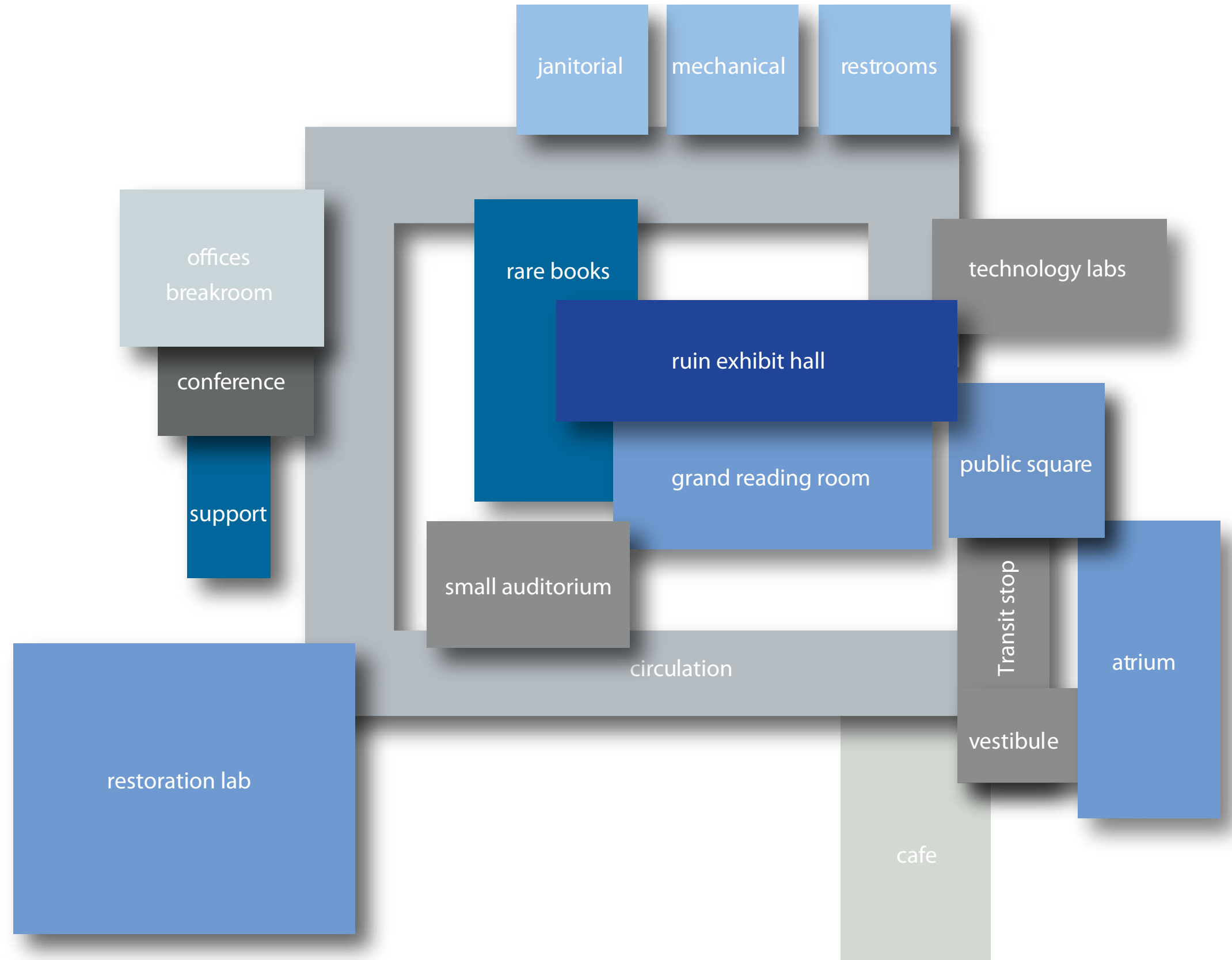
Figure 6.2

Process
Documentation

Artefact

The ruin of the site and existing buildings provided the grounds on which the inspiration of the artefact was built. The patina of the site is reflected in the aged plinth of wood, which over years has spent its life supporting a grain elevator. The aged wood is the support of the new and the hyper new. The light from the projected text translated on multiple sheets of glass reveals the relationship of reflection and refraction of the text on the aged and the new. This relationship of the old and the new is inspired by Brock Bazons quote, "We can only experience the known from the new we can only under-stand the new with a new view of the old." This is what I want the rare books library to reveal, the relationship of the past reflected into the new, allowing the intention of this relationship to be shown throughout the proposed building.

Figure 7.1

Precedent Study

The Kolumba art Museum incorporates the ruins of the old church within its building program. Through the Juxtaposition of the old construction and the new, a unique experience is formed that is special to the observer.
I have had the privilege to personally experience this building, and it, "Stages the architectural experience." The building itself tells the story of the destruction of the church by incorporating the ruins into the façade, the interior holds the ruin bed in where church columns lie. The simple interior uses light to create an ambience of solemn and reflection. The Kolumba is also the physical manifestation of Nietzsche's "Critical" view on history. The ruins were caused by the allied forces bombing during World War II, instead a reconstructing the ruins, which were once a Romanesque church, the people of Cologne built a small chapel to commemorate those innocent people that lost their lives in the bombings. This built historical significance gives meaning to Kolumba Museum beyond just a pretty building. By being conscious to its site, and historical importance, Zumthor embodies the Ruin and history of site through the Medium of Architecture.

The Kolumba museum embodies the meditation of material, spiritual, and inner values of architectural elements that are engaged with environment. Through stimuli, and encounters with specific details of the building design, Peter Zumthor shows that he is more interested in how the observers interact and engage with the architecture
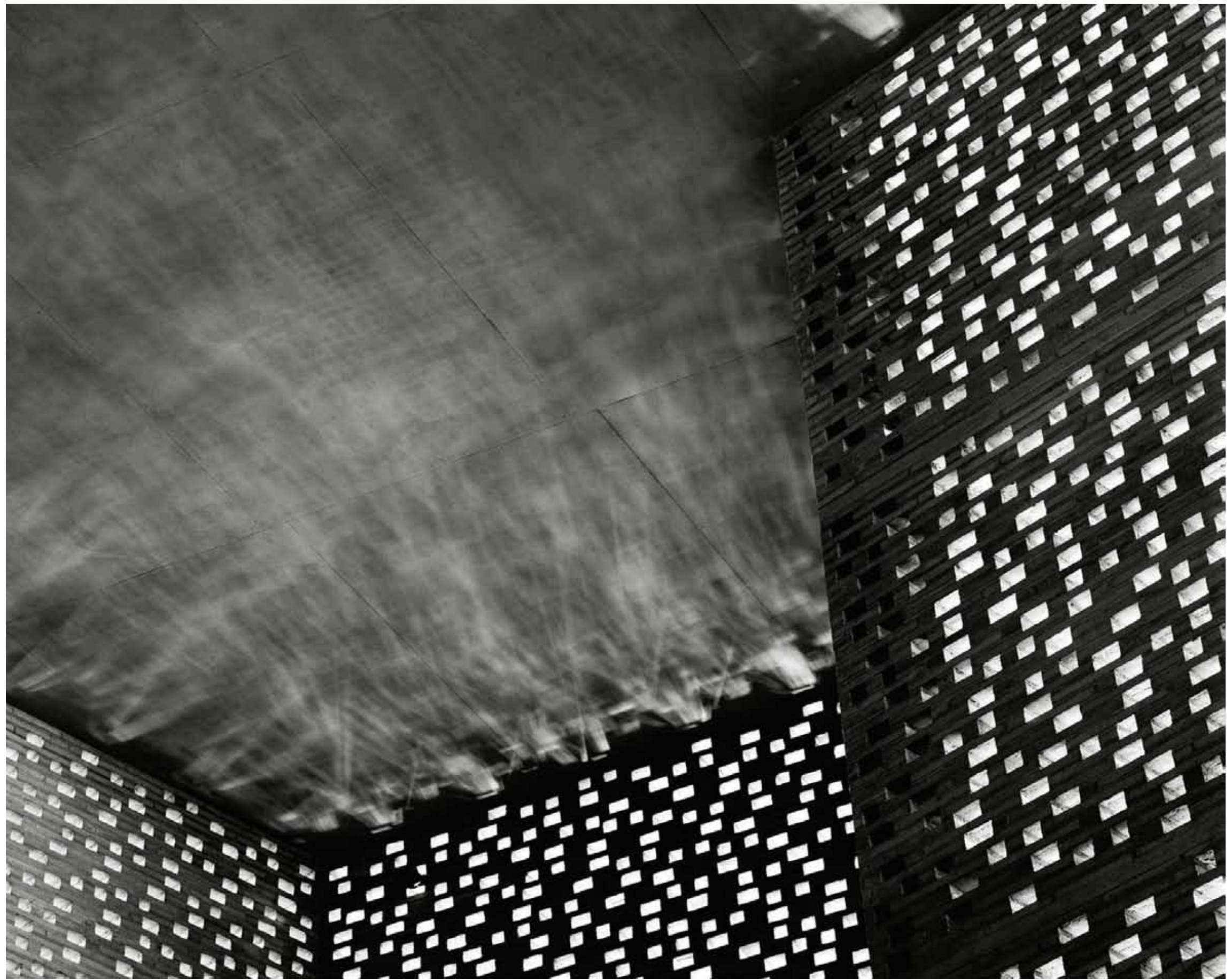
Figure 7.2

rather than merely visual aesthetics. The ruins of the site produce the variables in which Zumthor follows in their presence, stimulating the mind into filling in the gaps of the scarred history of the site. Through the scars a fiction is simulated from the observer's experience. Paul Ricoeur suggests that, "fiction, in turn, proceeds from images by the means of new combinations. Fictions are merely complex ideas whose components are derived from previous experience." The fiction of the experience of the Kolumba thus becomes more powerful than the existence of it viewed as just materials. From the fiction, the truth of the site and history is revealed. The people of Cologne choose to remember what horrific history has occurred in the city, but it not understood as monumental or antiquarian, it is understood through a critical view. If the Kolumba was through monumental history, Zumthor would have created a similar church encompassing the ruins of the old, forgetting what was there. If Zumthor designed with an antiquarian understanding of history, he would have rebuilt the church for what it was, and not what it could be, again, this is not bringing the past within the present. Thus the Kolumba can be viewed the through the critical understanding, which Zumthor did design in.

As the scars of the Kolumba give way to the experience, the scars of the brewery that now sits abandoned on the site stirring the emotions of those who choose to visit the ruins. With the combining of the new and the old, the gap between the past and present shrinks. The ruins contain layers upon layers of history and built significance, like a palimpsest aged with time. The palimpsest however is always added too, the writings of the new are contained within the old. The rare books library will be a conglomeration of the newly built structure, within the old ruins of the brewery. Through the layers of the palimpsest we can observe the importance of relationships of the writings themselves. In the readings Cyril and Lilaine

Welch, the relationship between poetry and philosophy is highlighted as movement within time. This relationship between the two develops the importance of both, but if the balance is not kept in check, poetry becomes philosophy, and philosophy becomes poetry, the similarities must be understood or the meanings and importance of both become convoluted.

The rare books library must have a relationship between the new and the old, the balance, ever so delicate, must be shown through the built environment. With the merging of new building practices and materiality, the newly built additions and areas will highlight the old cast iron, brick, and poured concrete forms. The warm colors of the old and rusted, will be encased with the modern glass, and the opaque minimalist values of simplicity. This contradiction of materials brings the opposites closer together, creating a sense space between the two. Spaces contained within the aged brick walls, will be delicately cut sharing views of the new, this relationship of give and take speaks of Bazons Brock saying, "one can only understand the known from the new; one can only experience the new with a new view of the old."

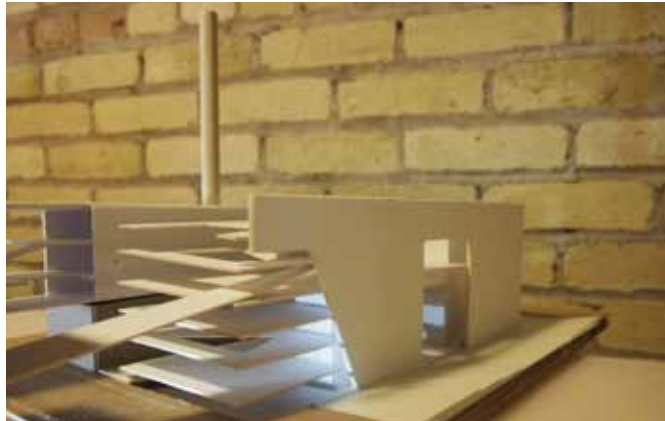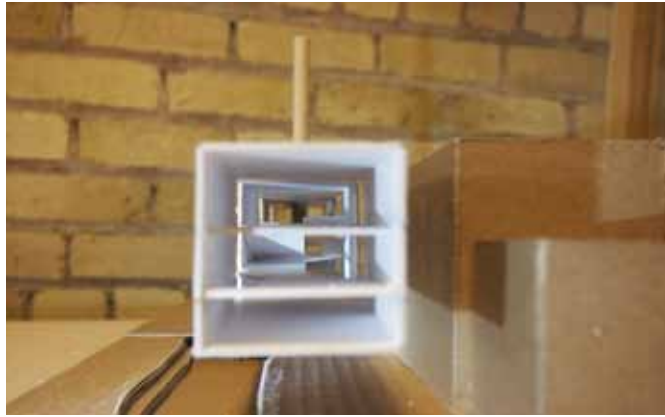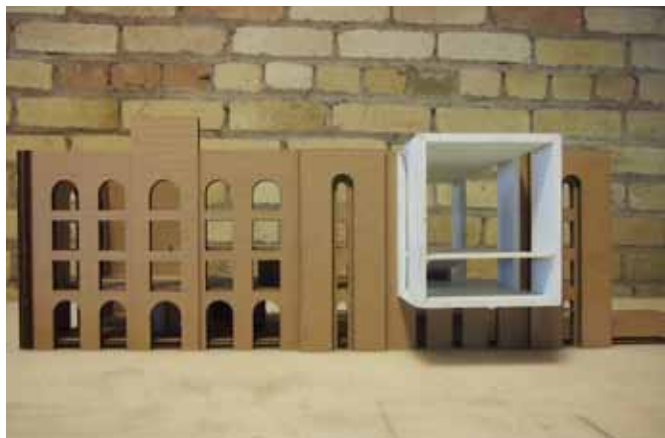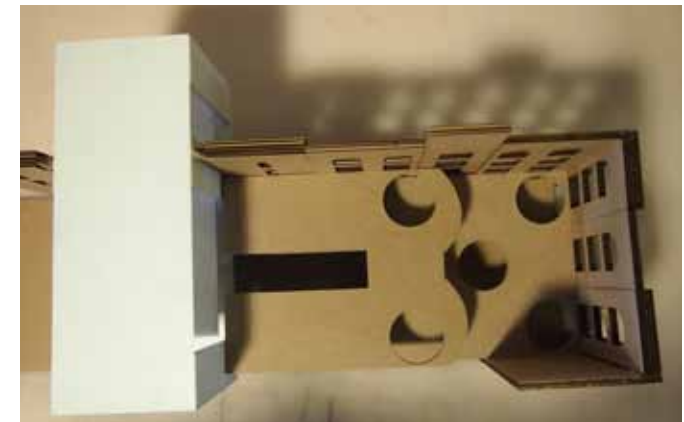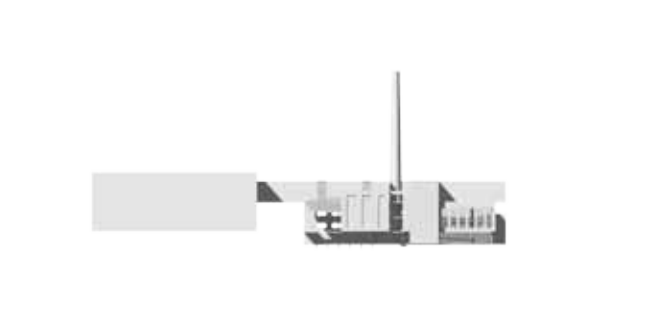*Figure 7.3*   131

Process

Through the artefact I developed the precedent on which my rare books library will be designed. Through careful consideration, and multiple modes of exploration I used sketching, drawing, digital modeling, writing, and physical modeling as outlets in which I engaged with design. Through many views, one develops a holistic approach to design, that encompasses not just one aspect of it. This was very helpful due to the fact, that it was comprehensive in the sense understanding it not just as a building, but as a research and historical project.
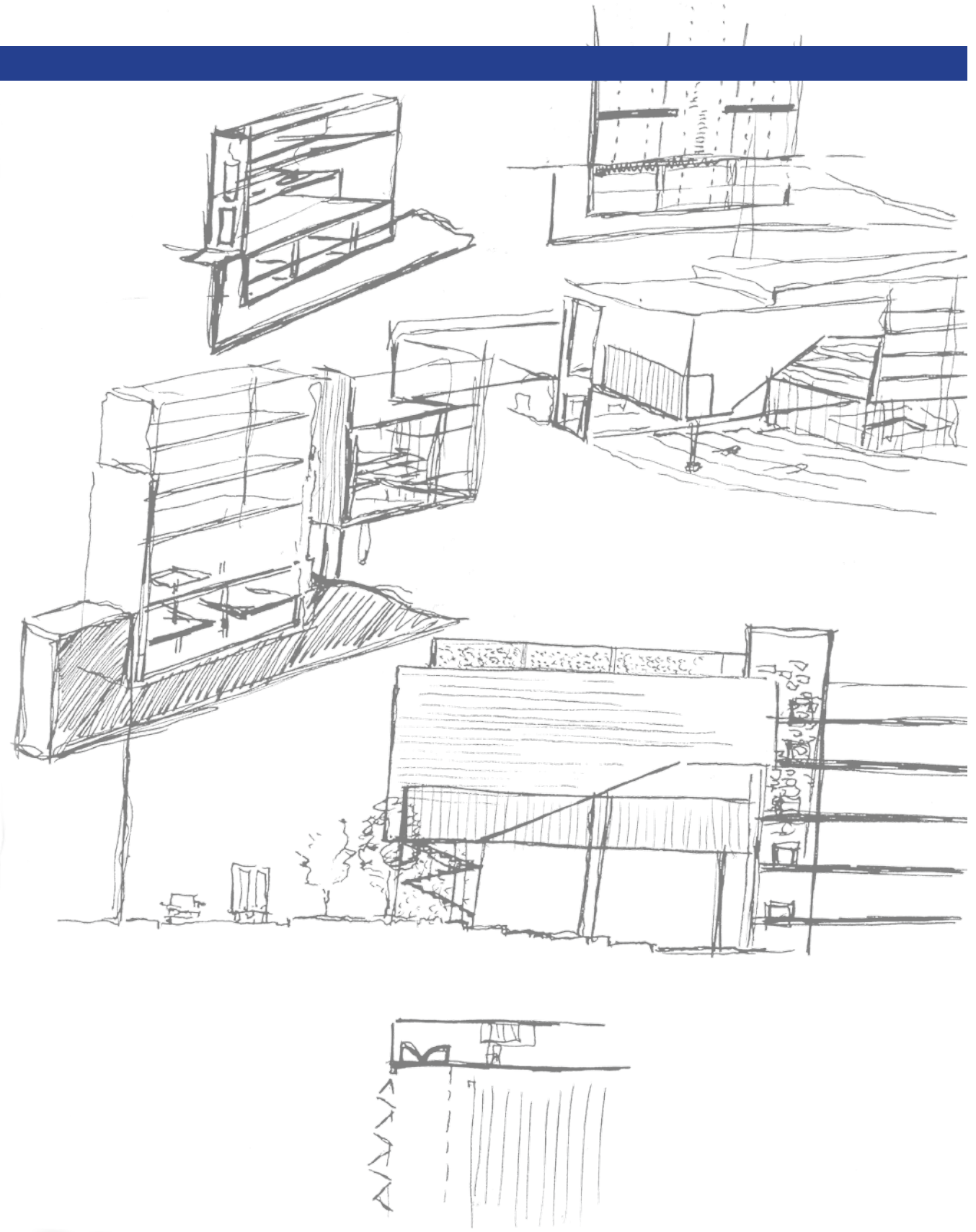
Figure 7.4

Figure 7.5
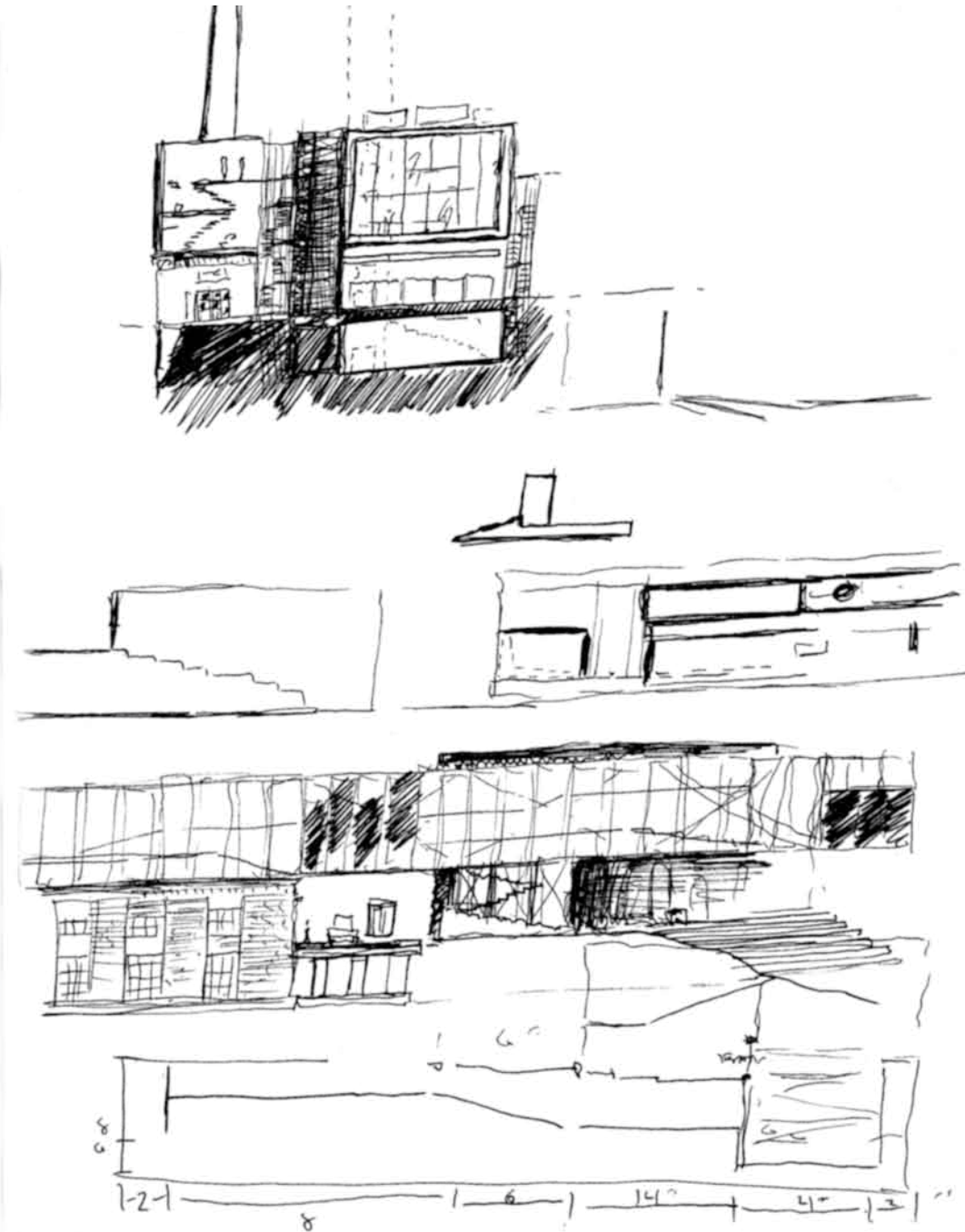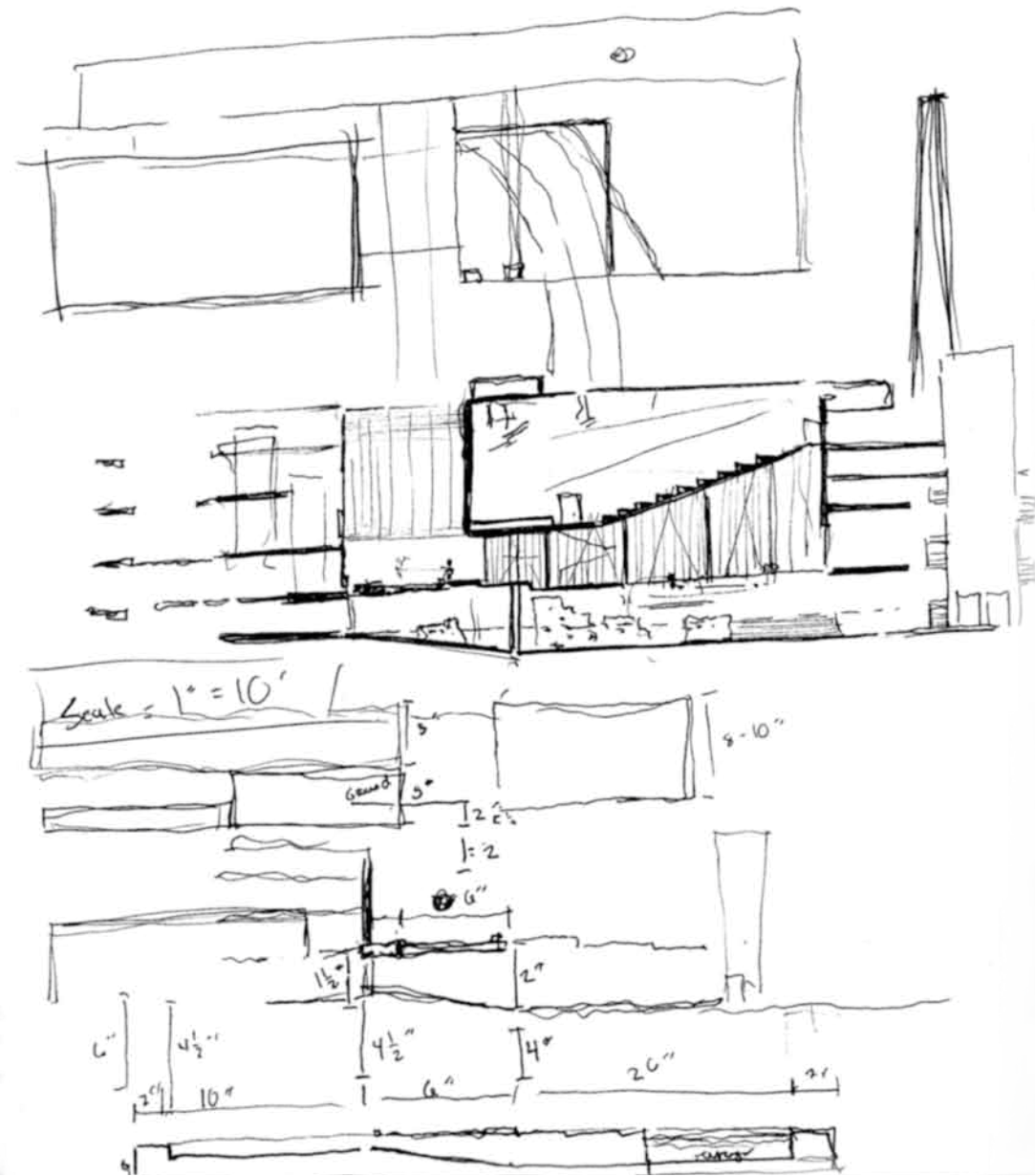
Storytelling – through the architecture
↳ A story be told →

Two levels - simultaneously
↳ suspends between two realities
physical reality,
▷ imaginary reality

Building – utility and matter – temporal spatial metaphor

How does architecture evoke an matter of perception?
participation
– in what way??

* pick a precedent (other building) How they described
the work.

– Relationships –
Metaphor – bridges things ——→ ▷
Coral + Lillian Wilch
Paul Ricoeur the F
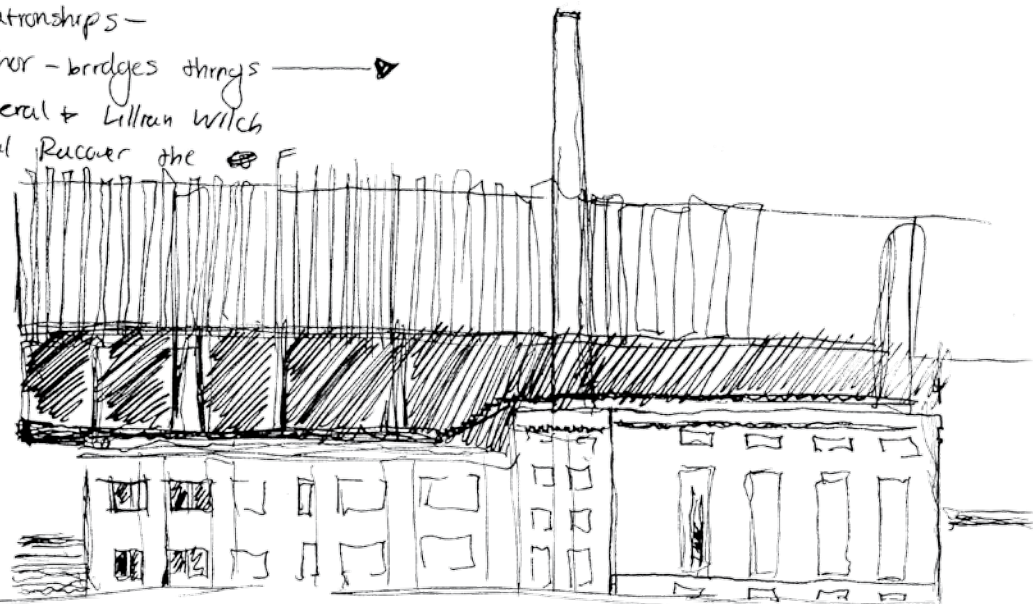
* Imaginations put to work
through a work *

→▷ pushing in a particular
way ↳→ ▷ Through specific,
we reach the big picture.

Joseph Conway – same thesis site . . . .

– How are the books being held
– Bridge into older spaces . . .
– Using Existing foundations
– ▷ Theater ▷ presentations areas.
– Details in how New and old come together

Daniel Liepackens
Void

Presentation
Drawings!!

▷ – With Artefact *
– Models ▷ Drawings
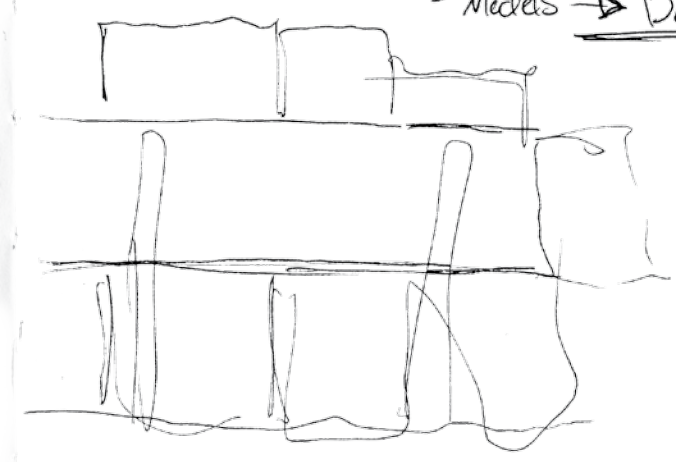
Figure 7.6

M o d e l s

Figure 7.7

Figure 7.8

Figure 7.9

Figure 7.10
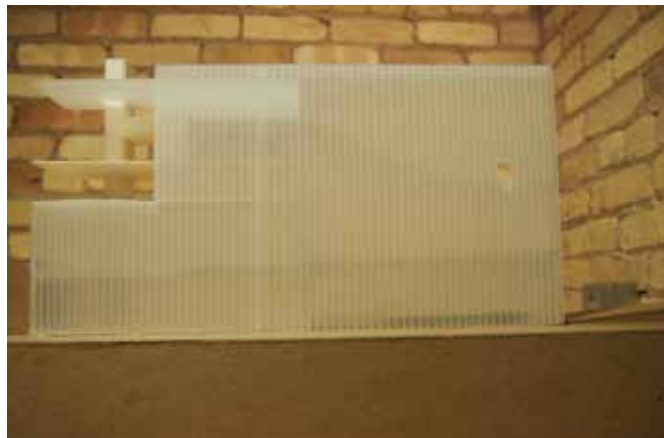
Figure 7.11

Figure 7.12
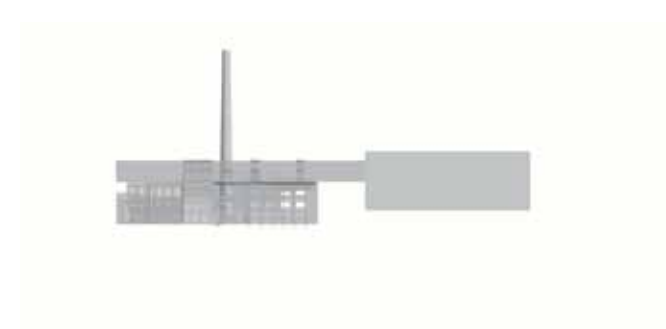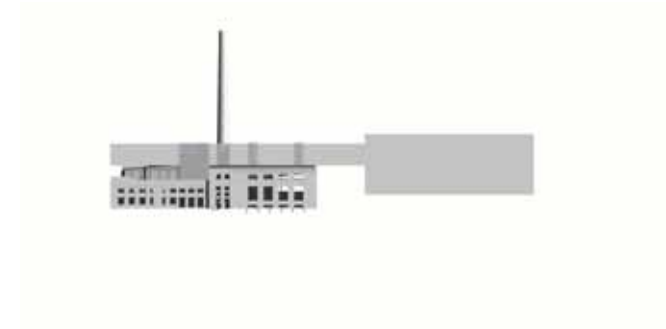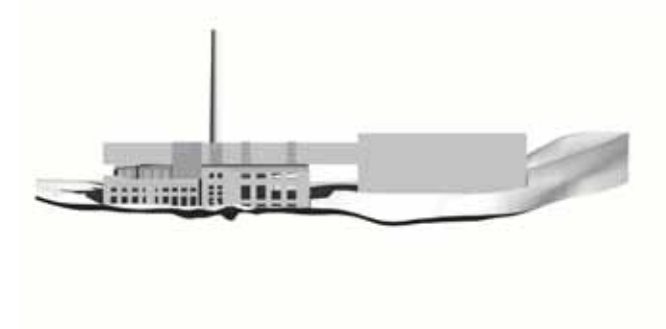
Digital

Figure 7.13

Figure 7.13
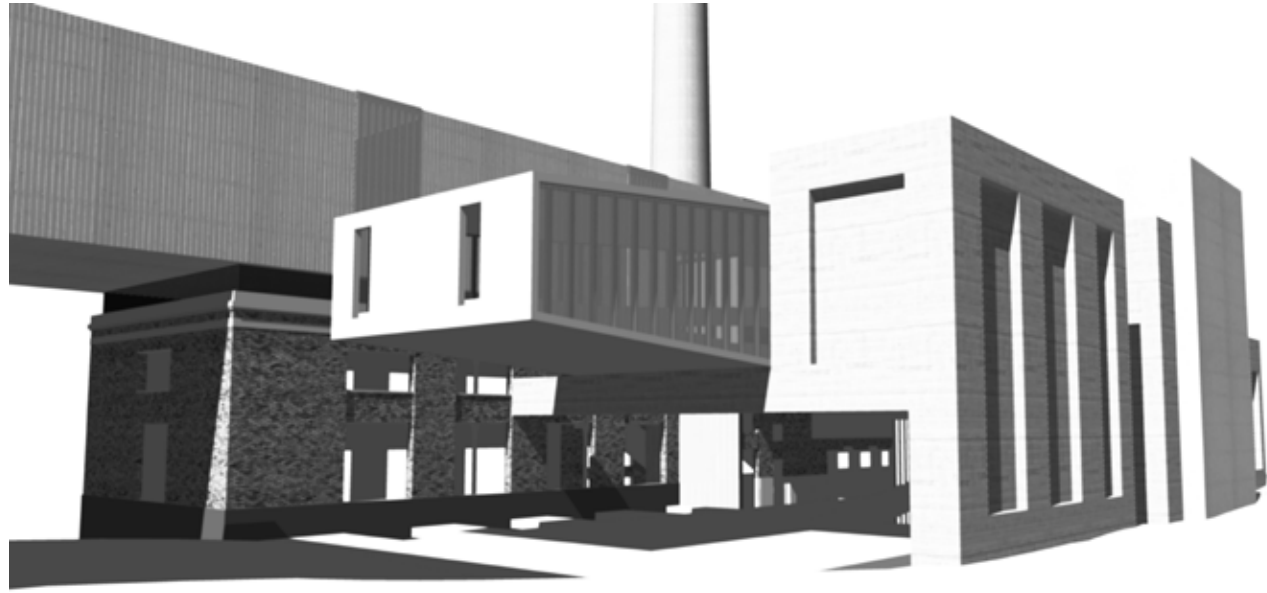
Figure 7.14

Figure 7.14
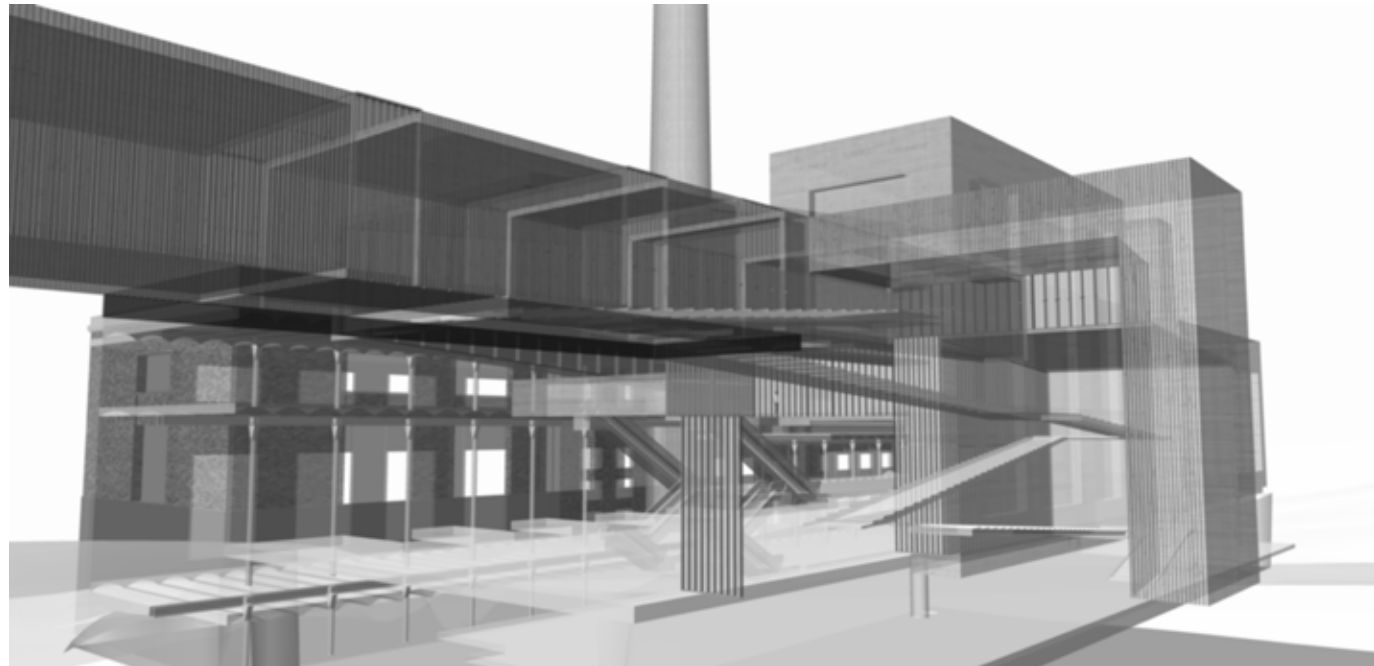
Project
Solution

Figure 8.1

Figure 8.2

Figure 8.3

Views and callouts:

⬤ Vertical circulation

◯ Rare book preservation enclosures

⬤ Mechanical spaces

Floorplan key:

1- Main Entry
2- Foyer/welcoming desk
3- Book display and digital media
4- Historic hamm's brewery display
5- Rare books and manuscript display
6- Ruins
7- Storage
8- Freight elevator
9- Loading dock
10- Secondary south entry
11- Gallery
12- Flexible display space
13- Mechanical
14- Secondary book display/reading area
15- Souh entry foyer
16- Auditorium
17- Upper gallery
18- Reading/studying rooms
19- Grand reading room
20- Scenic outlook
21- Restoration lab/offices
22- Mechanical

Top Floors

Mid Floors

Ground Floors
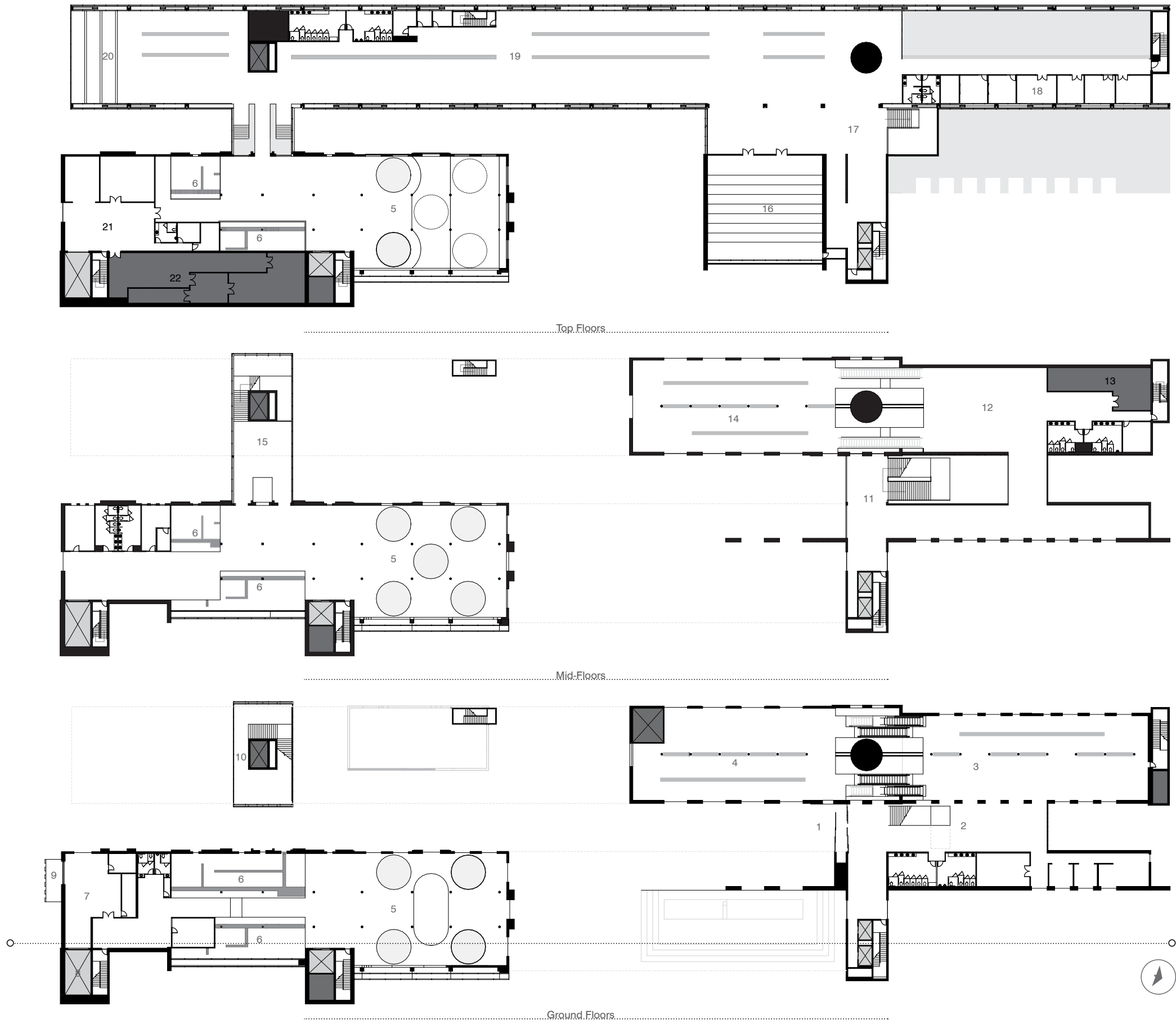
Floorplates and structure
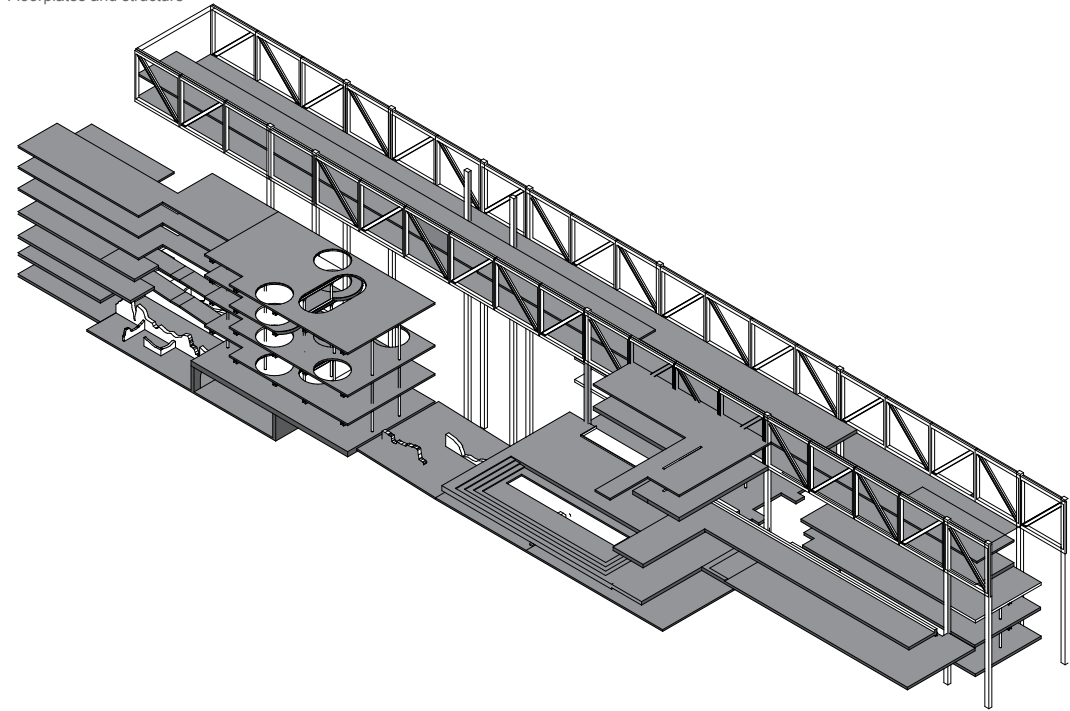
Figure 8.4

Ruins and structure

Figure 8.6

Egress

Figure 8.7

Mechanical spaces

Building progression

Figure 8.8
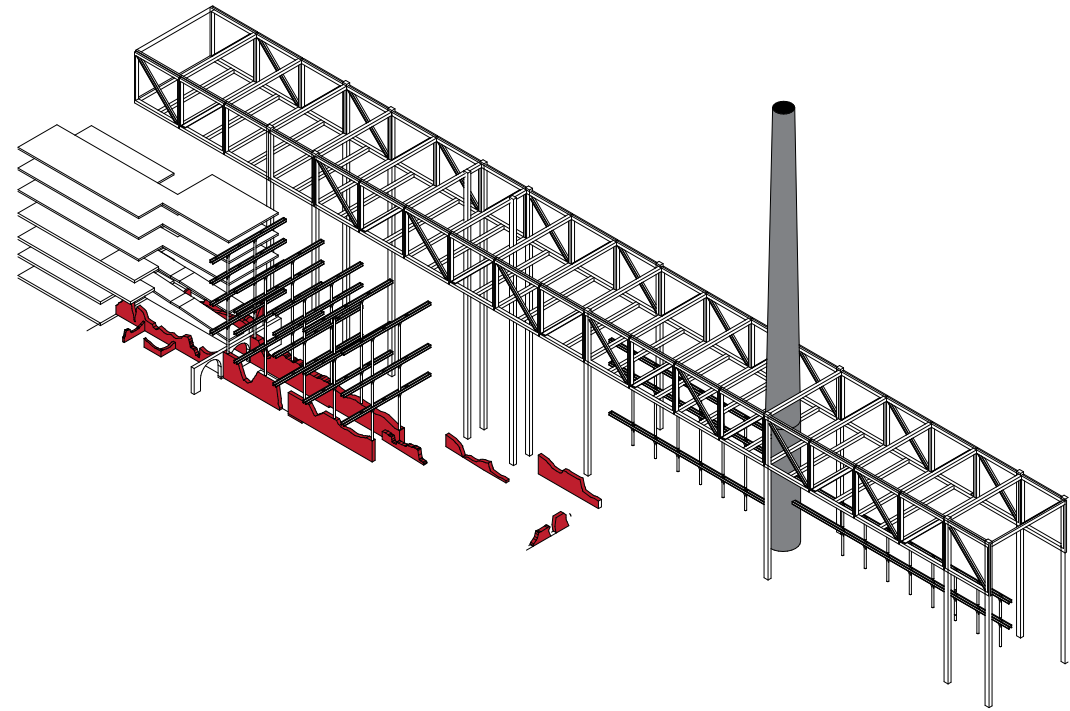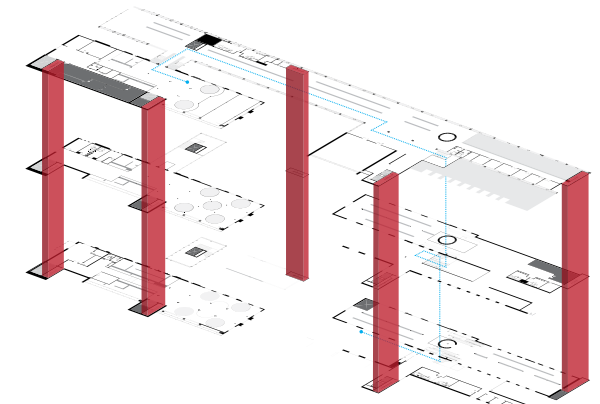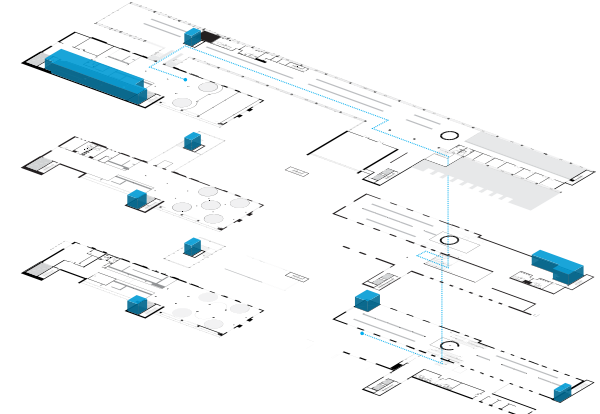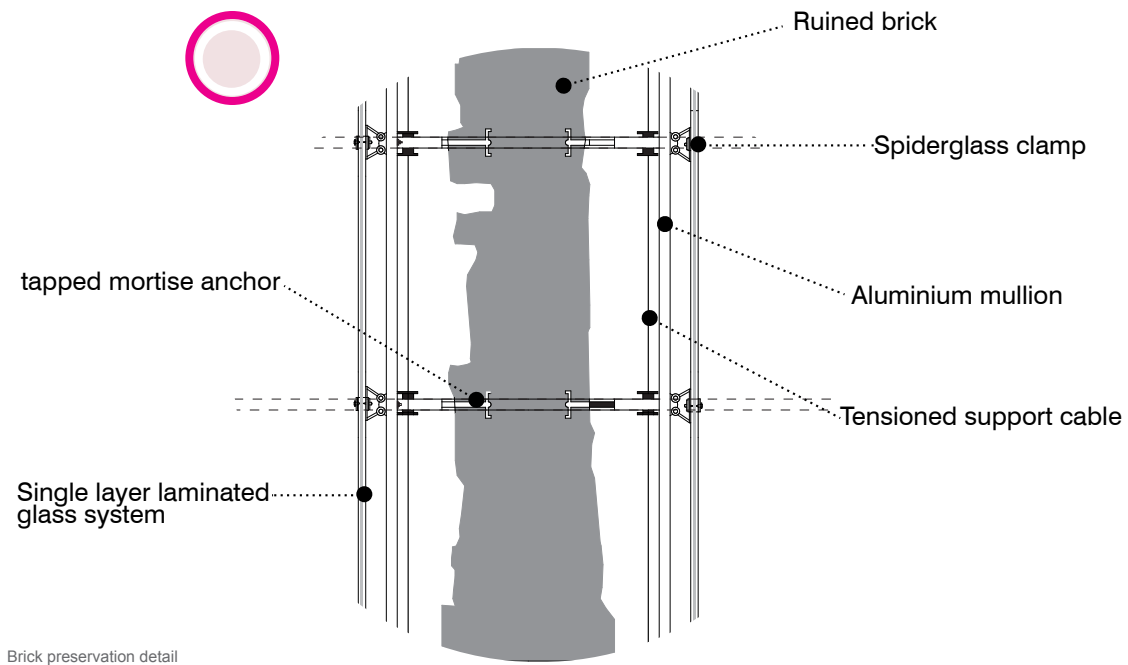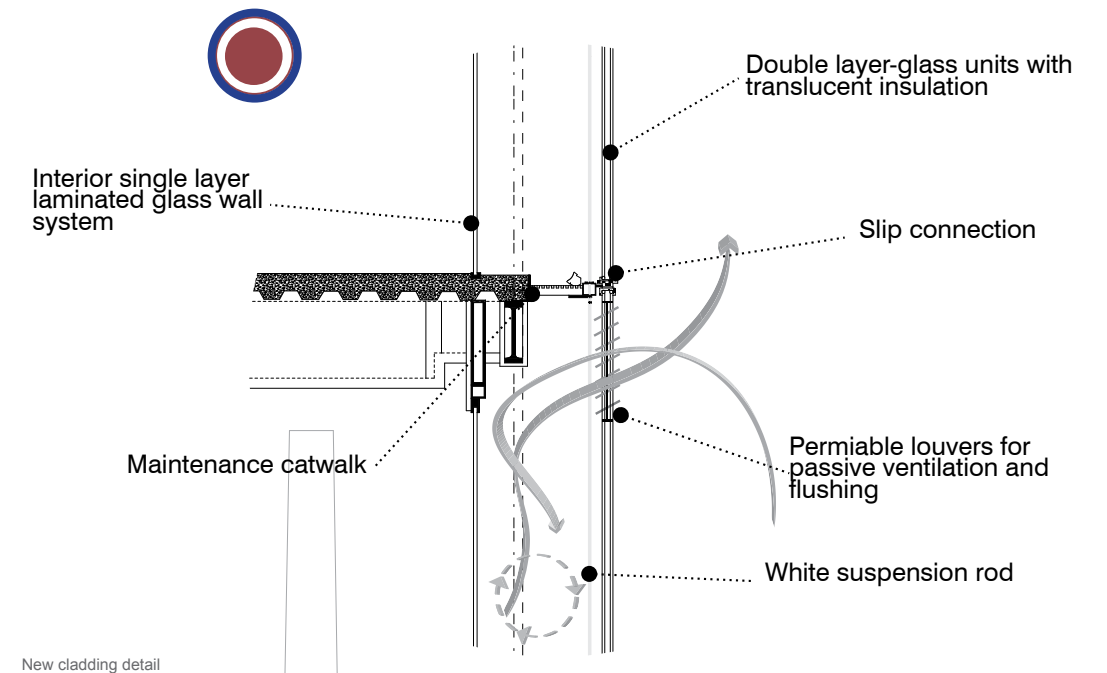
Figure 8.5
156   *Ruin: The Library Reimagined*   157

Ruined brick

Spiderglass clamp

Aluminium mullion

tapped mortise anchor

Tensioned support cable

Single layer laminated
glass system
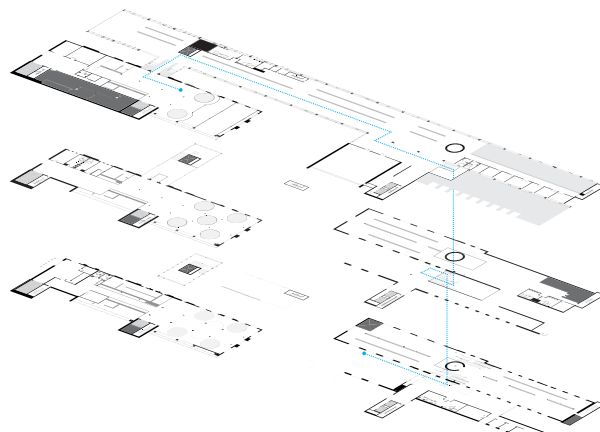
Brick preservation detail

Figure 8.9

Double layer-glass units with
translucent insulation

Interior single layer
laminated glass wall
system

Slip connection

Maintenance catwalk

Permiable louvers for
passive ventilation and
flushing

White suspension rod

New cladding detail

Figure 8.10

Section Cut
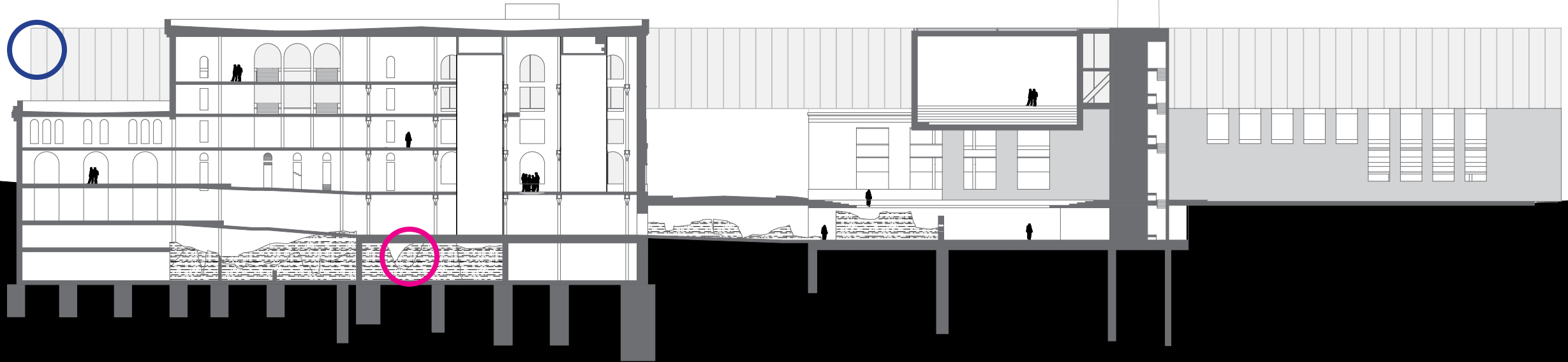
Figure 8.11

Preservation tanks

Climate controlled glass
preservation enclosure

Robotic book
retrieval arm

Fire supression
system

Figure 8.12

Central support column

Actuated servo arm

Magnetic bearing system
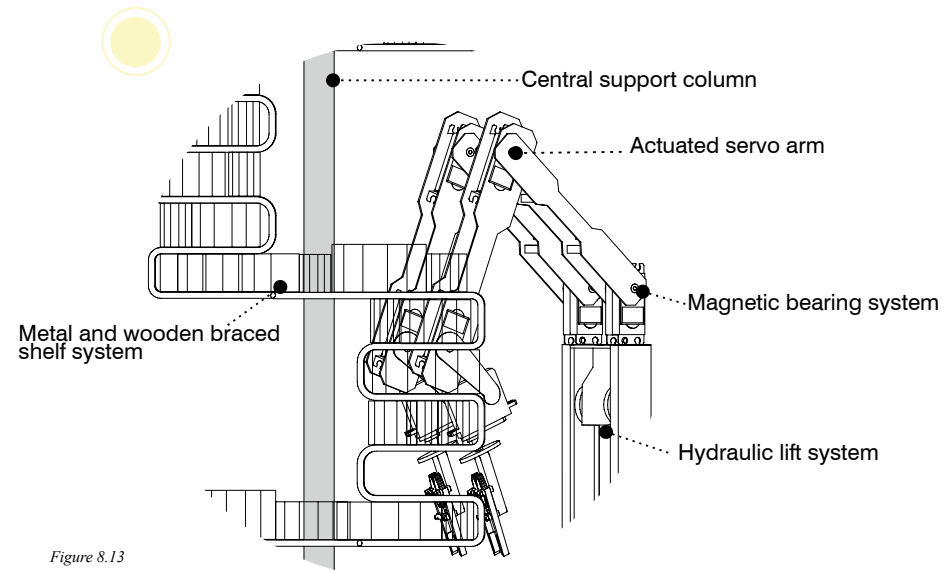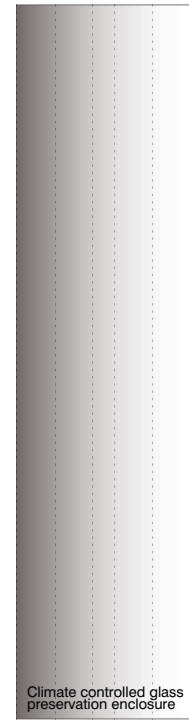
Metal and wooden braced
shelf system

Hydraulic lift system

Figure 8.13


Figure 8.14

Figure 8.15

Entering from the street the new and the old come together in a delicate balance. Much of the new material reflects the old, this creates a relationship between the two, seeing the old within the new. The old brewery's façade then becomes encapsulated and preserved, encompassing Nieztches critical view of history.

Figure 8.16
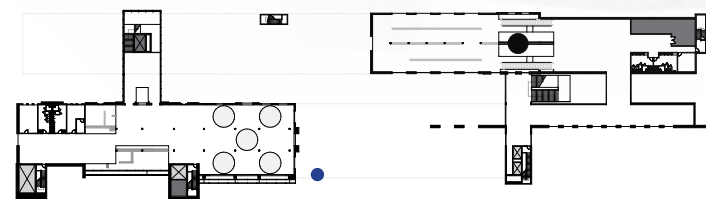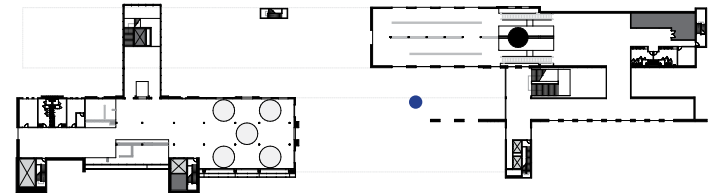
The entry shows once again the relationship between the new and old. The entry is recessed in the overhanging auditorium space above. The cladding of the material is reflective showing the reflections of the old, when you walk underneath, the person becomes part of the building through this reflection. These layers of reflection are the beginnings of the palimpsest of which the building strives capture.

Figure 8.17
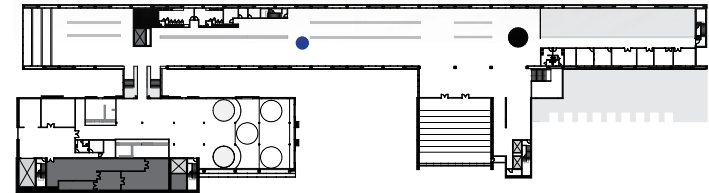
As we enter the grand reading room, we can see the material choices are very minimal, this compliments the books, allowing them to become the center of attention. The subtle details direct your attention to the books. The simplicity of the space is quite the opposite of the ornate façade of the brewery. Through the reflective materials of the grand reading room, the façade of the old can be seen in minute reflections in the upper book cases protective catwalk. This again, promotes the idea the old is always within the new.

Figure 8.18
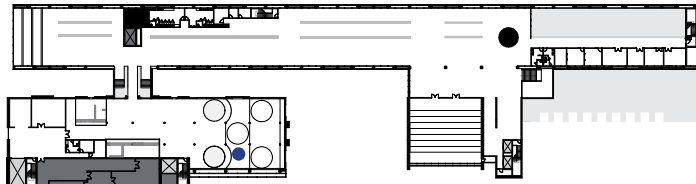
From the grand reading room we connect to the old brew house which house the preservation tubes for the rare books. Each tube is individually climate controlled for more efficiency and better preservation methods.

Figure 8.19
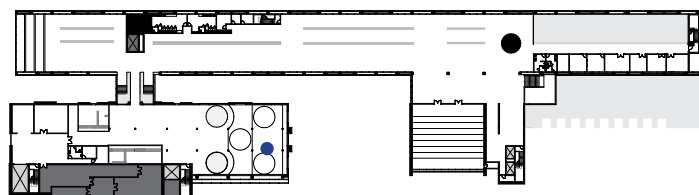
From within the old brew house, we can see up close of how the preservation tanks work. The robotic arms are used in the most delicate tasks of lifting the book off the shelf and retrieving it for reading. The robotic arm is used because it can apply an even amount pressure on the book without any damage. The unique balance between the old and new, is a display of how the past is ever changing within the future.

Figure 8.20
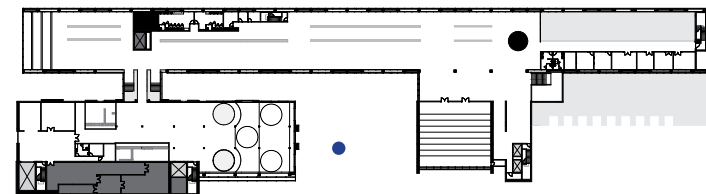
Once you are below the preservation tanks you come into a space that connects under the street to the main entrance, this secondary access allows a direct path for the scholar or reader to get access to the preservation tanks. In this area, much of what is left is the supporting load bearing brick wall that held the old steam tunnels and other various connections of rooms and corridors.

Figure 8.21
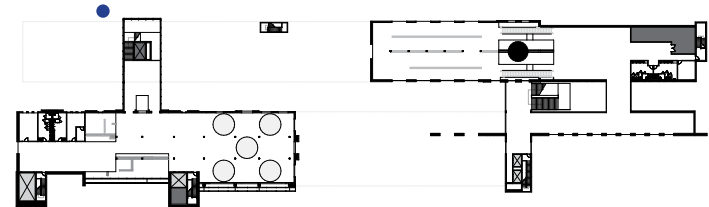
The southern perspective of the new addition that frames the old façade of the brewery, is an example which I am displaying the older architecture. By framing the old façade with the new and reflective, the breweries exterior is gaining and showing its importance to the viewer. These selected views of the whole project give glimpses of the rare books library adapting to its preexisting conditions. By utilizing what is there, we can see the potential for the future, and discover a new view of what a library can be from the old.

Figure 8.22

Project
Installation

Figure 9.1

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Figure 0.1

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Hometown: Grand Forks ND

2nd year

Tea House project | Vorderbruggen
Fall 2011
Boat House | Vorderbruggen
Fall 2011
Dance Studio | Booker
Spring 2011
Unconventional Dwelling | Booker
Spring 2011

3rd year

Church Remodel Project | Kratky
Fall 2012
Brewery | Martens
Spring 2013
Dinosaur Museum | Martens
Spring 2013

4th year

High Rise | Crutchfield
Fall 2013
Urban Infill Project | Ramsey
Spring 2014

5th year

Wetland Research Lab | Barnhouse
Fall 2014

"NDSU, where the winters are cold, but the studio warm."
-Samuel Erickson