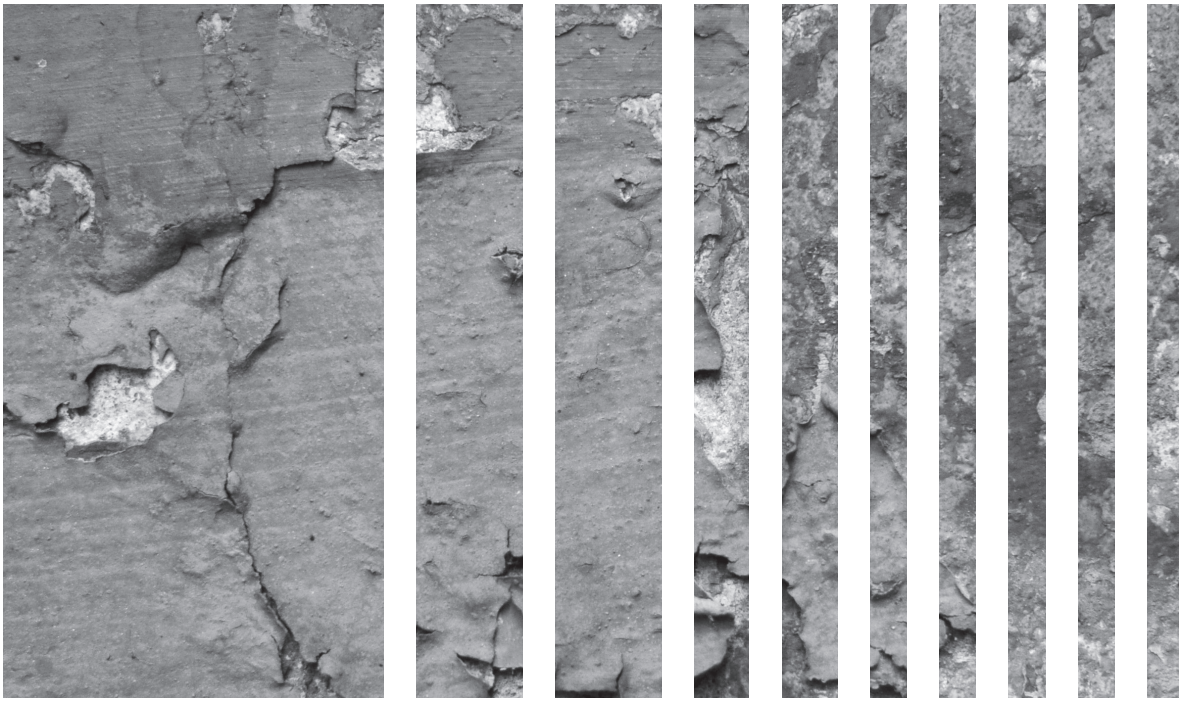
Digital Oasis

An Architecture of the Tangible



Daniel T. Davy

Digital Oasis

An Architecture of the Tangible

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

By

Daniel T. Davy

In Partial Fulfillment of the Requirements
For the Degree of
Master of Architecture

Primary Thesis Advisor

5/5/12

Thesis Committee Chair

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Thesis Abstract

Daniel T. Davy

TITLE

West Loop Community Workshop
TYPOLOGY
Community Workshop/Center
92,000 s.f.
Chicago, Il

This thesis approaches the issue "As technology further develops our abilities to communicate across distance, what role will public space play, if any, in the future shaping of our cities?" The Theoretical Premise/ Unifying Idea that guides the research is, "The digital world must not be allowed to become a cheap substitute for our tactile and perceptual experience of the world." The Project Justification is, "An abandonment of the tactile world, though voluntary, is a de-evolution of the way we experience, communicate, and appreciate the world. An architecture that reaffirms the delight and surprise inherent only in the tactile world of perception is necessary for a society that seeks to communicate and better itself."

KEY WORDS
Public Space, City, Perceptual Architecture, Communication

Problem Statement

As technology further develops our abilities to communicate across distance, what role will public space play, if any, in the future shaping of our cities?

Statement of Intent

Statement of Intent

TYPOLOGY

Adaptive Public Space and Community Workshop

CLAIM

There is a growing disconnect between the world of the self - the mind - and the world of the tactile, the physical world. A growing dependence on self-growth through digital means diminishes the role of architecture, and specifically an architecture of the tactile, plays on human development and delight.

PREMISES

THE ACTOR

The tactile, physical world is paramount to human understanding and delight of space and existance.

THE ACTION

To reduce dependence on an individualistic digital-based existance, care must be taken to bring architecture beyond a mere play of formal and visual aesthetics, but instead include a sense of poetics and an understanding of human tactile perception.

Statement of Intent

THE OBJECT ACTED UPON

People have abandoned the tactile world not because the digital world is superior, but because our cities rarely offer experiences that go beyond that of the visual or aesthetic.

MANNER OF ACTION

An architecture that addresses the full breadth of human perception, including the permanence and impermanence of time, will allow for people an experiental depth that the digital world cannot recreate.

THEORETICAL PREMISE/UNIFYING IDEA

The digital world must not be allowed to become a cheap substitute for our tactile and perceptual experience of the world.

Project Justification

An abandonment of the tactile world, though voluntary, is a de-evolution of the way we experience, communicate, and appreciate the world. An architecture that reaffirms the delight and surprise inherent only in the tactile world of perception is necessary for a society that seeks to communicate and better itself.

Proposal

Narrative

Have we become too dependent on technology? Ask most people in the developed world, and you may hear a resounding no. Technology does wonderful things, after all. It has helped us travel to all corners of the globe, to build towering metropolises, and to communicate almost at the speed of light.

While technology has allowed great feats in engineering and science, the increasing pervasiveness of digital technology as a means of communication is doing great harms to our built environment. Increasingly, communication technology has taken the context out of experience. With no orientation for experience, memory and experience becomes muddled. As digital communication increasingly homogenizes architectural space, as its uses increasingly become flexible and mixed, we are in more need than ever for an architecture that heightens our experience, not simply accomodates for it.

Not only does the digital homogenize space, but it also disrupts the community with a fetishized view of the individual. For a communal species, technology has done a large part in driving wedges in our abilities to think holistically about a group. Even before the digital revolution, technology has increasingly iconicized the individual. Maslow's hierarchy of needs is an example of the modern pursuit of perfection of the individual. Digital technology has only furthered this pursuit - most interaction can now be done solely through the digital

medium.

We must demand an architecture that offers what the digital world cannot, an architecture that reinforces an experience with both body and mind, and not simply the mind. If our architecture continues to focus primarily on image and symbol, then there is no competing with the digital world. However, if we instead design to heighten a specific experience, one that engages both the body and mind and requires participation on the part of the occupant, we can begin reaffirm a city based on the community, and not the individual. This project will explore the ways in which architecture and poetic tectonics can shape the way we interact with our cities and with each other.

User/Client Description

OWNER

The community workshop will be owned, operated and maintained by the city of Chicago. Partial funds will be supplied by the city of Chicago, with the remaining funding bridged by citizen donations and federal grants.

USERS

The workshop will be available for all members of the Chicago community, and for tourists to the region on a part-time basis. It will work on a membership basis, much like a library. Access and use of the facility will be free to residents, with only a membership account needed to access the workshops.

The facility will be able to easily handle all patrons within a 30 minute walking radius from the building. It will also accomodate peak weekend periods when additional members access the facility who live further than this radius. The facility will be staffed to operate for 16 hours a day, with expected peaks after business hours from employed members.

The facility aims to reach all members of the community, regardless of economic or social situations. The design will serve as a crucial community center for strengthening experiences and relationships among all those in the community. To do this, the facility will have programs to give assistance to those with less economic means.

Elements

- **OFFICES**

  Offices will be provided for the staff and mentors.

- **LOUNGE**

  Will serve as a meeting and social space for staff and members

- **DIGITAL STUDIO**
- **GALLERY**

  A gallery will be provided to provide inspiration and present work.

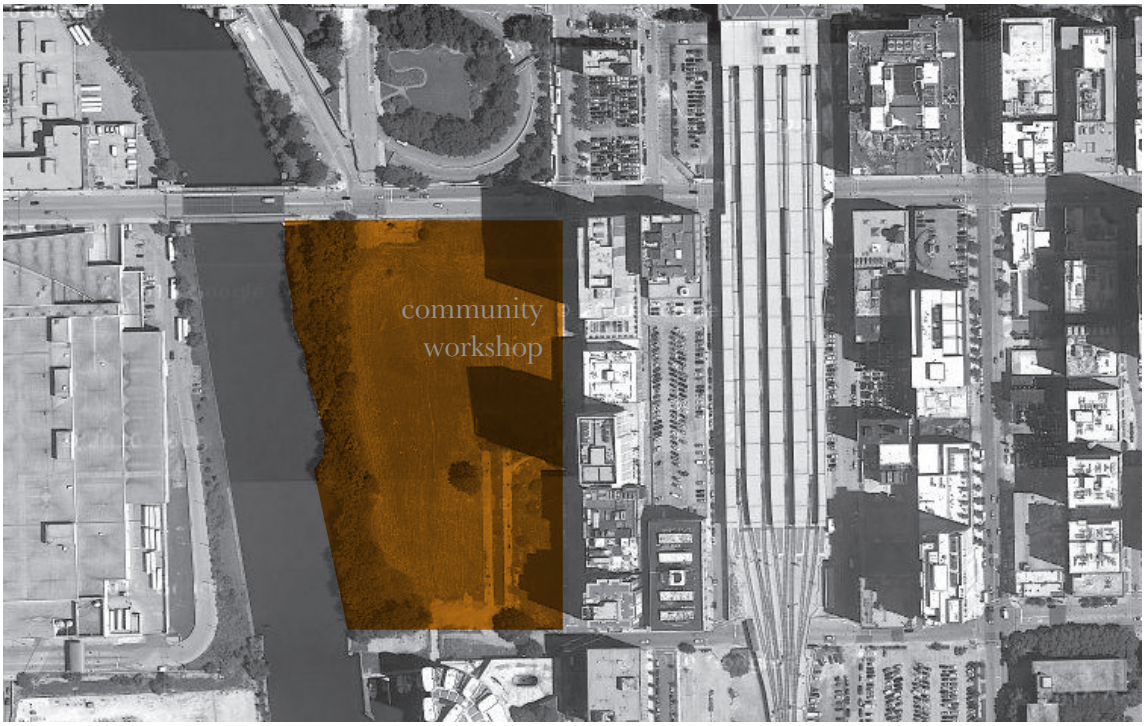
- **CAFETERIA**
- **LOBBY/SECURITY**
- **FIRST AID**

  Required for injuries and accidents. Multiple stations will be needed.

- **WOODSHOP**
- **METALSHOP**
- **CERAMICS STUDIO**
- **RESTROOMS**
- **JANITOR**
- **PARKING STRUCTURE**
- **BICYCLE STORAGE**

Site Information

Elements



Site Information

Chicago has a long history of staying on the cutting edge of technology, and through it has built a city based on order, power, and the cartesian grid. Chicago's emphasis on image and the individual make it an ideal site for a design intended for the reinforcement of the community and the physical world.

ADDRESS

600 Wells St.

South Loop

Chicago, IL

Area: 355,000 s.f.

The site is bordered by the Chicago River to the West, the Congress Parkway to the North, a central train hub to the East, and a Catholic school to the South.

LANDMARKS

Sears Tower, Chicago River, Dearborn Park, Grant Park, The Loop, Train Yard

VIEWS

The site has an extended view of the South Chicago river as it flows down towards the older manufacturing section of Chicago. The Sears tower is also a dominant landmark to the North, casting no shadow, but reinforcing the proximity of the central loop. Grant Park can be seen down the nearby Congress Parkway, with a view of the Buckingham Fountain.

Emphasis

Breaking the homogeny of experience that the increasingly digital world and its ease of use brings is of greatest importance to this thesis. Memory and experience do not work in a linear fashion, but instead are both nodal and cyclical in nature. We remember and experience moments, not an objective recording, and it is through memory and its representations in the built environment that we are very much rooted to our world and to each other.

Plan for Proceeding

RESEARCH DIRECTION

Research areas will include but are not limited to: the theoretical premise, memory, sociology, programming, community centers, site analysis, rainwater collection, fabrication methods, and circulation design.

DESIGN METHODOLOGY

The Design methodology will include several aspects:

Mixed-Method Analysis

Quantitative and Qualitative analysis

Graphic Analysis

3D Analysis

Systems Analysis

The concurrent transformative strategy will be used to guide the design methodology. Data will be gathered through archival research and analysis of data and demographics. Data will also be accrued by site visit and analysis.

DOCUMENTATION OF DESIGN PROCESS

Documentation of the process will be done digitally through both scans of physical work and through accumulation of digital process data. It will be provided to the NDSU digital commons for review among other scholars and will be provided along with the thesis at review. Data will be compiled bi-weekly for documentation and review.

Schedule

January 9th - January 16th

Schematic Design

January 17th - January 25th

Structural Modeling and Circulation Design

January 26th - February 9th

Revision/graphic design of thesis book & creation of presentation worthy schematic design graphics

February 10th - March 5th

Design Development/Detail Design/Prep-eration for Mid-term reviews

March 6th - April 16h

Presentation work

Previous Studio Experience

SECOND YEAR

arch 271

darryl booker

- tea House
- boat House

arch 272

joan vorderbruggen

- NDSU performance center
- marfa residence

FOURTH YEAR

arch 471

don faulkner

- mixed-use high rise

arch 472

don faulkner/frank kratky

- williston masterplan

THIRD YEAR

arch 371

david crutchfield

- probstfield farm
- NDSU downtown library
- snow sculptures

arch 372

Cindy Urness

- illinois natatorium
- downtown trans-terminal

FIFTH YEAR

arch 771

Stephen Wischer

- architectural artefacts

Program

Research From the Theoretical Premise

There are many reasons for the growing disconnect between the city and the citizen. Robert M. Pirzig talked about this disconnect in *Zen and the Art of Motorcycle Maintenance.* Pirzig noted that technology itself was not the issue with the growing discomfort with modernization and increasingly disorienting technology. It was a lack of understanding this technology, context, that was driving citizens towards the anti-reason romantic lines of thought.

The increasing prevalence of more and more advanced communication technology typifies this disorientation that technology provides. Marc Auge writes in *Non-Places: Introduction to an Anthropology of Supermodernity* that communication and transportation technology (essentially serving the same purpose, as far as this thesis is concerned) is increasingly shrinking the world. Ironically, this shrinking of the world is caused actually by expansion of transportation and communication technologies. Essentially, space itself is shrunk and scrubbed clean of both context and meaning in the modern world.

Alas, we live in an era in which the cities we live in, and the actions we take within them, are rubbed raw of experience and memory. Instead, modern cities too often serve as a myriad of disconnected dwellings and businesses. That if it weren't for the roads and proximity connecting them, they would be no more neighbors or contextually related than The Great Wall and the Berlin version.

This isn't to say that urbanization or modernization are entirely to blame for the current condition. And even digital communication itself is only a tool, something people could easily use the communication of ideas among a community of like-minded people for the education and stimulation of creativity of all parties involved. Digital communication *is* used for these purposes, and as such often serves as a valuable tool for the communication of ideas and easy access to education.

However, digital communication is among the vast majority of the population not used for these purposes. Instead, we see it used as a substitute for interaction with the physical world. Though the Internet offers vast opportunities for self-betterment, it is far too often used to live vicariously through others.

It is curious how often that this culture of the cult of personality

is decried in our society, and yet there is little consensus for its causes or for its solution. Again, it comes down to the way we experience through digital communication. Unlike almost every tool from humanity's past, we use digital communication as a means *escapism* rather than as a means of *doing*.

So why is it important that we live through *doing*? To better understand this, we must look at how we experience the physical world we inhabit. Because of the prevelance of modern thought since Rene Descartes sparked modern humanism, we tend to view time as both incredibly linear and of a steady rhythm. However, our ancient ancestors would not have agreed. The Greeks themselves believed that time ebbed and flowed at different rates by the will of the gods.

This makes sense, though of course not scientifically. But science has never been able to account for human perception! Instead of perceiving time as a steady rhythm, it instead makes sense that we see it as a series of hills and valleys. We function only through memory, for as soon as we realize we are in the present, that moment too has passed into memory. Thus memory is how we always perceive the world, and certainly memory is in no ways singularly rhythmic nor linear.

So instead perception, and life itself, is all about specific *experiences*. Experiences of great importance become permanently ingrained within our memory, and experiences of monotony or unimportance or doomed to take no part in the history of our minds.

This is what makes the loss of meaningful events through meaningless cities, meaningless jobs, and meaningless communication so dangerous. We as a society are essentially losing large portions of the quality of our lives due to a lack of meaning and purpose within our physical world. It is through a building designed to foster meaningful relationships while allowing the passage of skilled knowledge from person-to-person within a community that will help to solve this problem that the modern age has brought upon us.

However, the manner in which knowledge is passed on is just as important as the knowledge itself. The modern method of learning is actually a relatively new phenomenon. This method calls for a lack of meaningful or vested interest between the educator and the student. The educator does not often see meaningful or tangible results of the education he has offerred. Instead, the educator is currently a cog in the assembly line, producing a product that has little impact or influence on his life.

Gunther Stent theorizes that if we continue on the current path of modernization, we will soon reach something he calls "The Golden Age." Taking a cue from the ancient Greeks, Stent uses their definition of the Golden Age - a time when man had all his needs fulfilled, was always merry, and never grew old - to ascribe to the coming super-modern era. This era is fast approaching as modern man is coming to a time in which all major problems facing us will have been solved.

However, not all is completely rosy about this scenario. In Stent's vision of this utopian future, there will be 2 classes of people. The small minority who still have the motivation to provide the needs for the large majority, who will be nothing but consumers, having lost any need to provide for their own survival.

Certainly this majority will have access to best entertainment, and almost anything they desire. However, in its quest for this future utopia, will we have lost an essential part of our humaness? Is not our drive to do and to achieve an essential part of who we are? It is my belief that in Stent's future there is room for a 3rd class of citizen, the reincarnation of the faustian man. The man, who even though his needs are entirely met, still seeks to better himself. A system of community-based workshops and

education centers will be important for fostering this mindset.

Architecture has always strived to give meaning, order, and orientation to places and spaces. Marc Auge affirms this point when talking about places versus non-places. Auge states that non-places are exactly that, places permanently in transit. Non-places are becoming increasingly common in modern cities. We experience them every day. The inside of a car, the local supermarket, a suburban cul-de-sac. These places rarely encourage usage or inhabitants beyond simply passing through for ones business.

So in what ways can architecture provide for a more meaningful and contextual experience for the city-dweller. First, we must look at how meaning and context are given. The philosopher Merleau-Ponty would state that all experience is gained through the body, and not the concept of the seperate, detached mind. Thus, the current malaise of simply absorbing digital information for purely conscious-based learning provides little memory and little satisfaction. It is instead the things we make, the impact we have on the world that creates actual experience and context, and furthermore, helps bind community from the collective of individuals. Thus, a successful architecture must be one that inspires *doing*, for to deny

the body its effects on the world would be to deny oneself of living itself.

So we have arrived on a typology. A space for *doing*. But, you may say, there are many ways of doing, and many of them do not necessarily involve architecture. So how can architecture effect they way we act and make a physical imprint on the world?

Architecture itself cannot do this. In fact, architecture itself can rarely achieve anything beyond visual and spacial excitement. It is instead what and *how* the architecture facilitates. Architecture *for doing* must be an architecture of the body. It must avoid mere symbolism, cultural reference, or reliance on visual stimulation. An architecture that will forever remain a place for doing must be one grounded in the use of the human body, and this context alone.

A further refinement of the typology is necessary. Though a college based on knowledge, and the pursuit thereof, is not necessarily a college devoid of *doing* (When the pursuit of knowledge is the betterment and change of the world, and not simply for one's own conscious, it is a knowledge of *doing*), a technical or vocational school would seem to fit. The whole focus in on trades based in *making*. However, many technical and vocational programs fail to actually create lasting impacts. *This is*

because the focus of the technical school is on the skill learned, not on the thing made. The skill is of course crucial to *making*, but the typical vocational school focuses only repeating a limited set of skills for a predetermined goal - a profession. This is why our typology must land on a community workshop.

This community workshop flips the idea of the vocational school backwards. Instead, the goal is the object *made*, with no pressure on repeating a skill until all creative desire has expired. The *skill*, of course a welcome and necessary benefit, is merely the effect of achieving the goal. Thus, a community workshop acts as a place for the practice of trades free from the demands of degrees and certifications. Instead, a community workshop will help those needing retraining to actually find what they are best suited to do instead.

SUMMARY

Essentially, it all boils down to a discussion on quality, and whether modern Western society has the correct evaluation on what contributes to quality. The current consensus seems to be that quality is acquired or created by the gain of wealth, physical welfare, knowledge, or individual advancement. And certainly all these aspects contain levels of quality. However, in the process of this classical surge toward the ultimacy of the individual, we have failed to appreciate other forms of quality, and in the process have lost important aspects that were abundant in more primitive societies.

This is by no means a rail against modernism or technology itself. As stated earlier, technology is merely a tool that allows both opportunities and pitfalls to those that use it. Instead, this is a discussion of qualities that are finally being noticed as missing - qualities such as a sense of purpose, place, and community.

So how is architecture a solution to these problems of quality? Architecture has been called perhaps the oldest career on the planet, and this is primarily due to the importance the built environment plays on our culture. The buildings we inhabit shape the very way we live, and

can either foster or hamper our interactions with each other or the city in which many of us now live. However, the effect buildings have on us has too often been relegated to pure functionalism, aestheticism, or symbolism instead of a complete reexamination of *what* types of buildings a community of quality would need. This lack of proper evaluation is what led to such built environment problems as suburban sprawl, museums and monuments that cater to tourists instead of the immediate community, and a loss of clear meeting *centers* for individual communities.

A community workshop is not the only solution to the myriad of problems created by modern technology and philosophy, nor can community workshops themselves solve all these problems. However, a free-access space where members of the community can participate, learn, and teach others valuable skills that can begin to give identity to both individuals and the local community is certainly a start. There are already many signs that a movement in reverse course of the past 500 years of thought has begun to gain some traction. Whether it changes a single community, or effects the entirety of mankind, the goal of these spaces is clear - provide a grounding in a world where meaning, place, and purpose have started to wash away with the tide of modernization.

Case Studies

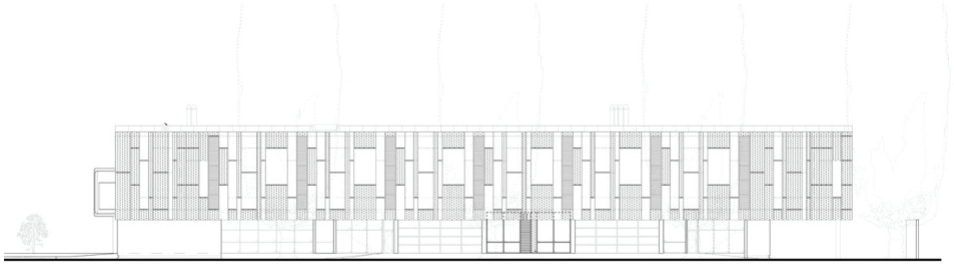
Australian Technical College

Birrelli Associates

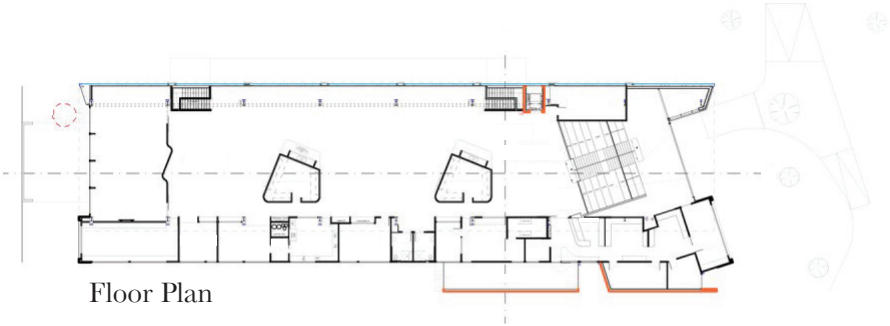
Project Type
Vocational School
Location
Tasmania, Australia
Area
N/A
Elements
Metal Workshop, Learning Studio, Auditorium, Grand Stair, Meeting Space, Offices, Joinery, Welding, Administration, Restrooms
Small School : Open Plan : Naturally Lit : Cooperative Learning

Designed as an homage to the utilitarian industrial forms of the Inveresk Railroad structures, the Australian Technical College of Tasmania serves as the premiere technical school for the entire island.

The structure of the building is relatively straightforward - simple steel portal frames. However, the relatively humble exterior and structure are played with in 2 manners. First, each end of the building is wrapped in a translucent triangular truss that provides lighting and a lofted space for the vertical circulation within the building. Second, the inside of the building plays with



Elevation



Floor Plan

color instead of finishes.

Because of the industrial inspiration, materials & finishes also follow a "rough" theme. Steel columns are simply painted bright "safety" orange. The entry light-box is formed from mere fiberglass, and translucently reveals its wood metal structure beneath.

The building is unique in that the entry stairs carry you directly to the 2nd floor, acting essentially as a 1st floor. Thus, the building's "basement", containing most of the machinery and workshops, is actually on grade and able to receive ample natural light while still maintaining its privacy from the public for the students. The design takes advantage of this by really allowing the workshops to be the students spaces to learn and explore vocational skills in a creative setting.

The comparisons to a train again occur in the plan of the building. The building is long and rectilinear, and each workshop could be considered a train compartment. The buildings head and rear are anchored by the large triangular truss, acting as the engine and caboose. Circulation through the building is also very linear, occuring along a "spine" parallel to all the workspaces.

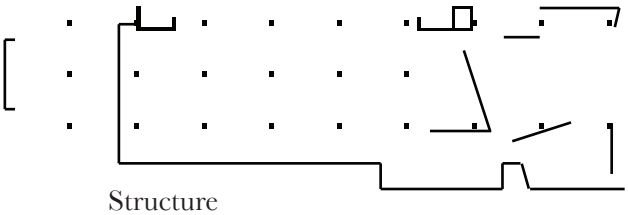
Ground Floor Interior
The workshop areas merely seperate function with divider walls, allowing spaces and students to flow freely from task to task.

Section

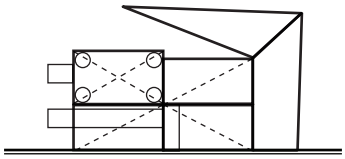
The Section reveals the hierarchy between the lofted-story "studio" space & the lower workshops

ANALYSIS

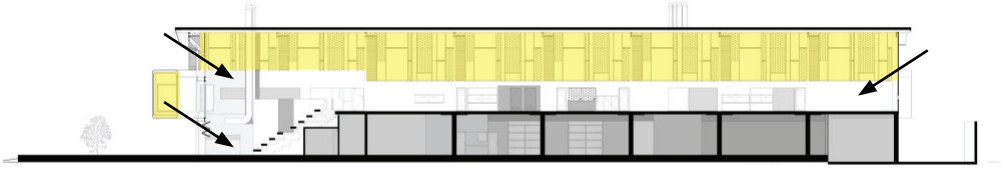
The Australian Technical College was conceieved to bring some aspects of design into a school type that is often discouraging of creativity and simply teaches "trades." The 2nd floor space effectively acts as a collabrative studio, and students are encouraged to apply their learned skills to projects of interest to them. This collaboration relates well to my theoretical premise. In the architect's own words, *"The design of the college's learning commons, the forum steps, and support spaces are founded upon the concepts of life long learning, student-centred teaching and learning, trade teaching utilizing real-industry-application, and the interconnectedness of knowledge and the human condition of communication."*



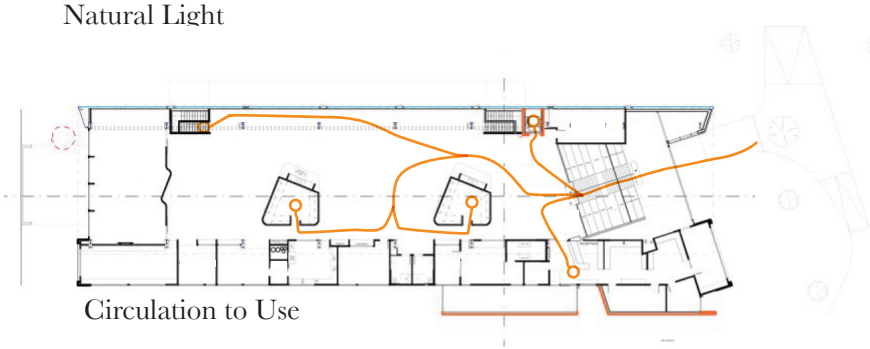
Structure



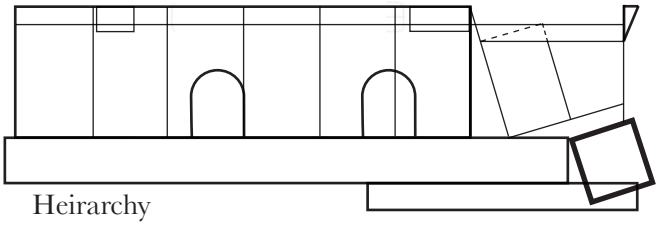
Geometry



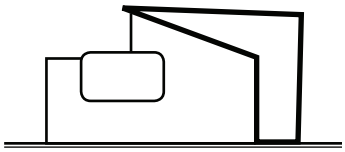
Natural Light



Circulation to Use



Heirarchy



Massing

Graphic analysis shows a space that is extremely hierarchical based upon conceptualising in the top half, and the making in the bottom half - a notion that is easily metaphorical for the anatomy of the human body.

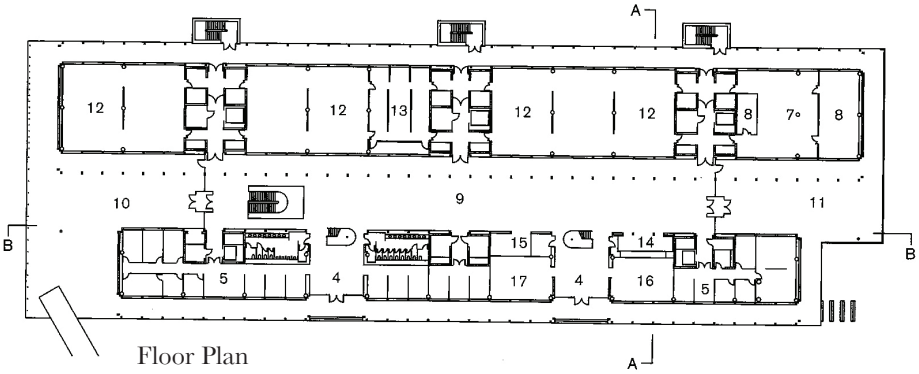
Frick Laboratory

Hopkins Architects

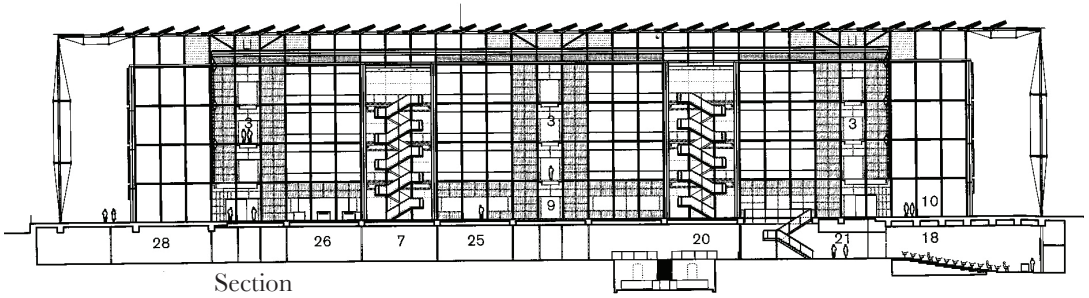
Project Type
Chemical Laboratory
Location
Princeton, NJ
Area
22,296 sq. meters
Elements
Laboratories, Meeting Hall, Full-story Commons, Auditorium, Restrooms, Offices, Administration, Stockroom, Lobby, Data Analysis, Lounge, Teaching space, Maintenance Shop
Large School : Professional : Naturally Lit : Academic : Cooperative Learning : Creative

The Frick Laboratory was built to house the new chemistry functions of Princeton University. The school both serves as an upgrade to the old 1920's chemistry hall and as a statement that Princeton's campus does not have to be trapped in tradition. Essentially, the building operates as a symbol for its function, the fostering of both education *and* creativity.

Hopkins Architects invisioned this process by creating an interlinked interior "community." The focus of the design becomes the hierarchy of the laboraties & offices linked through incredibly open and public space.



Floor Plan



Section

From Atrium viewing into the Laboratory
The laboratory and workroom spaces are given ample physical and visual access to the commons.

The design is essentially 2 envelopes within an envelope. The interior envelopes are the 4 story office and work structures framed in steel columns and beams painted a neutral grey. These inner "boxes" are finished in natural wood slats and large expanses of glass, adding to the feel that these are buildings within the building. The exterior envelope is similar to Corbusier's "brise-soleil." Similar to a lot of recent Renzo Piano works, a large Steel trellis is extended 6 feet above the 2 interior envelopes, providing protection for the interstitial spaces and also allowing in ample natural light.

This sytem allows for greater climate control over the smaller envelopes, since essentially they have no enclosures that are directly exposed to the elements. This is important in an advanced chemistry facility where climate control is crucial. It is strategies like these, and sustainable materials such as steel and wood that earned the design a LEED certification.

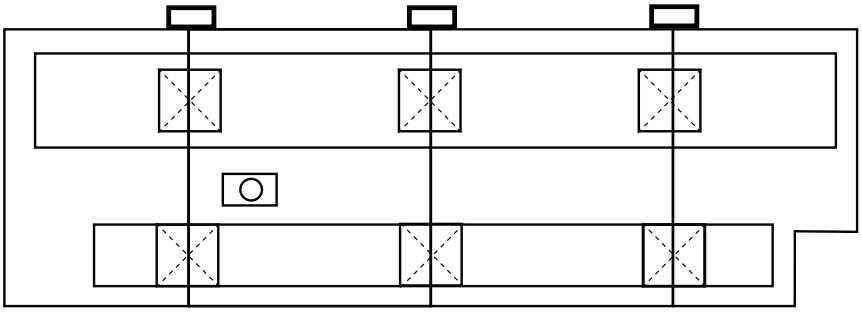
The dichotomy of these 2 interior envelopes was created for a very important reason. The laboratory had a need to keep the "wet" laboratories seperate from the "dry" ones. However, Hopkins did not allow this to restrict their designs aim of fully integrating all components of the building. Instead, the 2-envelope strategy allowed them to maintain the seperation of mechanical and access functions while still allowing ample physical and visual access across the interior atrium. The use of 2 skyways per level allows for this quick and immediate access, while the glazing of all laboratories allows the bulding to completely open up visually.

The mechanical program is quite extensive, and because of this, the structure is rather heavy. Hopkins decided to rely on smaller beams but in a tighter configuration to deal with loads, and let the form of the 2 envelopes help reduce problems columns could provide if directly running through laboratories. Also, the air-delivery method is also rather intelligent. The air first moves through the offices in the lower levels, then into the atrium, and finally into the laboratories.. This assures that there is no possibility of contamination between the dry and wet labs, and any poisonous gasses are always expelled from the laboratories through the roof. Only through the 2-envelope strategy was this made possible.

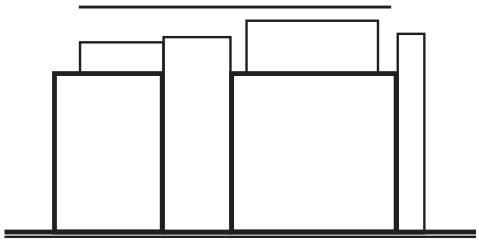
Rear Exterior
Though entirely of steel, the buildings structure is essentially of 3 parts: The interior envelopes, the brise soleil, and the 3 exterior stair cores.

ANALYSIS

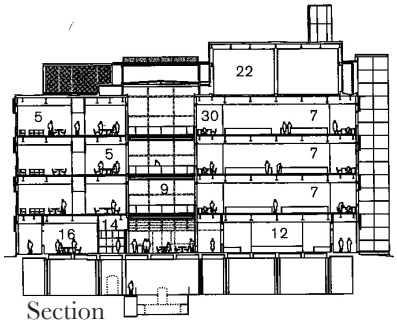
The inspiration for the Frick Laboratory was "a machine in the garden." Though the technical aspects of the building are impressive in their own respects, the key to this building is its presence on the campus. The glass box effect the building takes on allows it to reflect much of the local greenery back to the viewer, and the form of its brise-soleil clearly mimicks the structure of the large groves of nearby trees. With 216 solar panels, grey-water collection, and natural daylighting, it truly does exist as a machine at one with the garden.



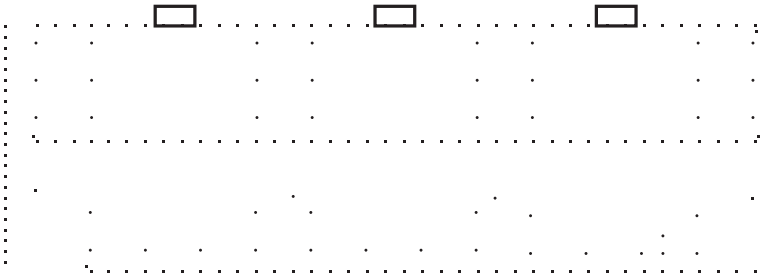
Geometry



Massing

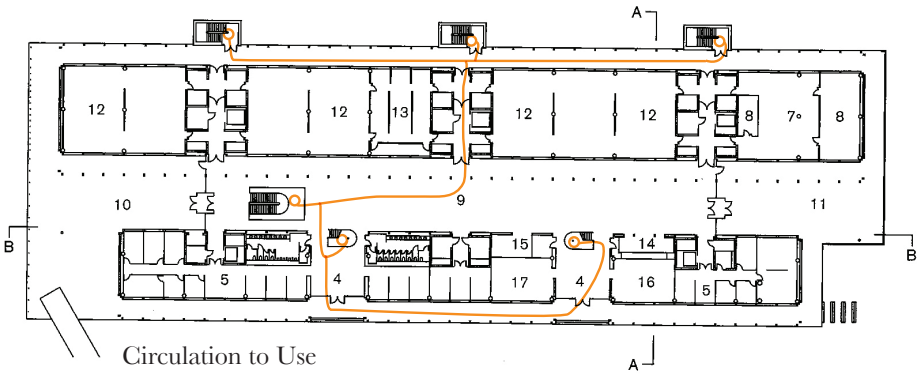


Section

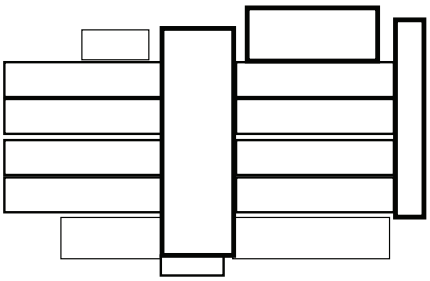


Structure

Graphic analysis shows the uniformity but playfullness that the buildings 2-envelope structure displays.



Circulation to Use



Hierarchy

College of New Caledonia

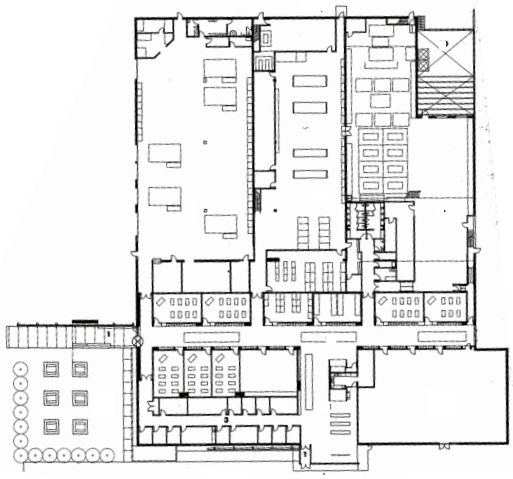
McFarlane Greene Architecture & Design

Project Type
Technical Colelge
Location
Prince George, British Columbia
Area
60,000 s.f.
Elements
Cafe, Electrical Shop, Carpentry Shop, Future Expansion, Loading, Outdoor Patio, Classrooms, Auto Repair Shop, Electrical Labs, Offices, Lobby
Small School : Closed Plan : Dark : Academic Adaptive Reuse : Cooperative Learning

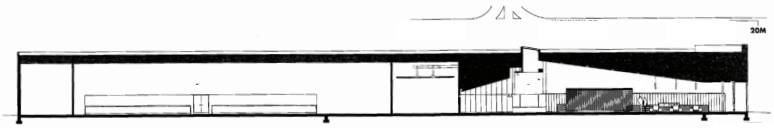
The College of New Caledonia in British Columbia is both the most typical in its program but the most atypical in its site.

The college uses a familiar scheme of breaking up workshops and classroom space, essentially sequestering functions with little interaction. However, it is in its reuse of an abandoned big-box retailer building that it challenges the notion of both how and where a vocational school should be built.

A vocational school would seem to make sense reusing a large retailer building. It requires a large program and amount of space, which is supplied, and it also requires a relatively heavy structure for use of machinery and mechanical equipment. The reuse of the big-box shell allows this to be done relatively affordably without too many drawbacks.



Floor Plan



Section

However, the rigidity of the structure is also a drawback. The architects had little ability to play with natural lighting or ceiling heights besides in the auditorium space, in which they introduced both a skylight and a sloping ceiling height. The natural lighting is the biggest problem with the reuse of these buildings, as the exterior walls are often load-bearing and do not yield to large areas of glazing.

Still, the architects create large spaces for working and for displaying projects. The locker rooms serve as temporary display spaces for work done within the college. There is also ample room between the machinery and workstations that allow for work to continue unabated. Further display space is provided by the exterior of the building where a small garden has been built adjacent to the secondary entrance. This space also functions for relaxation and eating.

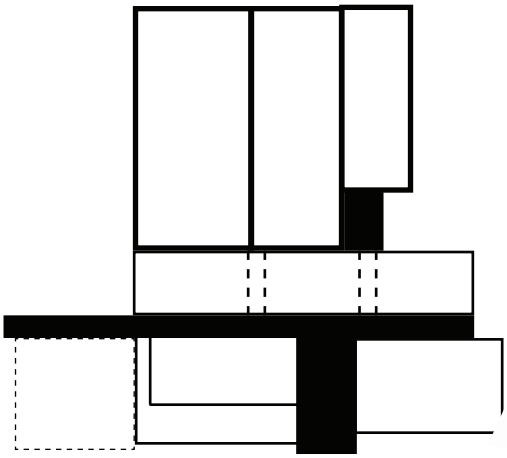
However, the architects didn't make many exterior changes beyond the entrance. For the entry, McFarlane Greene used an L-shaped canopy that dies into a wood-slat divider that obscures the large big-box parking lot. To the right of the entry is the garden, which the divider helps to give some sense of serenity amid the semi-abandoned retail area in Prince George.

Interior Lockers
The flexibility of the large interior spaces allow for the building both to provide vocational training but also display spaces for the public. This image shows the locker rooms supporting a second function as exhibit.

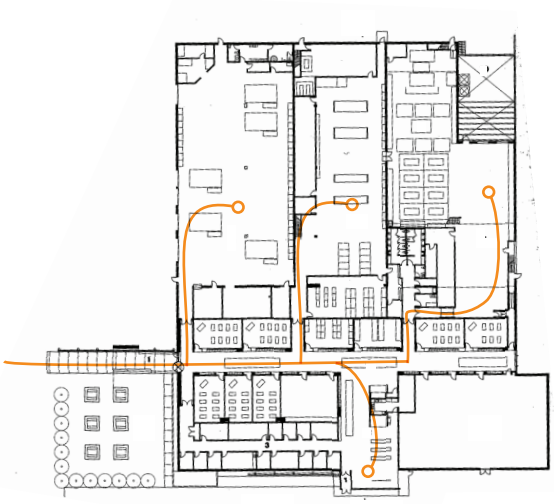
ANALYSIS

The most important aspect of the design for the College of New Caledonia is the existing shell that it uses. It is important because it highlights that a community workshop need not be high-budget, nor is it restricted to new development. Instead, this college was built in an unlikely area for education - high-convenience retail. Still, the options provided by reusing the building were advantageous - ample parking, a strong, existing structure, and cheap land prices. However, in a community-based education, location and proximity becomes more important, and this option may not be viable.

Graphic analysis reveals that the program called for the seperation of utility workspaces and machine rooms from the bathrooms, classrooms, and auditorium



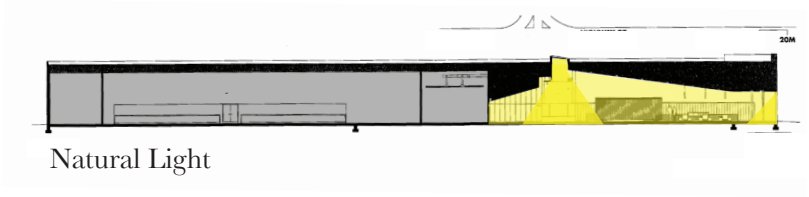
Hierarchy



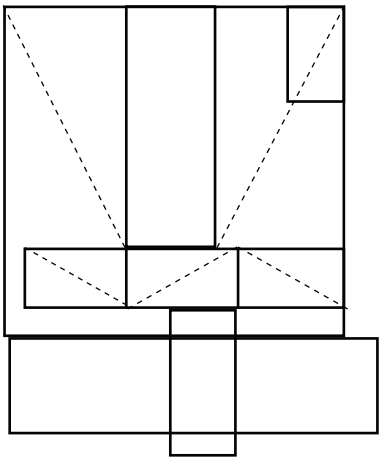
Circulation

Massing

Graphic analysis shows that natural lighting is difficult to achieve reusing a rather rigid and unforgiving existing structure



Natural Light



Geometry

SUMMARY

The case studies of the Australian Technical College, The Frick Laboratory, and The College of New Caledonia all pertain to the theoretical premise of the community workshop in one way or another. An in-person visit to the local Minnesota State Community and Technical College was also done to examine the workings and teaching mechanisms in most American technical and vocational schools.

The theoretical premise was both confirmed and modified by the typological research. Though the research confirmed that technical and vocational schools provide the correct typology for the application of the theoretical premise, the means to which this education is administered becomes even more important than the original typology itself. As the three case studies showed, to heighten our perceptual experience of the world, students must be allowed to explore trade skills creatively and in a collaborative environment. They cannot simply be programmed into performing a set and repeated task to achieve a better quality of life.

The first 2 case studies focused intently on the community spaces shared between workshops and laboratories, with only The College of New Caledonia really segregating its uses. However, the College of New Caledonia showed that the programmatic requirements are flexible enough that an abandoned big-box retailer can be converted into a community workshop, affirming that the theoretical premise can be used to revitalize degrading neighborhoods.

The Australian Technical College's lofty status in Tasmania seemed to come from Australia's background as a penal colony. Australia still shows

a high value for the blue-collar worker, and because of this it technical schools are both well-funded and well-regarded. The Frick Laboratory, on the other hand, shows the high priority the United States places on post-secondary education, and specifically the sciences.

Conceptually, all 3 case studies follow the same underlying idea - provide spaces for learning from experienced educators, but also provide an opportunity for students to use their knowledge to pursue new avenues. For this to be the case, all 3 case studies required large workspaces that allow enough space for both instruction and interaction. In these examples, the workshop or laboratory *is* the classroom, and the seperation of workspace from learning space that occurs in most modern educational facilities is one of the direct problems this theoretical premise addresses.

However, simply because a space needs to be loose enough to foster creative learning does not mean that it does not have a large set of technical requirements and issues. All 3 case studies carry a large amount of mechanical systems and programmatic requirements, and the appropriate situating of machinery and utilities to both be efficient and allow for ease of use are required. For the design of the community workshop, the workspaces should not inhibit creative thinking or doing due to clumsy arrangement or poor programming. Circulation between complementary workshops and machinery is paramount.

Historical Context

Community workshops are nothing new to architecture. Yet as western society has become more and more privatized, spaces for community development and interactions have seen a steady dropoff in usage correlating with an increase in dense urbanism.

This isn't to say that urbanism itself is the problem. However, the disconnect with the larger community is due to a myriad of factors. Though an exhaustive list of factors would be difficult to lay out, some factors for this disconnect are specialization of skills, a gap between the consumer and the means of production, and the greater increases of transit time from the place of habitation to the place of occupation. Modernization itself can be partly to blame for many of these factors, but urbanization also has a direct influence. We still see this influence of dense urbanism in America today - often the rural or small-town resident bemoans the lack of community or day-to-day interactions available in "the big city."

So let us examine the roots of a simple, unurbanized community that still exists today. Though these communities are dwindling in number in our modern age, they are still observable in remote areas of the world. The peloponnesian people, though often disturbed by tourism, still exist in tight-knit communities locked closely together by the geography of their

small islands. Every member of the community both had to contribute to the survival of one another and was also direct witness to various means of production for these resources. Thus, everyone within the community had "skin in the game" for the survival and betterment of the island.

Specialization was also not nearly what it is today among the pelopennesian people as well. The entire community learned to do multiple tasks, and each member had a vested interest in teaching the other important trade skills. Thus, education was not the self-involved task it is today. The modern educator is only motivated either by pay or by a strong sense of a job-well-done. If a student goes on to succeed, it is unlikely the teacher will experience any direct effect other than pride. However, the pelopennesian people had an actual survival-based incentives to pass on skills and knowledge. The direct effects were both completely observable.

So when did the passing-on of knowledge become so sterilized?

I have already stated that both urbanism and modernism have had direct effects on how we interact with the community. However, there were also important events within the last millenia that have affected our sense of community on the philosophical level. Though ancient Rome had become to specialize in occupations much like modern society, most

Romans were directly linked to their local communities due to utilitarian and transportatioin reasons. Because of these factors, trades were largely taught father to son or from the tradesman to the apprentices. These apprentices were largely from the direct community, and trades were still very much localized.

This continued for more than a millenium after the dissolution of the Roman empire. It is still even observable today - parmesan cheese, now a worldwide commodity, is still directly linked to its millenia-old tradition based in the city of Parma. For almost a 1000 years, Parmesans only handed down the craft to other parmesans!

So it is clear that 1000 years of urbanization and modernization did not cause the fatal blow to community based education.

The beginnings of the decline started in the 17th century with Rene Descartes and the beginnings of classical thought. Descartes studies of the mind and its disconnection and elevation from the body brought back the dialectical approach to thinking that had been forgotten since the ancient Greeks. Now, instead of the spiritual body within a community we had the secular mind of the individual. Though these ideas first only had traction within the intellectual minority of the time, the last five centuries have

seen this concept dominate our current psyche. With it, we have seen the decline of community-based education and investment.

Still, we must give Descartes credit for a myriad of human triumphs that have happened since his awakening. Science certainly couldn't have made the leaps and bounds it's made in the past half-millenium without this new view on the supremacy of they mind. Certainly our vast gains in economic efficiencies wouldn't have been possible as well without the focus on the self.

But isn't it time that modern society step back from its hectic schedule and take a look at what was lost in the process? In its hurry to advance man through rational means, classical thought missed an incredible opportunity to also reevaluate what quality means to us as a society. Have all the material, welfare, and intellectual gains of the past 500 years not come without a cost? A sense of purpose, place, history, community, and spiritualism in man have been lost, and today we too easily dismiss these important qualities because of an inability to easily quantify their benefits.

I stated earlier that community workshops are nothing new to modern architecture. This is not entirely true. Though community centers are thankfully starting to become an increasing trend in modern

development, and technical and vocational schools are still commonplace, a community workshop focused on community-based education would be difficult to find either today or in historical context.

However, this is only because this technical community-based education was never *formally* implemented into a purposeful structure. It was always informal in nature - passed down through the trades or through the community in general, with no formal *center*. Still, the *mechanisms* of the education were still there.

So though it may not seem obvious at first, a community workshop both compares and contrasts very closely to a prominant feature in almost any urban center - the library. Whereas the library was essentially Descartes' cathedral to the mind, the community workshop will function instead as the cathedral of the mind *through* the body.

Do not mistake the importance of greater and more accessible community spaces as a fight against modernization or as a backward nostalgic action. Instead, spaces like these are vital for filling in the glaring gaps that modernization and classical thinking have left in their rapid surge towards the ultimate individualism.

SUMMARY

Today's society is more ready than it has been since Descartes to move a step away from strict classical thought and instead find a more balanced approach to what is actually quality in our lives. Some of this backlash is already growing and evident. Movements such as *shop local*, the recent surge in American populism, the de-suburbanization of America, and a growing movement for community involvement in schools all highlight just the beginnings of what I see as a strong trend for the foreseeable future.

The biggest factor forcing a return to community-based education is the rising cost of transportation. With it will come an economic factor that will once again force communities to participate directly with one another, rather than seek opportunity from without its bounds.

Throughout history, strong communities have always built great centers and monuments to house the most important aspects of their societies. The failure of todays libraries, museums, concert halls, schools - and a failure of urbanism in general - is a disconnect with the local communities. Instead, let us not design public institutions within our communities that aspire to be cater to and be appreciated by the entire world, but instead be appreciated by just one community.

Thesis Goals

ACADEMIC

This thesis is presented to begin a discussion into a realm or architecture too often ignored in favor of the more quantitative aspects - the aspect of quality. It is my hope that this thesis subject will help instill future designers to consider designs that aren't simply grand monuments or fulfillments of their program requirements. Instead, I would like them to think about human connections and experience, such as the experience of community-based education.

My other goal for this thesis, though lofty, is for it to gain recognition or publication from a major journal, magazine, or online architecture blog. This may seem unrealistic for a student from North Dakota, but national recognition would be an exciting prospect for getting my name recognized by "higher-end" firms. It is my plan to meet with my thesis advisor to discuss strategies and guidelines for attempting to get work recognized beyond the scope of the school itself.

PROFESSIONAL

I am excited by the possibilities this thesis will help open in my professional career in architecture. It is my goal to provide a thesis that not only shows a professional level of presentation and design skills, but more importantly showcase that I am a young architect capable of moving the profession in new directions.

I plan to show to future employers that I don't simply design a building to function nor simply to aesthetically please. Though these 2 factors are important, it is a complete evaluation of the buildings qualitative

impact on its occupants that interests me as an architect.

My thesis will become the premier focus of my portolio, and will accompany only 2 or 3 other projects within my portfolio. Thus, the presentation graphics and design will have to be thorough and inspired. It is the goal of this thesis to provide a design that will cause most of the professional world to take a second look when first seeing it.

PERSONAL

I would not have entered NDSU's architecture program if it weren't for my deep interest in how the built environment effects every aspect of our lives, and how we as designers have a great deal of control over how this occurs. The completion of this thesis design will not only come as a resolution to the years of work in the program, but will serve as a personal validation of all I have aspired to achieve in the field so far.

If this thesis proves to be successful in these goals, it will serve as a confidence springboard from which I may draw future inspiration when trying to tackle the first projects I will eventually be able to manage. To be able to take a design from the complete formation of its concept to a completed schematic would help prove to myself that I am able to achieve the complex task of conceptual design, from the grandest gesture to the smallest detail.

Site Analysis

QUALITATIVE ASPECTS

The city of Chicago offers a great many opportunities for architecture both by means of its many natural resources & the extraordinary history of its built environment. However, just as it gives opportunities, there also come some challenges with working on a site in Chicago, some climatic & some man-made. However, a thorough analysis will show that the benefits of the proposed site far outway any potential pitfalls. In fact, some aspects that may at first be viewed as hindrances could in fact serve as powerful design factors.

Views/Vistas

Sandwiched between the Chicago river and the South side of the Chicago Loop, views are in abundant supply. The most immediately noticable are the large cluster of sky-scrapers and high-risers directly to the North, among them the nearby Sears Tower. The road that borders the site on the North provides a view to the East of both Grant Park and Lake Michigan. On the other side of this road is an old cast-iron Chicago River drawbridge that heads over towards a massive abandoned concrete USPS sorting facility from the early 20th century. This structure dominates the adjacent side of the river. To the South on both our site's side of the river and the adjacent side, the views are dominated by dilapidated warehouses, industrial equipment, and undeveloped scrubland. However, a poorly proportioned 1970's six-story concrete condominium building dominates the South side of the site. The block directly East from the site is completely walled-in with 10-30 story upscale condiminiums ranging from the early 20th century to the past five years.

Light Quality

The site has generous natural light due to the lack of development to the South of the site. The heavy development lies instead to the East and North. Because of this, the site begins the day in shade, with a bluish quality, but this moves to full sun for almost 2/3rds of the daylight, all year-round. During this period, the light quality is mostly white, though it turns to yellow near sunset. The sun in only obscured by the nearby Western postal facility for the last hour of sun, and only during the Summer months. During night, the streetlights and light pollution illuminate various areas on the site yellow, though during night the Western side by the river is by far the darkest, due to the growth of trees and distance from the street and nearby buildings.

Vegetation

Vegetation consists primariliy of mowed grass with a few weeds. The only other vegetation on the site exists on the river side, where a growth of trees lines the river. This growth is mostly ash and contains minimal underbrush.

Water

There is the South Bend of the Chicago River bordering the site directly on the West. This river is permanent, and mostly walled off with river-walls built of concrete. Our site is one of the few this close to the loop that is not river-walled. The river is not particularly polluted, though it was through the first half of the 20th century. It has since been cleaned, and since its source is nearby lake Michigan, only a mile away, it does not have a large opportunity to become polluted by this point.

Wind

Chicago's dense built environment heavily affects windflow through our site, though our location at the South end of the Loop helps to lessen the severity. Wind generally flows from the South or Southwest, which lacks the density of the city to the North of the site. Still, the density of the city just 1 block to the north forces swirlilng patterns of wind across our site, so though the majority of the wind is from the South, wind in our specific site has less predictability. The trees to the West do provide some relief from the wind, but the strongest currents occur from the street bordering the East of the site. Wind is strongest during the Fall and Winter seasons.

Human Characteristics

The site is currently undeveloped, and because it is privately owned and for sale, signs offer warnings against trespassers. Still, observation has shown that local residents of the condominiums to the East frequently walk their dogs in the site, and children were also observed using the site for play. The site also has some problems with homeless residents under the nearby bridge.

Distress

The site has only some moderate forms of distress. The most prominent is that at one point, the site was used to house excavation material from another construction site, so much of the topsoil is polluted with coarse sand. Because of this, grass has difficulty growing in some areas, and the topography has been minorly altered. Trees are in generally good shape, and erosion into the river isn't a large problem because a low wood

board river-wall has been constructed. The water in the river is generally clear, with enough mud to obscure the bottom, but not enough to discolor the river from blue. The site is close enough to the heavier industrial side of South Chicago to have some concerns of ground pollution, but no visible signs were found.

Soils

On the macro scale, Chicago's soils vary vastly due to the city's size. The suburban areas are built on a thick layer of silt on top of dense clay. However, closer to the lake the soil is a thin organic silt layer distributed over the top of clean sand. This sand was deposited by the glaciers into what were called moraines, or lake dunes. These have mostly disappeared due to human influence.

Our site is predominately sand that has mixed with the small amount of silty topsoil due to human excavation. This has created a silty-sand mixture that is hospitable for some plantlife, but also difficult for others to survive. Agriculturally, central Chicago has long gone past the point of having land valuable for agriculture, though at one time much of it was abundant.

Vehicular/Pedestrian traffic

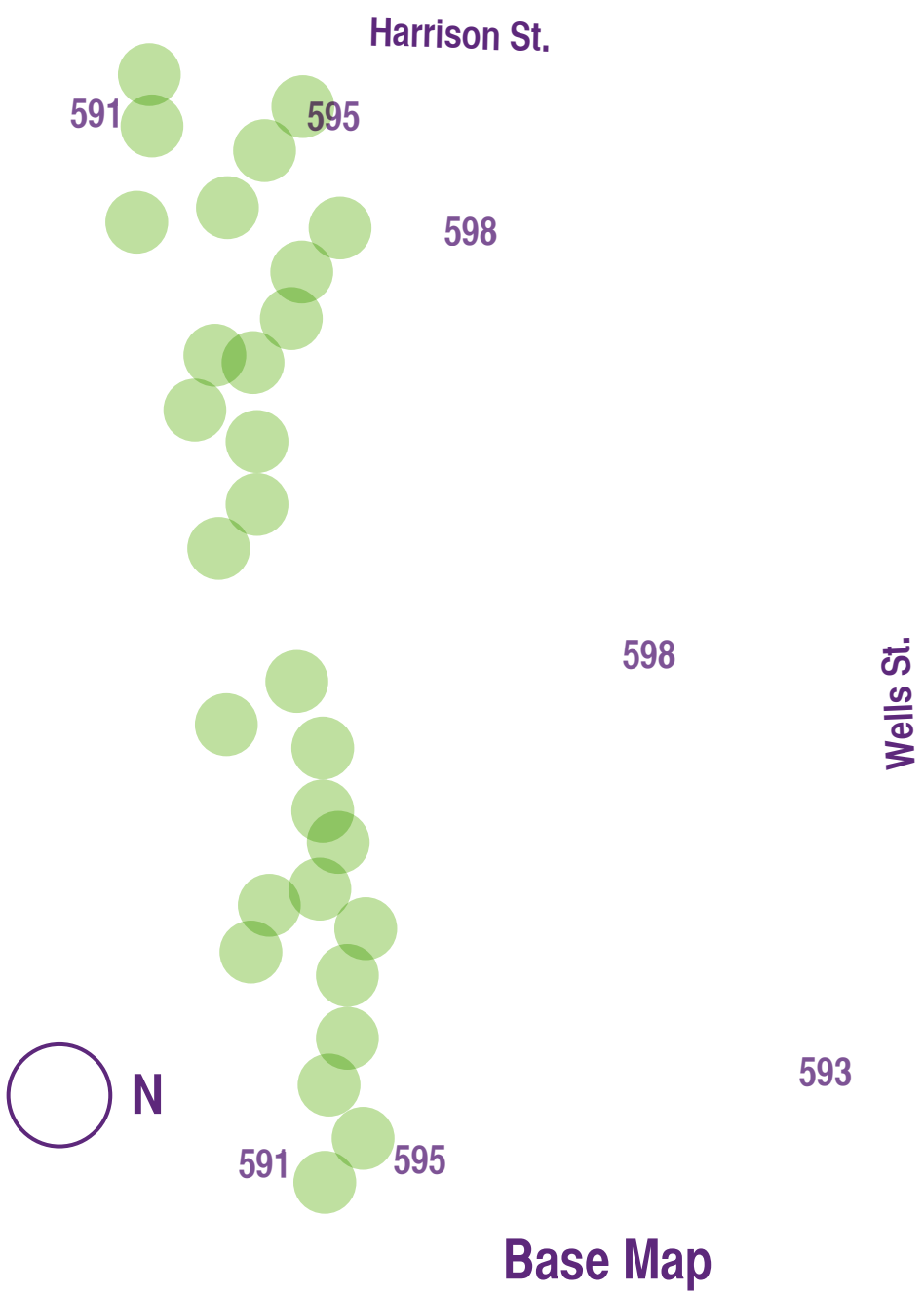
Only two streets border the site. On the North there is Roosevelt Road, a major thoroughfare that connects Soldier Field to all the way through Oak Park into the small town of Geneva. This road is almost always busy with vehicular traffic, though its adjacency to the interstate 1 block to the North restricts pedestrian traffic. The road to the East however is rarely frequented by vehicles due to the lack of development further

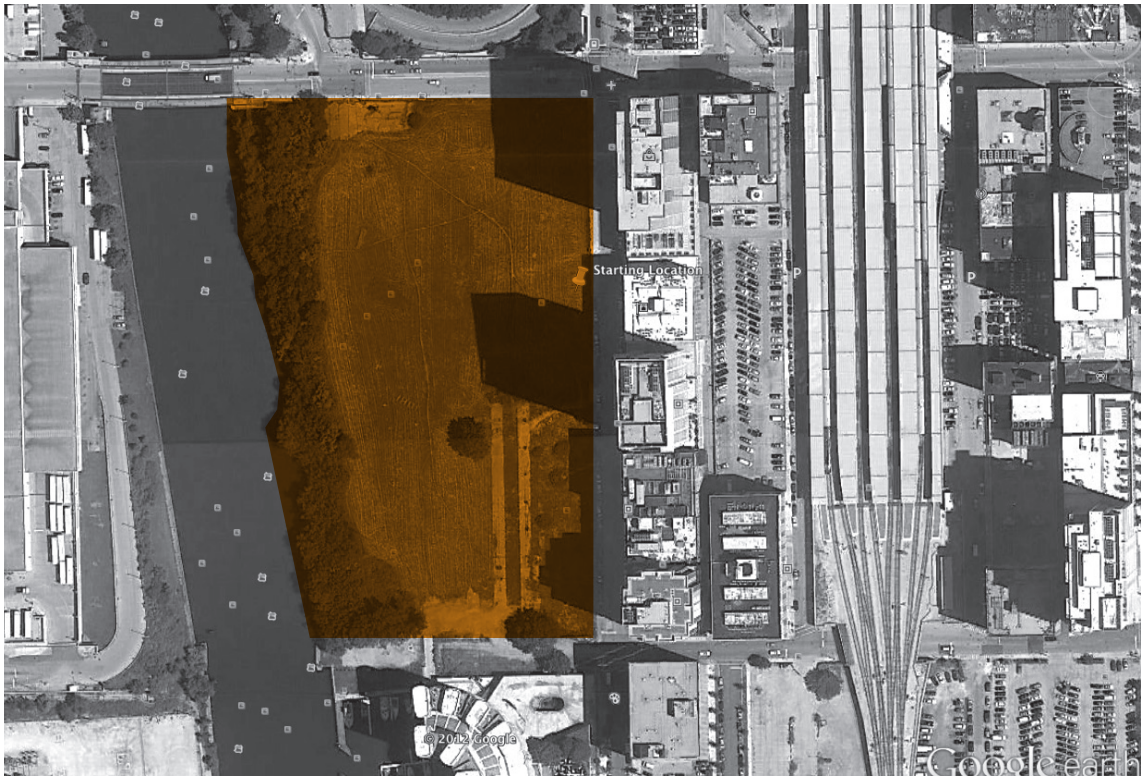
South. Instead, this road gets only about one vehicle every 30 seconds, similar to a moderate residential road. Pedestrian use of this street is much stronger than Roosevelt.

Site Character

The site has 3 defining built aspects that affect its character very strongly, and 1 natural characteristic that does the same. The built characteristics are the disposition between the glass-and-steel modernism of downtown Chicago and the adjacent upscale condominiums to the older industrial, dillapidated section of Chicago to the South and West. The cast-iron drawbridge over the Chicago river and the out-of-place concrete 1970's condominiums to the South also heavily influence the perception of the site. However, the Chicago River is by far the biggest factor on the site, and one of its greatest resources. Overall, the character of the site takes on an area of town in transition, as interested in this neighborhood increases as residential real-estate in downtown Chicago increases.

Maps




Starting Location
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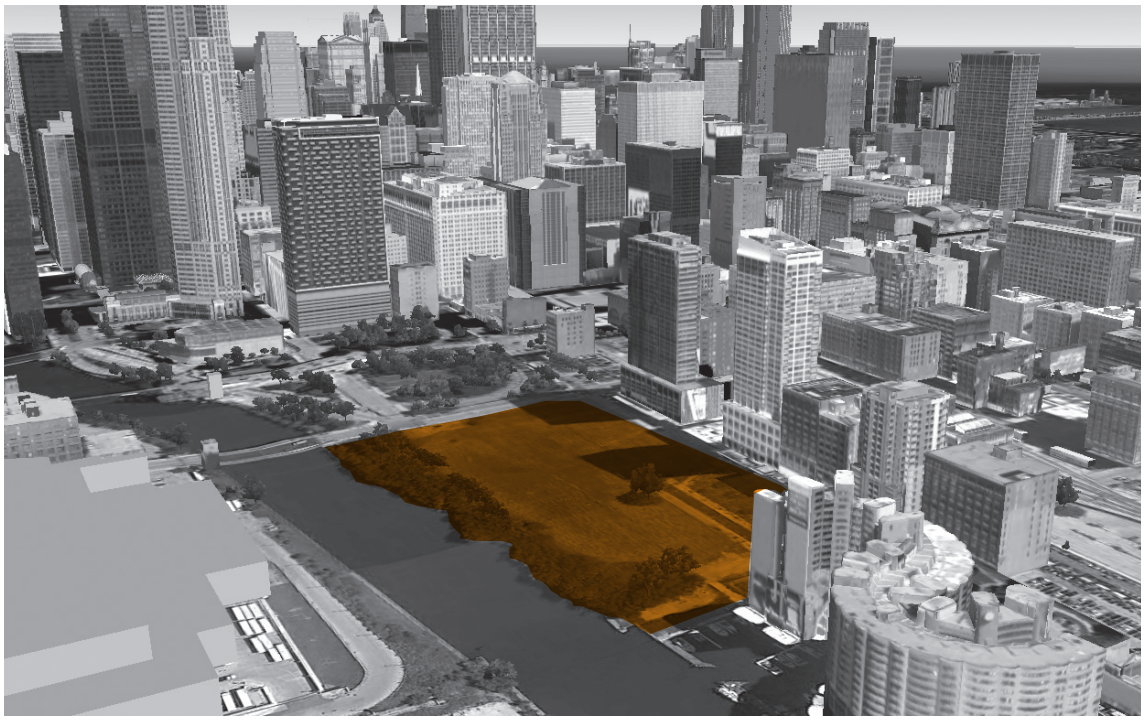
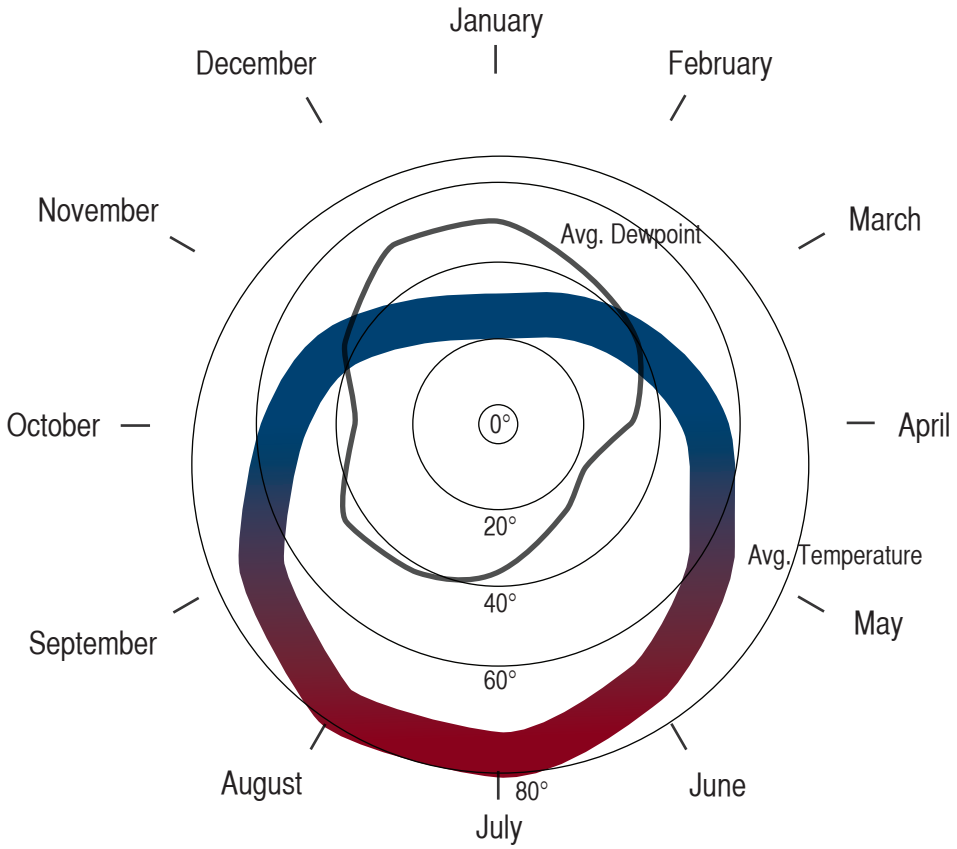
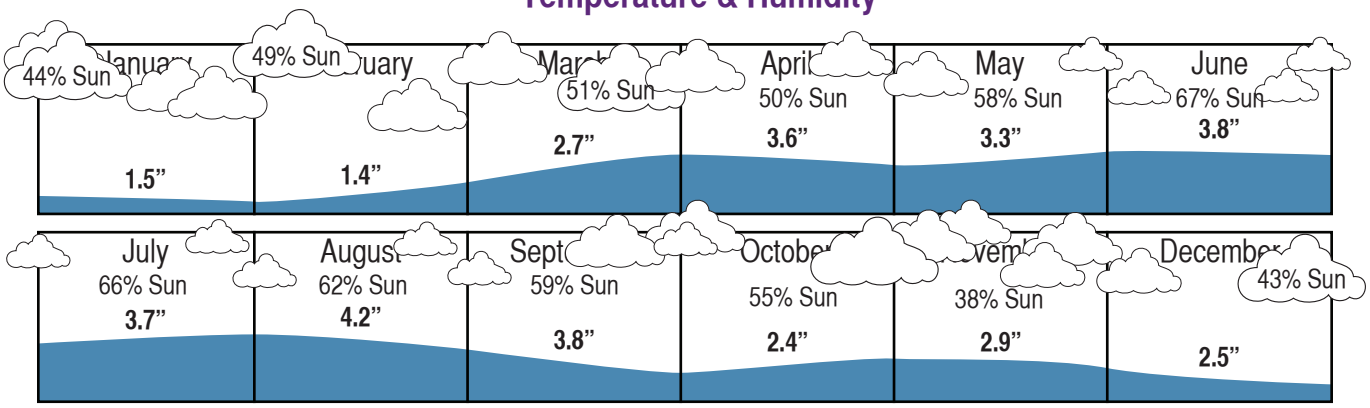
Google earth

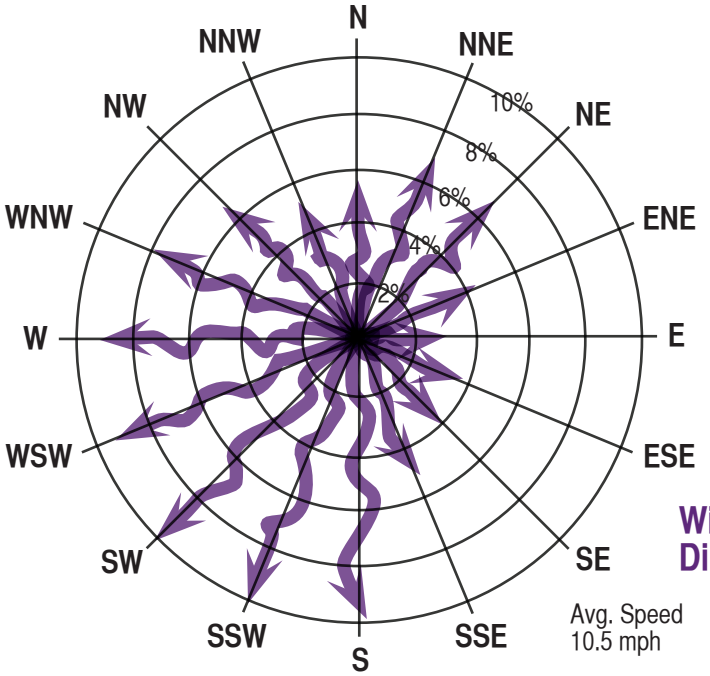




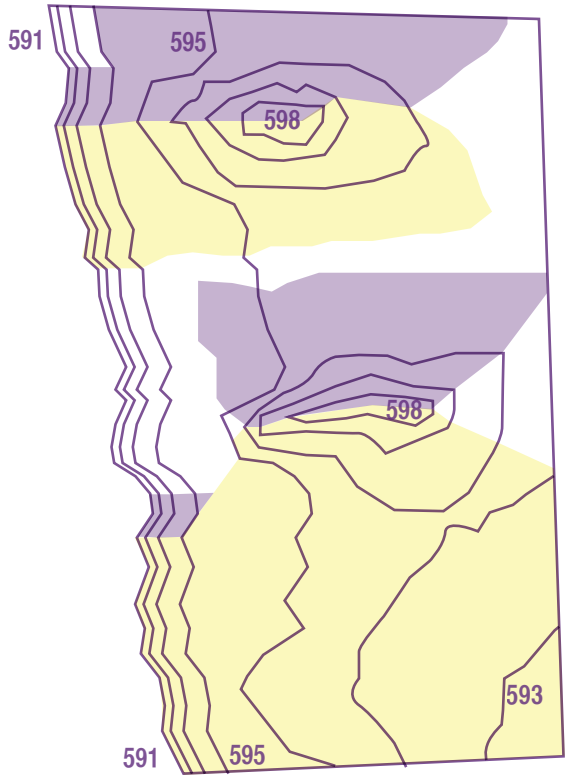
Temperature & Humidity



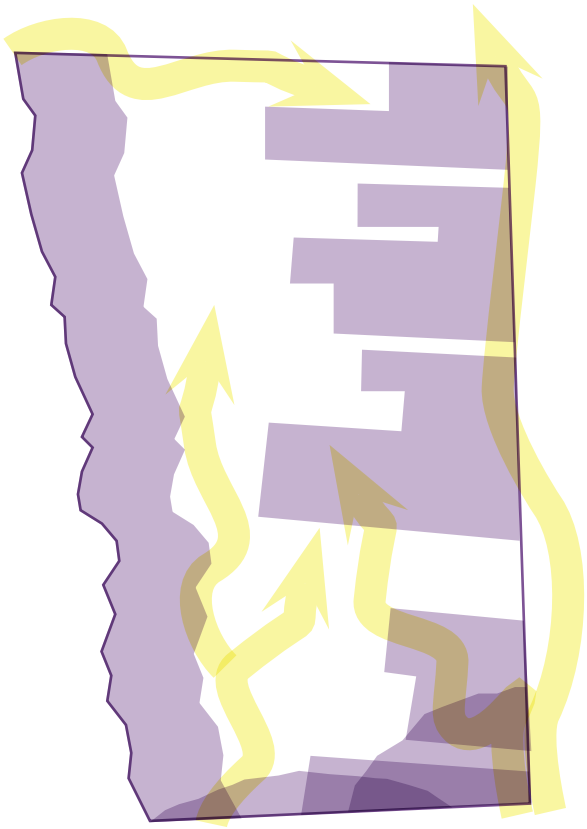
Cloud Cover & Precipitation



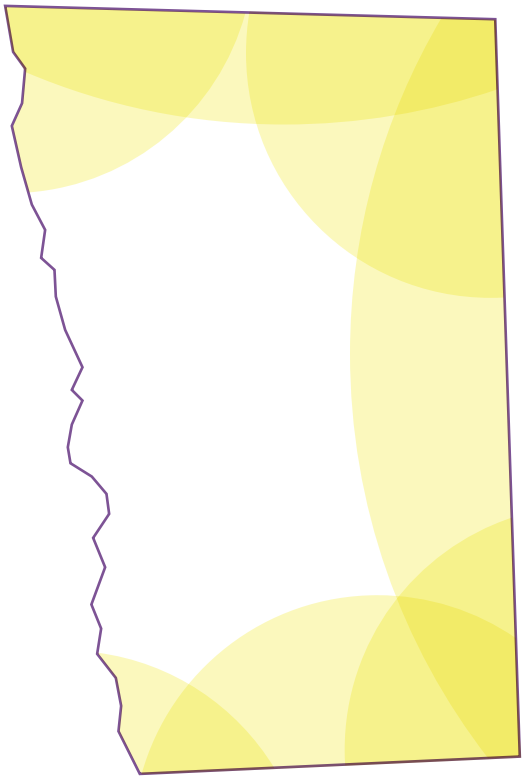
Wind Speed & Direction



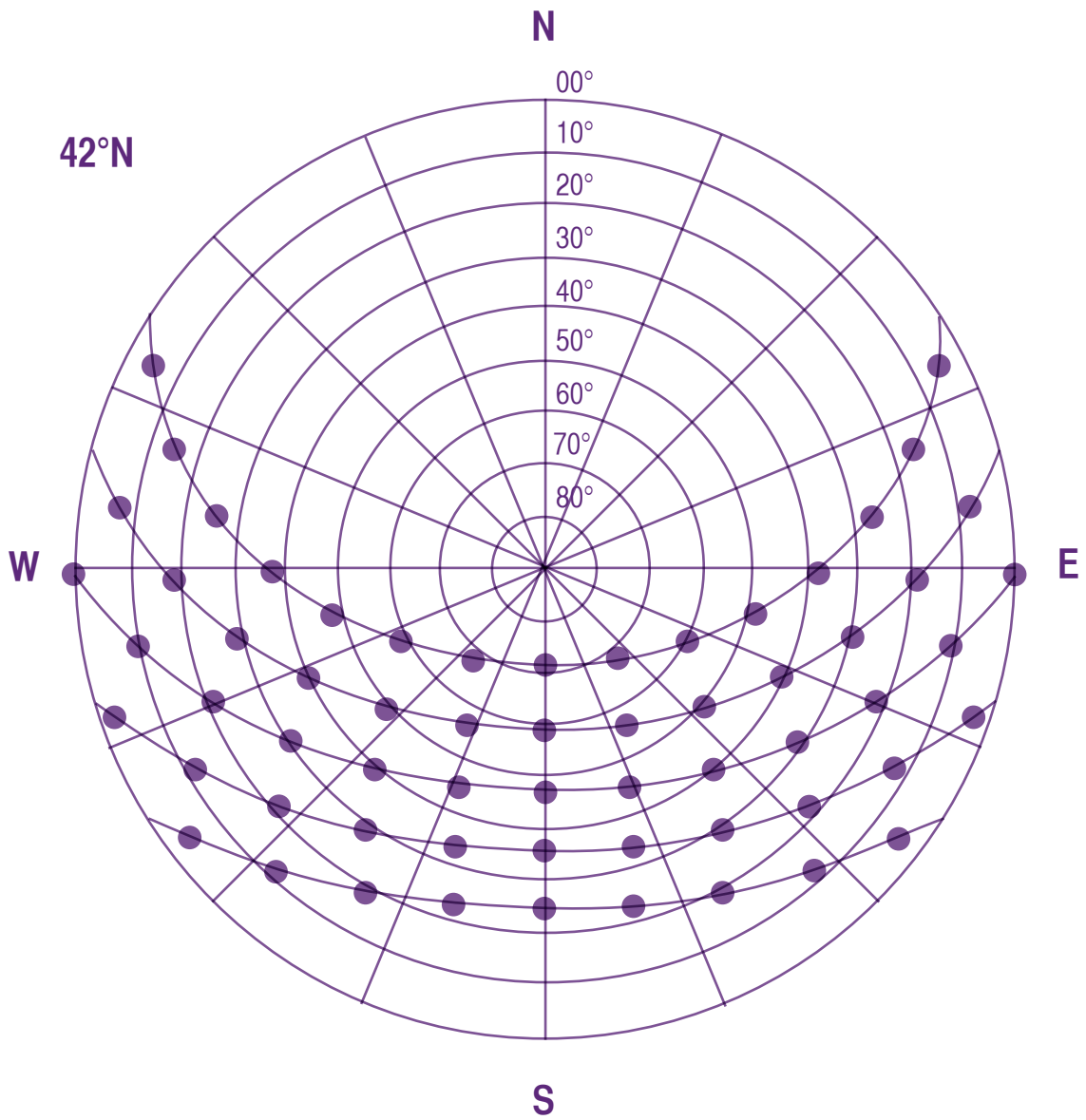
Slope - Climate & Topography



Shading & Air Movement



Noise



Sun Path

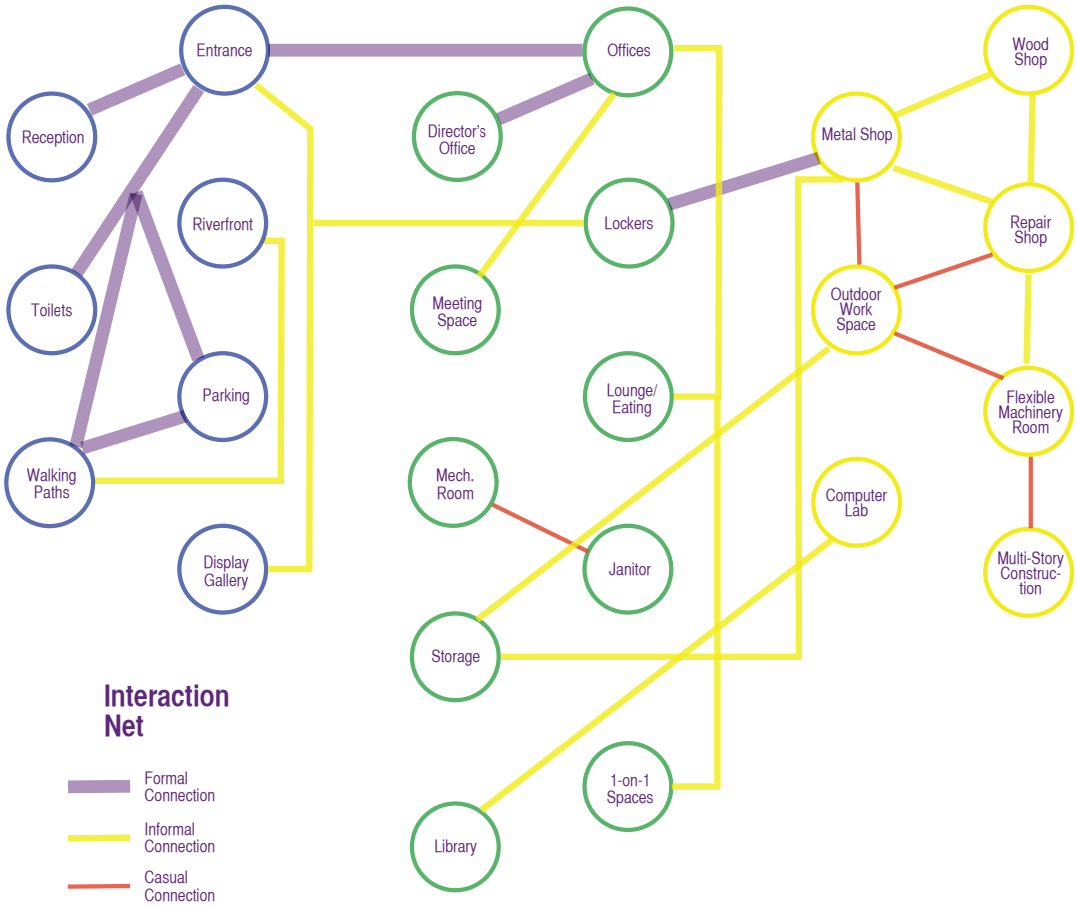
Programmatic Requirements

Interaction Matrix

Essential
Desirable
Not Needed

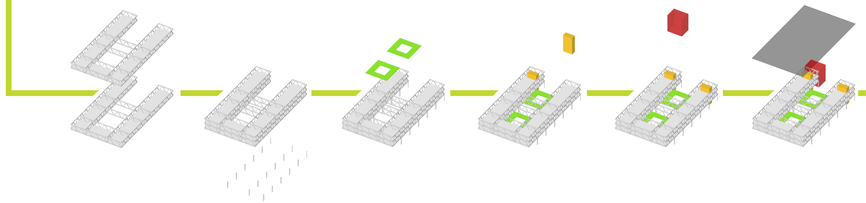
	Entrance Lobby	Private Offices	Reception	Director's Office	Public Toilets	Meeting Space	Wood Shop	Storage	Janitor	Circulation	Mech. Room	Parking	Metal Shop	Computer Lab	1-on-1 Spaces	Lounge/Lunch Room	Heavy Machinery Room	Exterior Work Space	Gallery/Display	Library/Resource Center	Lockers	Repair Shop	Riverfront	Walking Paths
Entrance Lobby		Desirable	Essential	Desirable	Desirable	Desirable	Desirable	Not Needed	Not Needed	Essential	Not Needed	Essential	Desirable	Desirable	Not Needed	Not Needed	Desirable	Not Needed	Essential	Not Needed	Desirable	Desirable	Not Needed	Essential
Private Offices	Desirable		Essential	Essential	Essential	Desirable	Not Needed	Not Needed	Not Needed	Essential	Not Needed	Desirable	Not Needed	Not Needed	Desirable	Desirable	Not Needed	Not Needed	Not Needed	Desirable	Desirable	Not Needed	Not Needed	Not Needed
Reception	Essential	Essential		Essential	Essential	Not Needed	Not Needed	Not Needed	Not Needed	Desirable	Not Needed	Essential	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Desirable	Not Needed	Not Needed	Not Needed	Not Needed	Essential
Director's Office	Desirable	Essential	Essential		Essential	Desirable	Not Needed	Not Needed	Not Needed	Essential	Not Needed	Desirable	Not Needed	Not Needed	Not Needed	Desirable	Not Needed	Not Needed	Not Needed	Desirable	Desirable	Not Needed	Not Needed	Not Needed
Public Toilets	Desirable	Essential	Essential	Essential		Desirable	Desirable	Not Needed	Not Needed	Essential	Not Needed	Not Needed	Desirable	Desirable	Desirable	Essential	Desirable	Not Needed	Desirable	Desirable	Desirable	Desirable	Not Needed	Not Needed
Meeting Space	Desirable	Desirable	Not Needed	Desirable	Desirable		Desirable	Not Needed	Not Needed	Desirable	Not Needed	Not Needed	Desirable	Desirable	Essential	Not Needed	Desirable	Not Needed	Not Needed	Desirable	Not Needed	Desirable	Not Needed	Not Needed
Wood Shop	Desirable	Not Needed	Not Needed	Not Needed	Desirable	Desirable		Essential	Desirable	Desirable	Not Needed	Not Needed	Essential	Desirable	Desirable	Desirable	Essential	Desirable	Not Needed	Desirable	Desirable	Essential	Not Needed	Not Needed
Storage	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Essential		Desirable	Desirable	Not Needed	Desirable	Essential	Desirable	Not Needed	Not Needed	Essential	Desirable	Desirable	Not Needed	Not Needed	Essential	Not Needed	Not Needed
Janitor	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Desirable	Desirable		Essential	Desirable	Not Needed	Desirable	Desirable	Not Needed	Desirable	Desirable	Not Needed	Not Needed	Not Needed	Not Needed	Desirable	Not Needed	Not Needed
Circulation	Essential	Essential	Desirable	Essential	Essential	Desirable	Desirable	Desirable	Essential		Not Needed	Essential	Desirable	Desirable	Desirable	Essential	Desirable	Desirable	Essential	Desirable	Essential	Desirable	Essential	Essential
Mech. Room	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Desirable	Not Needed		Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed
Parking	Essential	Desirable	Essential	Desirable	Not Needed	Not Needed	Not Needed	Desirable	Not Needed	Essential	Not Needed		Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Desirable	Not Needed	Essential	Essential
Metal Shop	Desirable	Not Needed	Not Needed	Not Needed	Desirable	Desirable	Essential	Essential	Desirable	Desirable	Not Needed	Not Needed		Essential	Desirable	Desirable	Essential	Desirable	Not Needed	Not Needed	Desirable	Essential	Not Needed	Not Needed
Computer Lab	Desirable	Not Needed	Not Needed	Not Needed	Desirable	Desirable	Desirable	Desirable	Desirable	Desirable	Not Needed	Not Needed	Essential		Desirable	Not Needed	Not Needed	Not Needed	Not Needed	Desirable	Essential	Not Needed	Not Needed	Not Needed
1-on-1 Spaces	Not Needed	Desirable	Not Needed	Not Needed	Desirable	Essential	Desirable	Not Needed	Not Needed	Desirable	Not Needed	Not Needed	Desirable	Desirable		Not Needed	Desirable	Desirable	Not Needed	Desirable	Not Needed	Desirable	Not Needed	Not Needed
Lounge/Lunch Room	Not Needed	Desirable	Not Needed	Desirable	Essential	Not Needed	Desirable	Not Needed	Desirable	Essential	Not Needed	Not Needed	Desirable	Not Needed	Not Needed		Desirable	Desirable	Not Needed	Desirable	Not Needed	Desirable	Not Needed	Not Needed
Heavy Machinery Room	Desirable	Not Needed	Not Needed	Not Needed	Desirable	Desirable	Essential	Essential	Desirable	Desirable	Not Needed	Not Needed	Essential	Not Needed	Desirable	Desirable		Desirable	Not Needed	Desirable	Essential	Essential	Not Needed	Not Needed
Exterior Work Space	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Desirable	Desirable	Not Needed	Desirable	Not Needed	Not Needed	Desirable	Not Needed	Desirable	Desirable	Desirable		Not Needed	Not Needed	Not Needed	Desirable	Essential	Essential
Gallery/Display	Essential	Not Needed	Desirable	Not Needed	Desirable	Not Needed	Not Needed	Desirable	Not Needed	Essential	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed		Not Needed	Not Needed	Not Needed	Desirable	Desirable
Library/Resource Center	Not Needed	Desirable	Not Needed	Desirable	Desirable	Desirable	Desirable	Not Needed	Not Needed	Desirable	Not Needed	Not Needed	Not Needed	Desirable	Desirable	Desirable	Desirable	Not Needed	Not Needed		Not Needed	Desirable	Not Needed	Not Needed
Lockers	Desirable	Desirable	Not Needed	Desirable	Desirable	Not Needed	Desirable	Not Needed	Not Needed	Essential	Not Needed	Desirable	Desirable	Essential	Not Needed	Not Needed	Essential	Not Needed	Not Needed	Not Needed		Desirable	Not Needed	Not Needed
Repair Shop	Not Needed	Not Needed	Not Needed	Not Needed	Desirable	Desirable	Essential	Essential	Desirable	Desirable	Not Needed	Not Needed	Essential	Not Needed	Desirable	Desirable	Essential	Desirable	Not Needed	Desirable	Desirable		Not Needed	Not Needed
Riverfront	Essential	Not Needed	Essential	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Essential	Not Needed	Essential	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Essential	Desirable	Not Needed	Not Needed	Not Needed		Essential
Walking Paths	Essential	Not Needed	Essential	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Essential	Not Needed	Essential	Not Needed	Not Needed	Not Needed	Not Needed	Not Needed	Essential	Desirable	Not Needed	Not Needed	Not Needed	Essential	

Programmatic Requirements

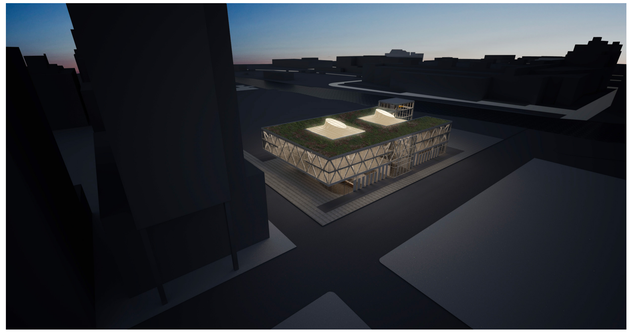


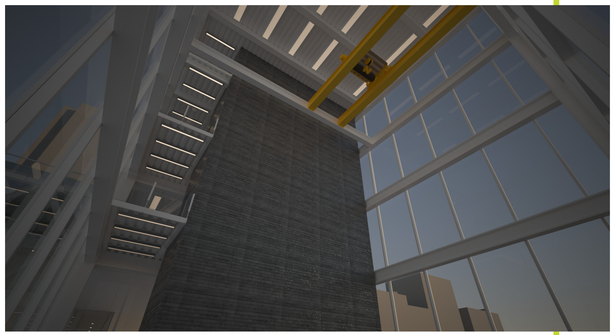
Space Allocation

Entrance Lobby	1000 s.f.
Private Offices	6@120 s.f.
Reception	150 s.f.
Director's Office	160 s.f.
Public Toilets	6@120 s.f.
Break Spaces	3@300 s.f.
Meeting Space	150 s.f.
Wood Shop	2000 s.f.
Storage	2000 s.f.
Janitor	100 s.f.
Metal Shop	2000 s.f.
Computer Lab	500 s.f.
1-on-1 Spaces	10@80 s.f.
Lounge/Lunch Room	1500 s.f.
Flexible Machinery Room	2000 s.f.
Multi-Story Contruction Space	1000 s.f.
Gallery/Display	500 s.f.
Outdoor Display	varies
Library/Resource Center	500 s.f.
Lockers	500 s.f.
Repair Shop	500 s.f.



The design concept begins by placing three 40' wide single-loaded structural bays side-by-side, then removing the center bay to provide an atrium space. This concept is then stacked a second time on top of the first, then placed upon paired columns that anchor the building to the Chicago street. Fire stairs at the West ends of the outer bays help anchor the upper floors, and stabalize the Southern cantilever. A large 3-story construction space is added to the southern bay, and finally a green roof and atrium glass unites the structure.





WEST LOOP COMMUNITY WORKSHOP

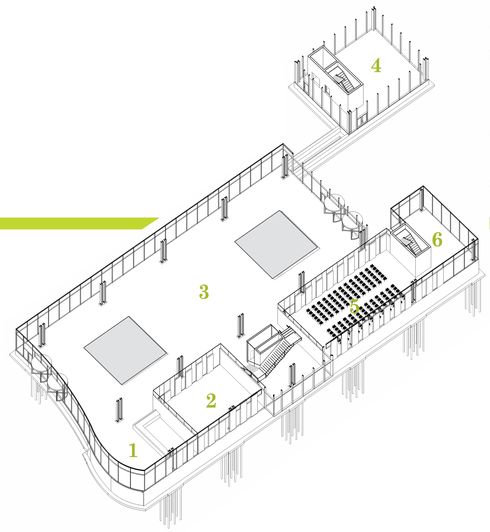
One would think that the ever-increasing pervasiveness of digital communications could have only strengthened our relationships and the communities that we live in. Unfortunately, our obsession with digital gratification has only made us more lonely - and the cities we live in more isolated.

A large part of this problem is the structure of living in a dense urban environment. Access to a computer is simple, and takes up little space within a small dwelling. There is no town square, no creative meeting point. The realm of creative meeting space is too often left to barren and isolated corporate plazas.

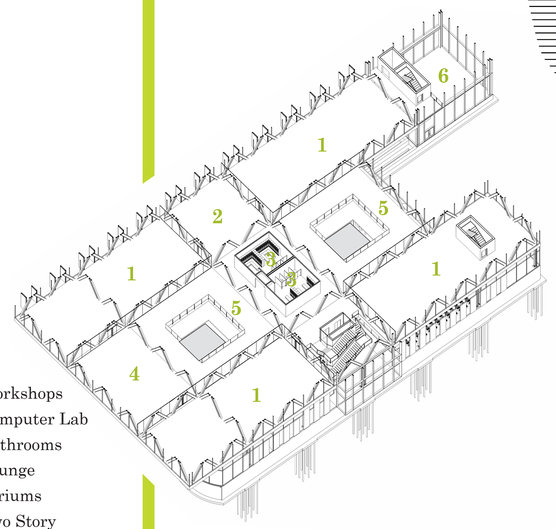
The West Loop Community Workshop is essentially a simple idea - a sort of community "garage" that through membership would allow access to tools, space, and equipment many would have difficulty with in Chicago's inner city. The building houses eight 40' x 100' workshops designed to flexibly adapt to revolving needs and equipment. However, some likely activities would include textiles, welding & metal working, wood working, and digital modeling.

It is through working with the tangible world and providing a communal building that all can access that we can bring people out from their isolated condos and apartments in tall glass towers. The West Loop Community Workshop is the center Chicago needs to start rebuilding its forgotten neighborhoods, one community at a time.

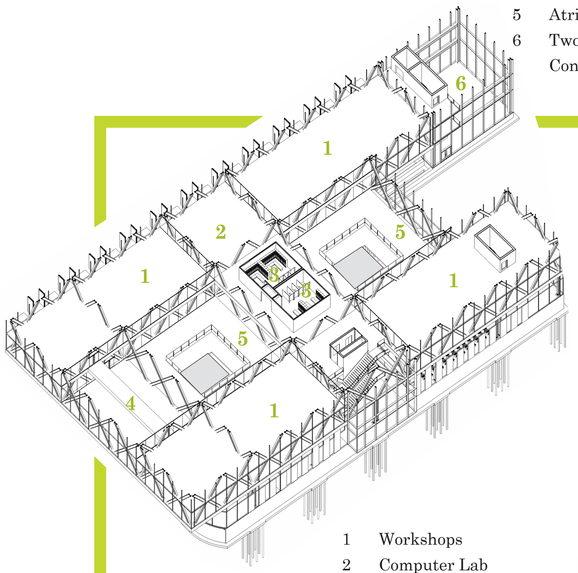
THE BUILDING exterior nods to the regimented structure of the Chicago grid. A roughly symmetrical box of full-floor trusses on a 20' grid is rested on an asymmetrical single-loaded 1st floor. The lengthy 40' cantilever over the Southern portion is both a reaction to the planned public garden space, and a break from the vertical nature of the Chicago Loop directly adjacent.



1 Reception
2 Office
3 Cafe/Lobby
4 Two Story Construction Space
5 Lecture Hall/ Multi-use Space
6 Lounge



1 Workshops
2 Computer Lab
3 Bathrooms
4 Lounge
5 Atriums
6 Two Story Construction Space



1 Workshops
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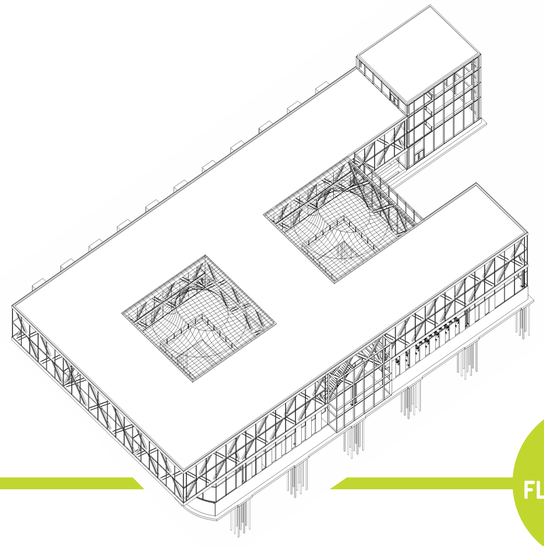

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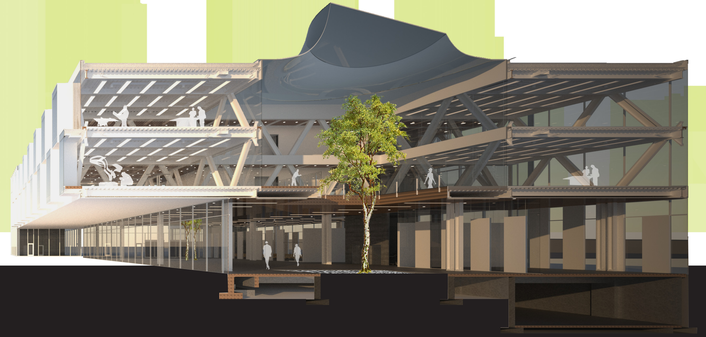
FLOOR PLANS

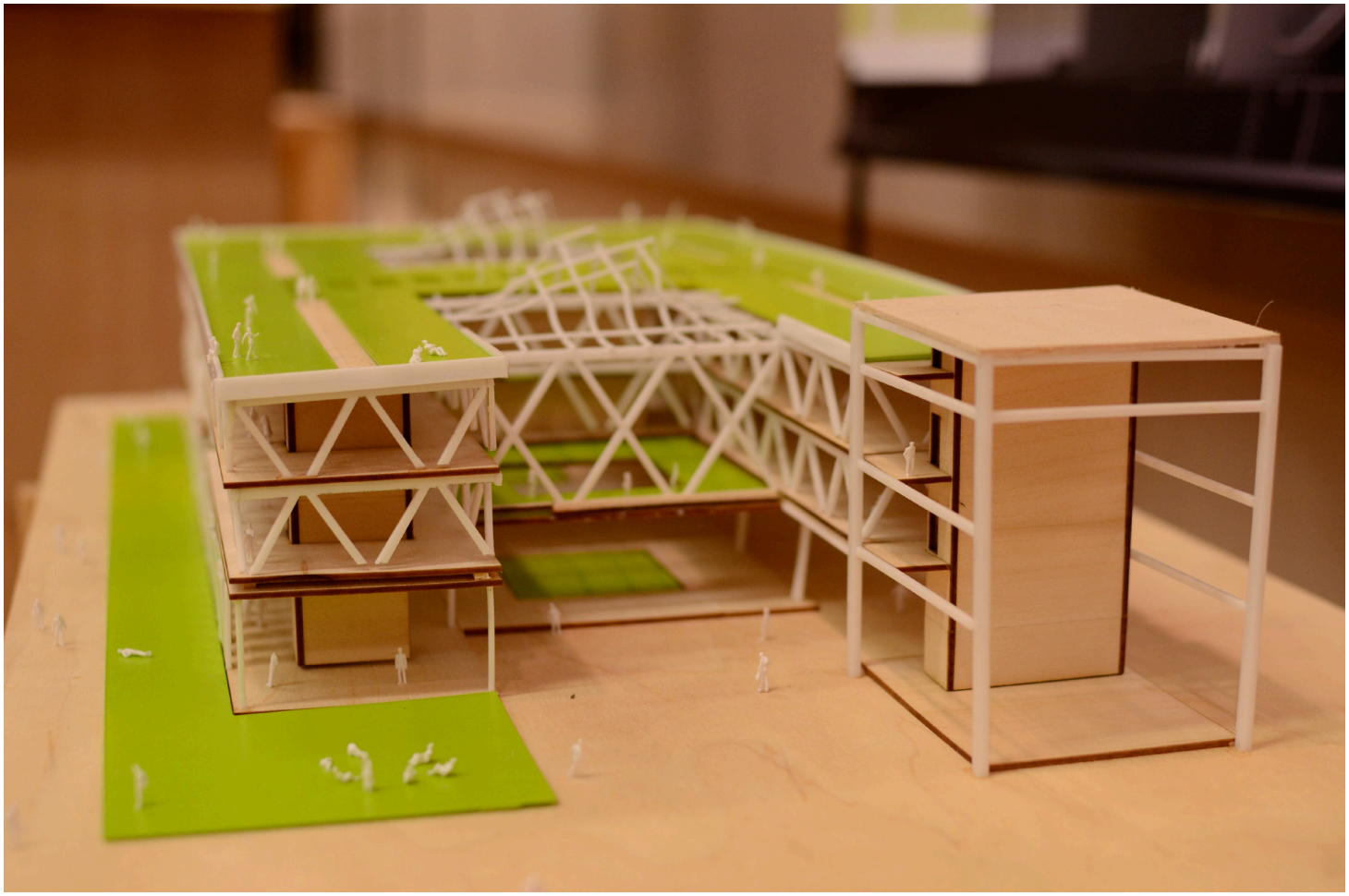
THE SITE

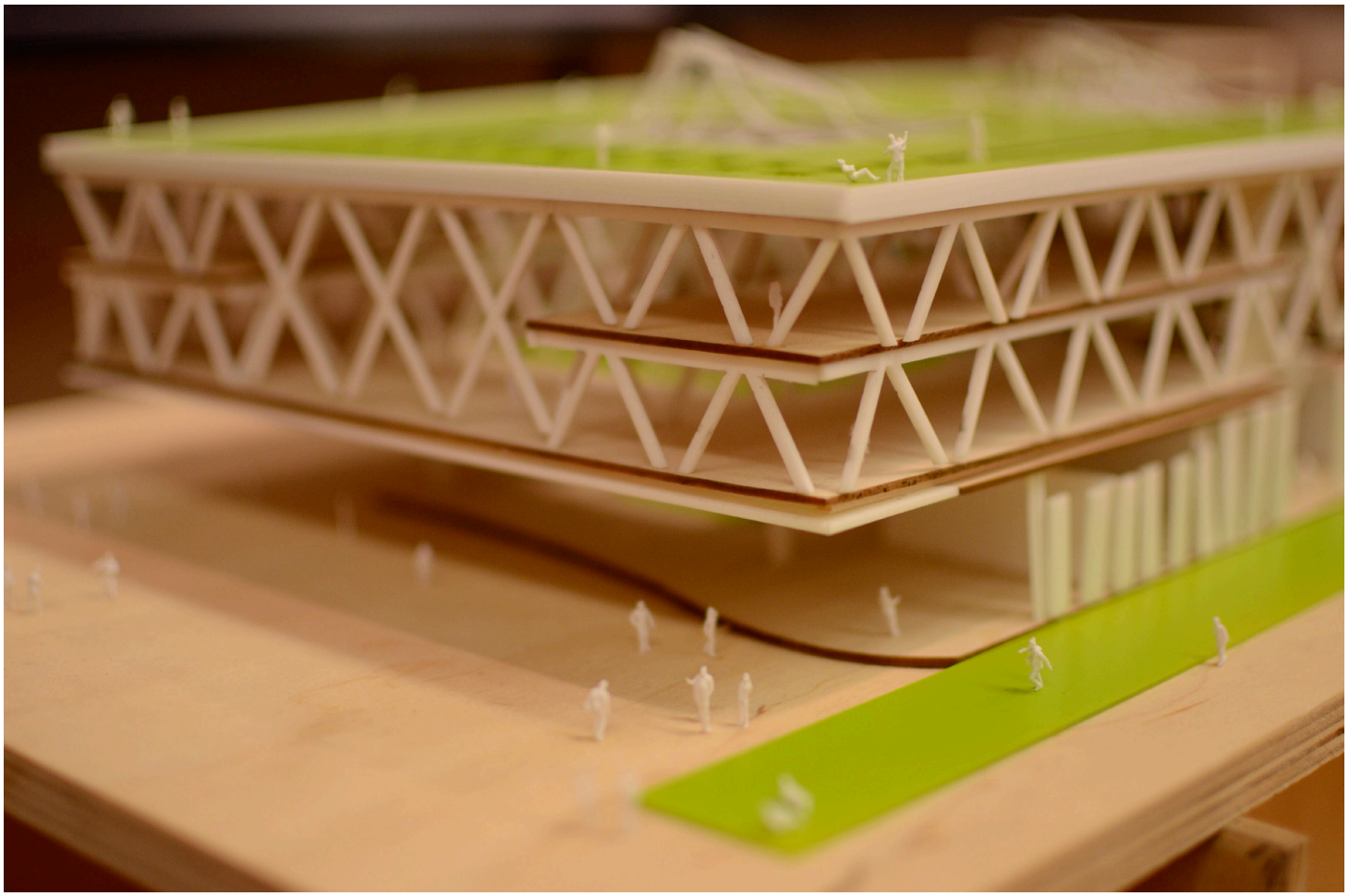
The proposed Site is located just Southwest of the dense Chicago Loop along the South Chicago River. The site was chosen both because of its impact on the community, and the site's old manufacturing history's effect on the project typology. Being on the edge of the developed Loop and the redeveloping West Loop allows for the building to serve as a crossroads to unite Chicagoans of disparate backgrounds and culture. The buildings proximity just South of the Eisenhower Expressway entrance to Chicago allows the building to also serve as an important gateway into the city.

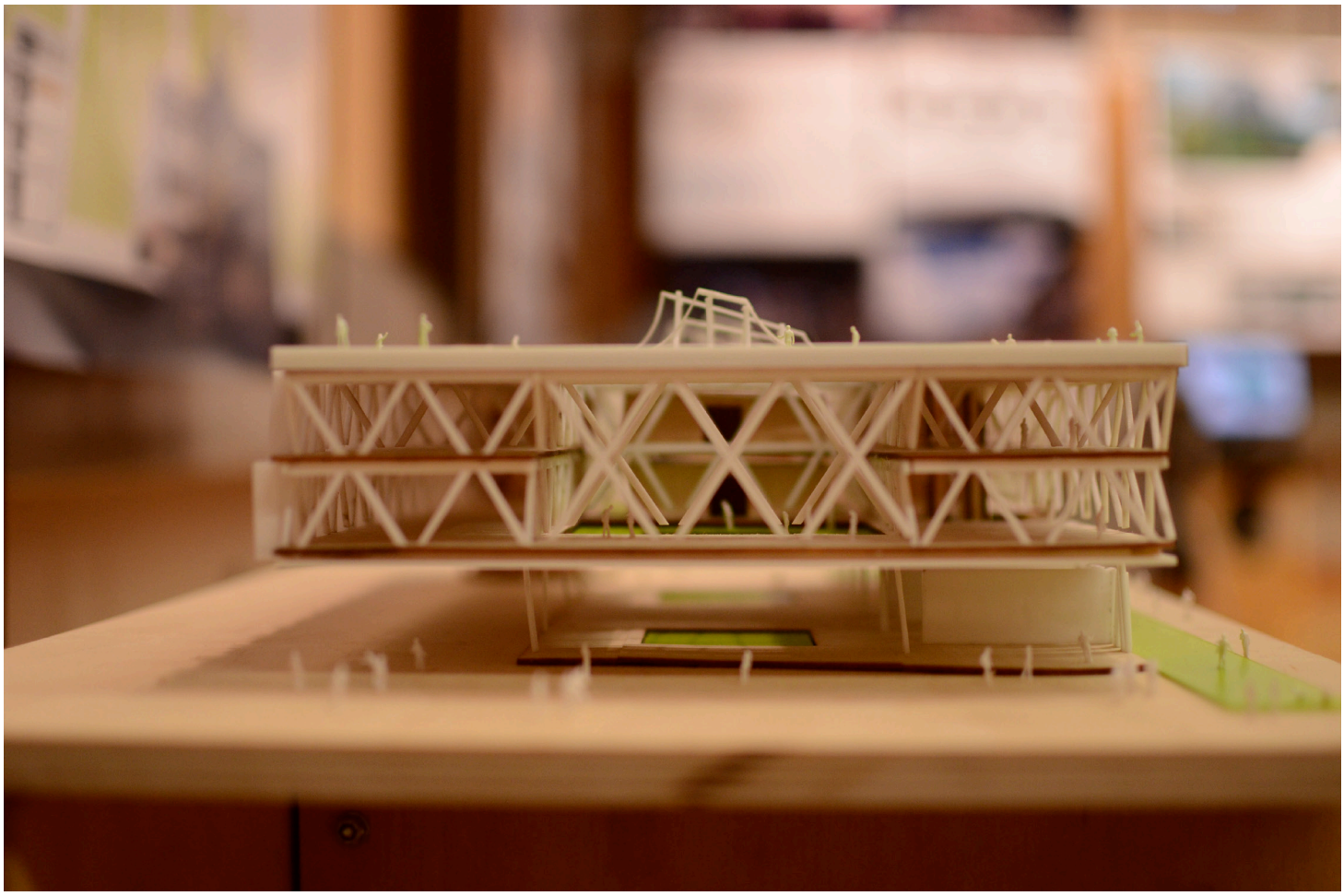
A series of interlaced glass boxes form a reflective space for occupants to sketch and conceptualize ideas. The 4' x 7' boxes provide a working surface and room for 2 to comfortably work and discuss.

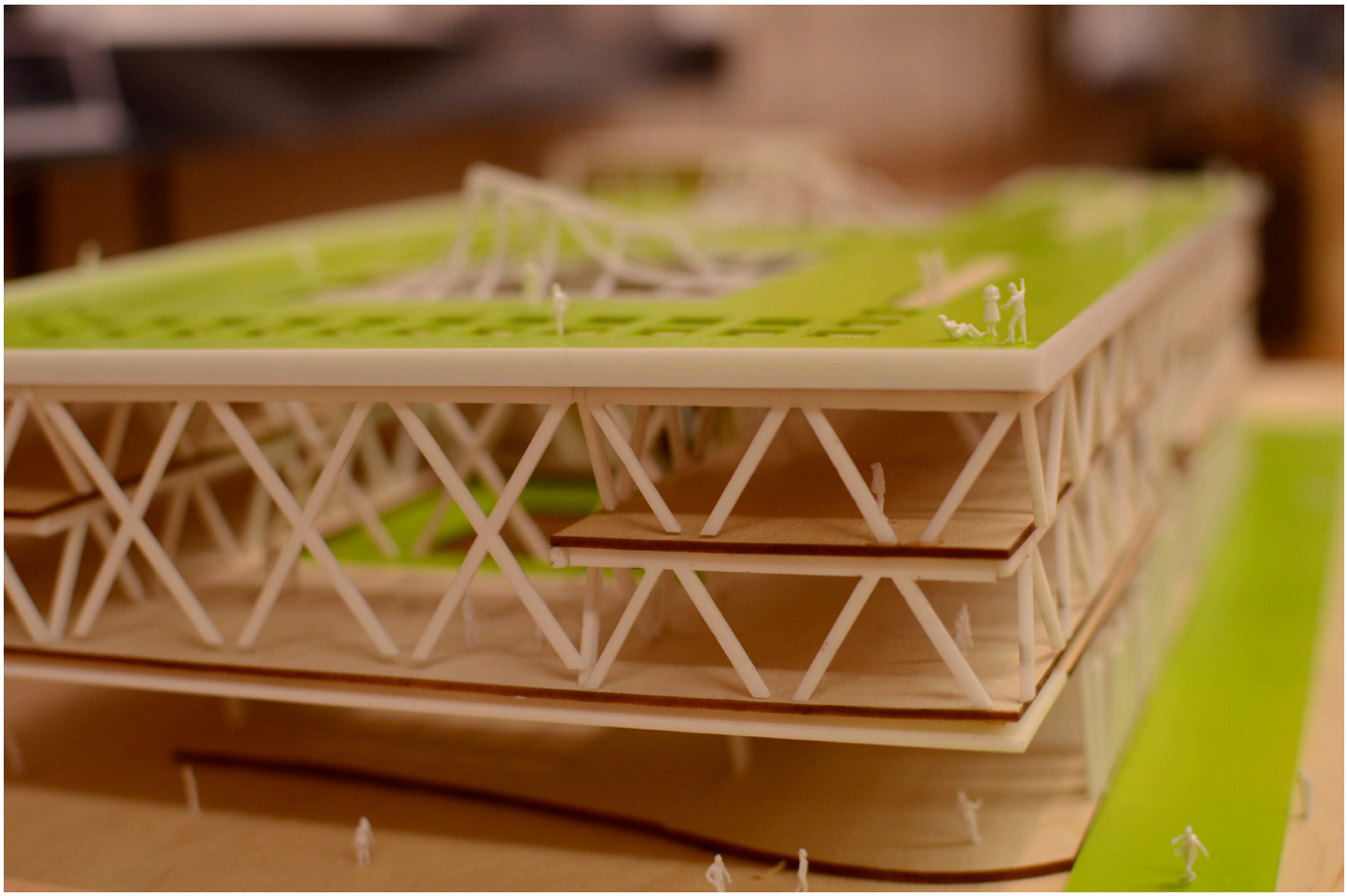


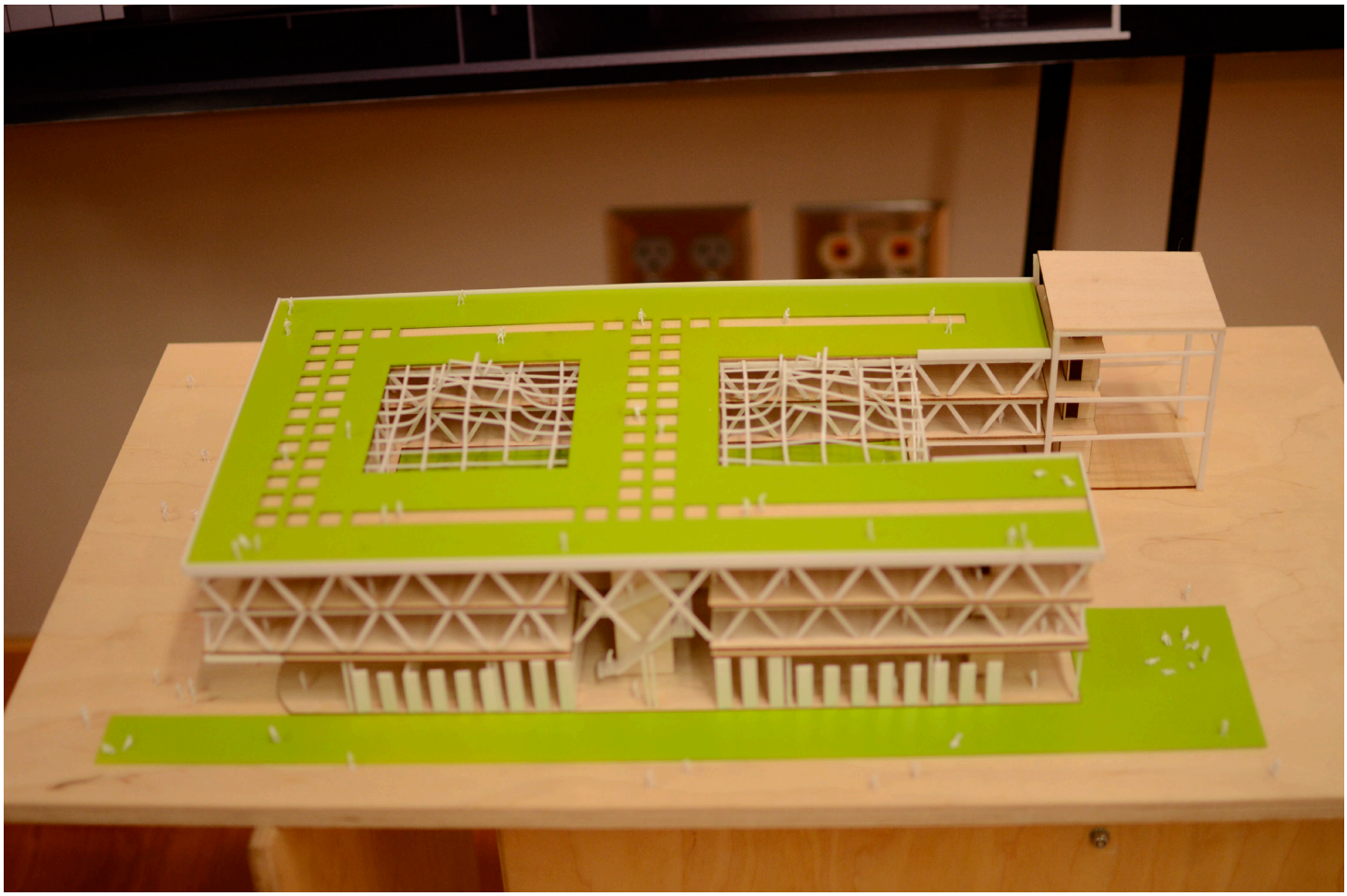
ARCH 772 Design Thesis
Spring Semester 2012
Daniel Dery
Mark Raverhouse
Software: Sketchup Pro, Maxwell, InDesign, Photoshop











WEST LOOP
COMMUNITY WORKSHOP
THE BUILDING
THE SITE

References

Merleau-Ponty, Maurice 1948 *The World of Perception.* New York, NY: Routledge

Riley, Terence 1999 *The Un-Private House.* New York, NY: H.N. Abrams

Auge, Marc 1995 *Non-Places: Introduction to an Anthropology of Supermodernity.* New York, NY: Verso

Colomina, Beatriz 1994 *Privacy and Publicity: Modern Architecture as Mass Media*. Boston, MA: MIT Press

Mitchell, William J. 2005 *Placing Words: Symbols, Space, and the CIty.* Boston, MA: MIT Press

Nesbitt, Kate 1996 *Theorizing a New Agenda for Architecture* New York, NY: Princeton Architectural Press

Braham, William W. & Hale, Jonathan A. 2007 *Rethinking Technology* New York, NY: Routledge

Pallasmaa, Juhani 2005 *The Eyes of the Skin* New York, NY: Academy Press

Pirsig, Robert M. 1974 *Zen and the Art of Motorcycle Maintenance* New York, NY: William Morrow & Company

Stent, Gunther Siegmund 1969 *The Coming of the Golden Age* Ney York, NY: Doubleday

Fehrenbacher, Donald J. (2011.) Soils. *Encyclopedia of Chicago*
Retrieved From: http://encyclopedia.chicagohistory.org/pages/1164.html

Saieh, Nico. (2011.) Australian Technical College. *Archdaily*
Retrieved from: http://www.archdaily.com/35014/australian-technical-college-birrelli-architects/

Seward, Aaron. (2011.) In Detail > Frick Chemical Laboratory. *The Architects Newspaper*
Retrieved from: http://archpaper.com/news/articles.asp?id=5303

General Staff (2011.) Chicago Weather. *The Weather Channel*
Retrieved from: http://www.weather.com/weather/today/Chicago+IL+USIL0225

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NDSU'S Renaissance Hall is my little work-place oasis in a life that continually provides more and more distractions.