Searching for Embodied Presence in Architecture

Marlon Gutierrez Cruz

A thesis
submitted in partial fulfillment of the
requirements for the degree of

Master of Architecture

University of Washington
2019

Committee:

Jim Nicholls

Alex Anderson

Program Authorized to Offer Degree:

Architecture

University of Washington

Abstract

Searching for Embodied Presence in Architecture

Marlon Gutierrez Cruz

Chair of the Supervisory Committee:

Jim Nicholls, Senior Lecturer
Department of Architecture

Committee Member:

Alex Anderson, Ph.D., Associate Professor
Department of Architecture

Buildings have the capacity to affect our emotions. When designed with care, they can move us and put us into a state of emotional awareness that heightens our everyday experience of living. But unfortunately, a building's ability to elicit any kind of meaningful emotional response is a rare quality. More often than not, buildings tend to take on qualities of passive functionality that lose sight of the potential they have to move the human spirit. We tend to experience most buildings in a kind of unconscious haze as a result, frequently becoming absent-minded in our day-to-day rituals of life. We are surrounded by buildings and utilize them on a daily basis, and yet, very few have meaningful qualities that can register a kind of consciousness that leaves us with a lasting impression.

Why is this? What separates those buildings we tend to disregard and those which move us internally? The answer lies in a building's ability to embody presence.

Presence is a quality not easily defined, but it goes beyond the superficialities of external form and instead, focuses on certain core principles which bring the building and the human experience in harmony. When a building has presence, it moves us emotionally and creates a consciousness of existence that arises in large part from its capacity to satisfy our innate human behaviors and drives.

Architect Louis Kahn once wrote,

"A great building, in my opinion, must begin with the unmeasurable, must go through measurable means when it is being designed, and in the end must be unmeasurable." [1]

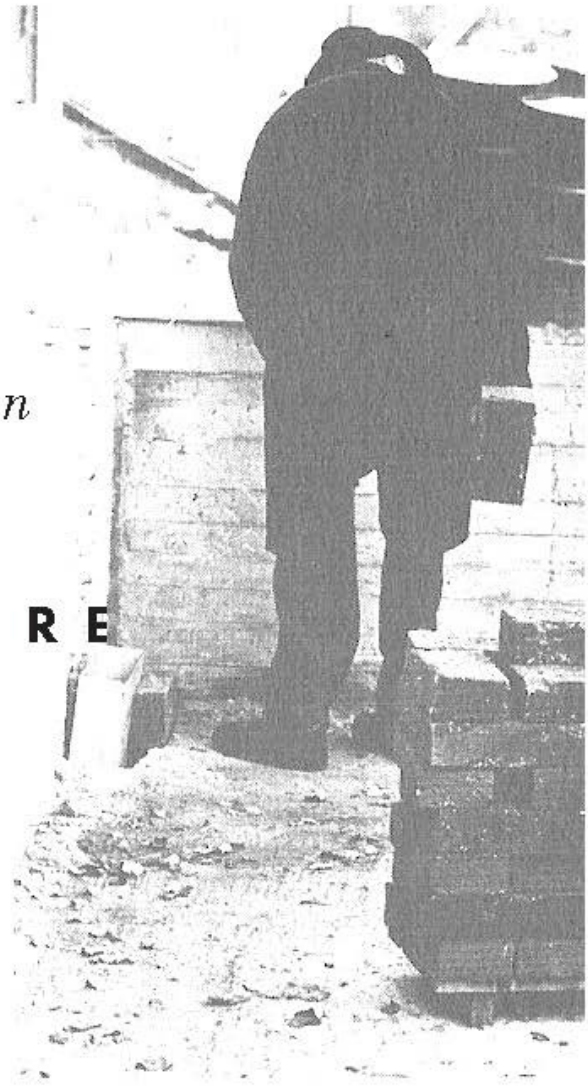
This is the concern of this thesis: to identify those essential principles that contribute to the feeling of presence in space. It is an attempt to define those "measurable means" that can get us closer to the elusive qualities of the "unmeasurable".

The principles in this thesis are what I believe to be those qualities that can move us and transform buildings into works of architecture.

1 Kahn, Louis. "Between Silence And Light: Spirit in the Architecture of Louis I. Kahn" Ed. John Lobell. (Boston & London: Shambhala Publications, Inc., 2008), p.48.

SEARCHING FOR EMBODIED PRESENCE *in* ARCHITECTURE

The Honesty of Material & Construction *11*
The Evidence of Human Expression
The Movement of the Body
The Engagement of the Senses
The Compatibility of Materials
The Feeling of Belonging
The Solace of Nature
The Acceptance of Imperfection
The Character of Light
The Perception of Weight
The Subtlety of Proximity & Distance



The search for a set of principles
and a project to put it in practice.

Thesis
by Marlon Cruz

Committee
Jim Nicholls
Alex Anderson

University of Washington

Autumn 2019

Cruz, Marlon. Thesis Cover. Image: Sigurd Lewerentz with Brick at Markuskyrkan. Circa 1960.
Swedenmark, John. Parish of Skarpnack, "Markuskyrkan" Chapel Brochure. (Stockholm: Ulla Ortberg, 2010), p.2.

Contents

Acknowledgments

To Jim Nicholls
for being an exceptional professor during my time at the University of Washington,
for the honesty and straightforwardness in your criticism,
for always challenging me as a way to reach my potential,
and of course, for always reminding me that there is still poetry in architecture.
You have been a great inspiration during my time in graduate school and I thank you.

To Alex Anderson
for your insightful criticism throughout the thesis process,
for your remarkable ability to identify design and theoretical issues,
and for your exceptional ability to help articulate ideas when all felt lost.
I appreciate everything you have contributed in the realization of this thesis.

To Amir D. Hossler
for initiating our first conversations on what would eventually be an important catalyst for this thesis. Without our 3 hour long conversations about architecture over pizza and beer, none of this would be possible.

To my parents, Bernie and Malou Cruz, and my siblings, Bernard and Riza Cruz
for their unconditional love and support throughout my time in architecture school. They are the motivation for everything I do.

And finally to my wife, Noveshien Galang
to whom I owe everything and who has sacrificed much to make my dreams of becoming an architect a reality. Without your love and your continued belief in my abilities, I wouldn't be where I am today.

Preface

I. A Singular but Common Truth

"I want to write something
so simply
about love
or about pain
that even as you are reading
you feel it
and as you read
you keep feeling it
and though it be my story
it will be common,
though it be singular
it will be known to you
so that by the end
you will think-
no, you will realize-
that it was all the while
yourself arranging the words,
that it was all the time
words that you yourself,
out of your heart
had been saying."

- Mary Oliver [1]

The following thesis is very much a personal journey in search for a set of principles in architecture. And, although my thesis as presented appears to be subjective in nature, by the end I believe you will realize that, in fact, my thesis contains within it a kind of truth or commonality that you will understand, and that you can relate to in your personal journey in architecture.

1 Oliver, Mary. "I Want to Write Something So Simply". Evidence: Poems. (Boston: Beacon Press, 2009), p.42.

Preface

II. Origins: A Shift in Ideology

The origin of my thesis begins not within the bounds of my final year at the University of Washington but eight years ago, when my first ideological beliefs in architecture were established.

Eight years ago, in the Spring of 2011, I was a community college student studying architecture at Diablo Valley College- a community college located in the East Bay of California (Fig. 1, 2). It was my last semester before graduating to receive my Associate of Science Degree in Architecture Design and a few months before transferring to continue my architectural education at the University of California, Berkeley. During the transition period between these two institutions a significant event occurred that had a tremendous impact on how I would view architecture for the next several years.

Figure 1: Diablo Valley College, ET Building

Figure 2: Drafting at Diablo Valley College. 2007.

The event was an invitation by a few of my classmates to join them in attending an architecture lecture hosted at UC Berkeley's College of Environmental Design. Initially, I had no desire to attend the lecture, as I had no knowledge of the speaker or of his work. However, I decided that since I would be transferring to UC Berkeley that Fall, and I had yet to visit Wurster Hall, the building which housed the Architecture Program (Fig.3), I decided perhaps this would be

a great opportunity to explore the facilities. Thus, hesitantly, I tagged along not knowing that the lecture would have a strong influence on how I would view architecture.

The architecture lecture was on February 23, 2011 by Bjarke Ingels of Bjarke Ingels Group (B.I.G.)(Fig.4). Bjarke was a young Danish Architect who at the time was promoting his book "Yes is More" and was just beginning to make a name for himself in the field of architecture (Fig.5). At that time, I didn't realize how well known he was until, upon arriving to the lecture, I saw that the auditorium was filled to the point where students were sitting on the auditorium steps, and supplementary rooms, with speakers and projectors, had to be used. There was a palpable sense of energy and excitement when the lecture began and Bjarke charismatically explained his design values and his recent work.

When the lecture ended, after what seemed like hours, I was completely captivated. Being from a community college, I had never seen such unusual buildings as the work Bjarke was showing. I had also never seen a building's program and form be so eloquently and creatively justified.

At first glance, Bjarke's building's gave the impression of being a formal spectacle, but in fact, the opposite was true, as he would justify each formal move with conciseness and clarity through a series of simple, yet convincing, diagrams. It was this sense of fearless experimentation in form and program that I found inspiring and which ultimately influenced me as I began my architectural studies at UC Berkeley a few months

Figure 3: Wurster Hall, UC Berkeley.

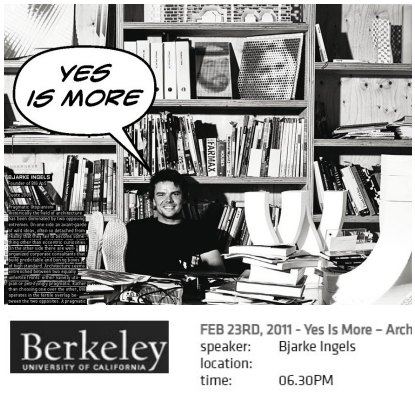


Figure 4: Bjarke Ingels Lecture at UC Berkeley.

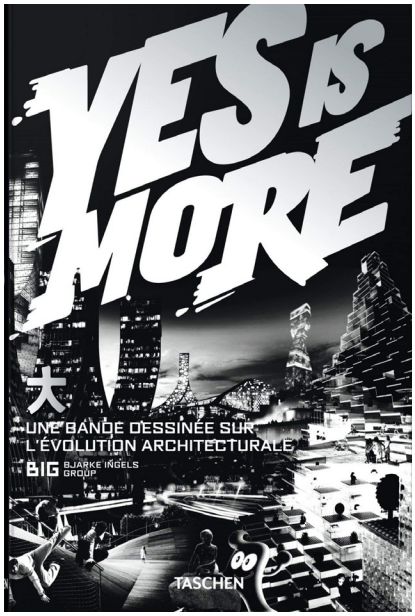


Figure 5: Bjarke Ingel's Monograph, "Yes is More".

later, in the Fall of 2011.

UC Berkeley's Architecture Program at the time was heavily theoretical and it became a place for me to delve into my new-found ideology, conceptual ideas, and formal experimentation in architecture. During my time at Berkeley (2011-2013), I explored such ideas as biomimicry and pneumatics and how these could shape architectural form (Fig.6) Among other experimental studios, I also examined the decay of the human body and how that might relate to how one analyzes the decay of a building's site (Fig.7).

My experience at UC Berkeley was full of architectural experimentation, and I thrived in its progressive environment. However, as my time at Berkeley was coming to an end, I realized that in the few years that I had studied architecture, both at Diablo Valley College and at Berkeley, I had not yet traveled to see any significant works of architecture. Many of the buildings I had grown to love were buildings I had only seen in books or through images online. Thus, before graduating and starting my architecture career, I decided it would be important for me to travel. It was then that another significant moment occurred as I ran into a pamphlet being displayed at Wurster Hall, just before my last semester (Fig.8).

The pamphlet was advertising a seven week program to study architecture in Denmark, Sweden, and Finland. When I discovered this, I thought it would be a great opportunity to

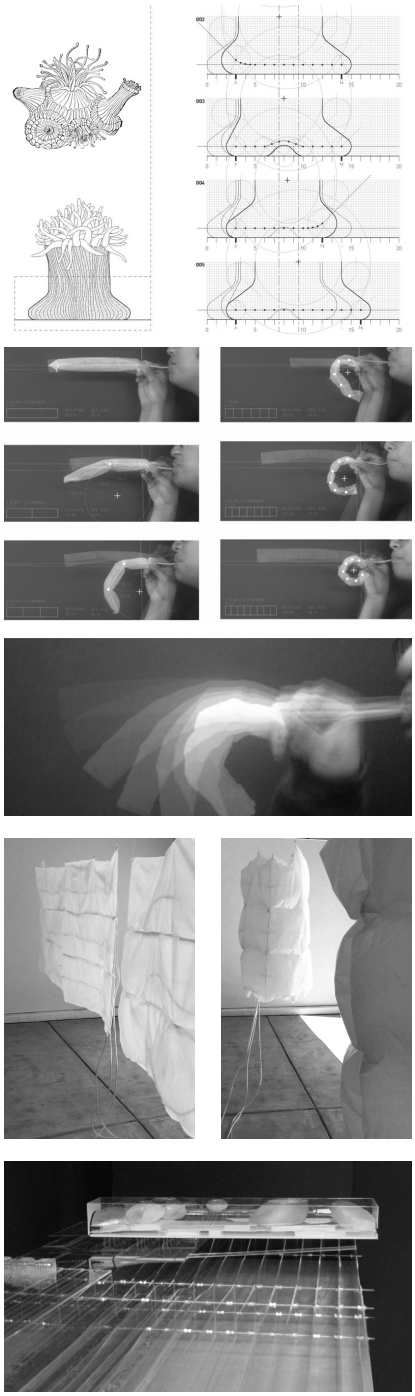


Figure 6: Experiments in Biomimcry and Pneumatic Architecture at UC Berkeley

finally see the works of Bjarke Ingels that had inspired me just two years earlier. So excitedly, I spent my last semester sleeping on studio couches to save enough money for the trip (Fig.9)

It was my belief that the inspiration gained from this trip to Scandinavia would be the catalyst to start my architectural career. But unknowingly, what I experienced instead was an ideological shift in my deeply held beliefs that form and concept were everything in architecture.

In June 2013, I reached Copenhagen, Denmark, my first trip outside the United States. But surprisingly, when I got the itinerary for our architecture tours to Sweden, Finland, and Western Denmark (Fig.10), not a single Bjarke Ingels building was included in the program. So, during my spare time when not attending classes, I traveled on my own to see his works (Fig.11).

Having the opportunity to finally see the work of Bjarke Ingels, an architect I had completely admired during my time as an undergraduate, filled with me with anticipation and excitement. However, moments after visiting his buildings a feeling of disappointment began to emerge.

Upon experiencing his buildings firsthand, the excitement derived from their exterior visual appeal suddenly became short-lived and the surface quality of their experience became apparent. After walking within the building's spaces, the conceptual cleverness behind the justification of their forms, now felt superficial and dull. I felt misled and struggled to understand what I found so unappealing about Bjarke's

Figure 7: Experiments in the decay of the human body and site.

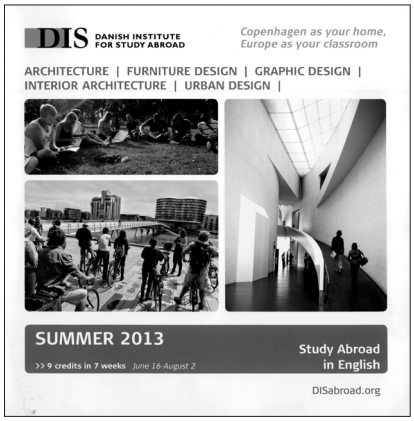


Figure 8: Denmark Study Abroad Pamphlet, 2013

Figure 9: Wurster Hall Couch for Study Abroad.

buildings in person. There was something about the difference between seeing his diagrams in a book versus experiencing his building in real life which left me feeling uninspired. The difference in feeling shook me and made me question everything I believed about architecture, which at the time was that concept and experimentation were everything.

It wasn't until I traveled beyond Denmark to Sweden and Finland, that my system of values would be redefined. And this redefinition could be attributed to a single architectural experience - my visit to Sigurd Lewerentz's Church of St. Petri (Fig.12-15). Visiting this quiet, unassuming church in Sweden altered my ideology and has influenced every subsequent step in my architecture career.

When I walked through the building's archaic-like rooms, I was moved by the subtle power of its craft, sense of materiality, and remarkable attention to detail (Fig.16). The building's spaces filled me with an overwhelming emotion that no other building had given me before. From this experience, I soon realized that the success of architecture didn't rely on unique forms, abstract concepts, or heavy experimentation but rather, the success relied on the human experience and the connection a building makes at the human scale.

Fueled by this realization, I began to slowly rebuild my values in architecture, and I made a promise to myself that I would try to find those qualities that moved me and went beyond the superficialities of form.

Thus, upon returning home to San Francisco, while

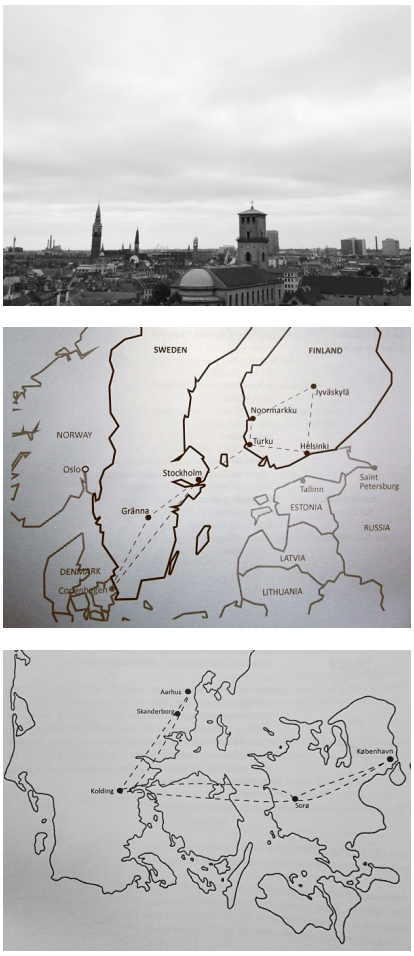


Figure 10: Arrival in Copenhagen & Study Tour Maps. June 2013.

Figure 11: Visting Bjarke Ingels. 2013.

working at an architecture firm and teaching architecture part-time at Diablo Valley College, I spent the next few years attempting to define those poetic qualities that moved me in architecture. In my free time, I began to write in my sketchbook (Fig. 17) as an attempt to answer such questions as: what were the common qualities among all the buildings that moved me, and did any of these qualities have a kind of universal truth? I also began to do research by reading any books that dealt with these questions in architecture (See Pg. 63-66)

I also felt that, in order to design buildings like the ones I had experienced, my next important step was to develop a better sense of the craft of construction. I wanted to become a better designer not just by simply drawing on a computer; I wanted to understand the fundamentals of how to build and, more importantly, build well. In order to do so, I left my design job in architectural practice to take courses in carpentry and construction details. During the day, I would work with power tools, cut lumber, and frame walls, ceilings, and roofs. And then at night, in order to supplement the building process, I would attend a courses in construction details, where I would design and draft details by hand. (Fig.18)

It was in this "Hand-to-Mind" communication that I began to recognize the interdependent relationship between designing and building. I was beginning to understand that in order to create a well-crafted building the architect and the builder should work as one.

Lastly, along with writing, reading, and understanding

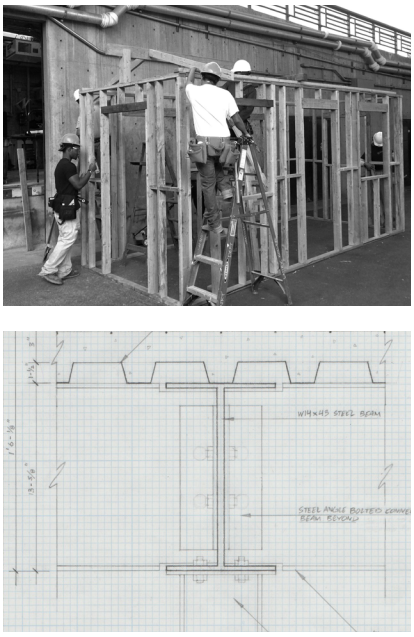


Figure 18: Carpentry and Detail Drafting. 2016

how to build. I began to travel more frequently as a way to search for buildings with similar design values and qualities. During these travels, I saw buildings by Louis Kahn, Peter Zumthor, Carlo Scarpa, Alvar Aalto, and many others, whose work embodied the same poetic qualities I had experienced at St. Petri. (Fig.19)

Ultimately, I was searching for that original feeling I had felt in St. Petri, and consequently, a set of principles that would help create that feeling more readily. This search brought me to the University of Washington as a graduate student and has inspired the premise of this thesis.

This search has become the start of a life-long journey, and what I have discovered so far is written here in this thesis as a set of principles.

This thesis is the search for embodied presence in architecture.

Figure 12: St. Petri. Church, Klippan Sweden, Sigurd Lewerentz.

Figure 13: St. Petri. Church, Klippan Sweden, Sigurd Lewerentz.

Figure 14: St. Petri. Church, Klippan Sweden, Sigurd Lewerentz.

Figure 15: St. Petri. Church, Klippan Sweden, Sigurd Lewerentz.

Figure 16: Details of St. Petri. Church, Klippan Sweden, Sigurd Lewerentz.

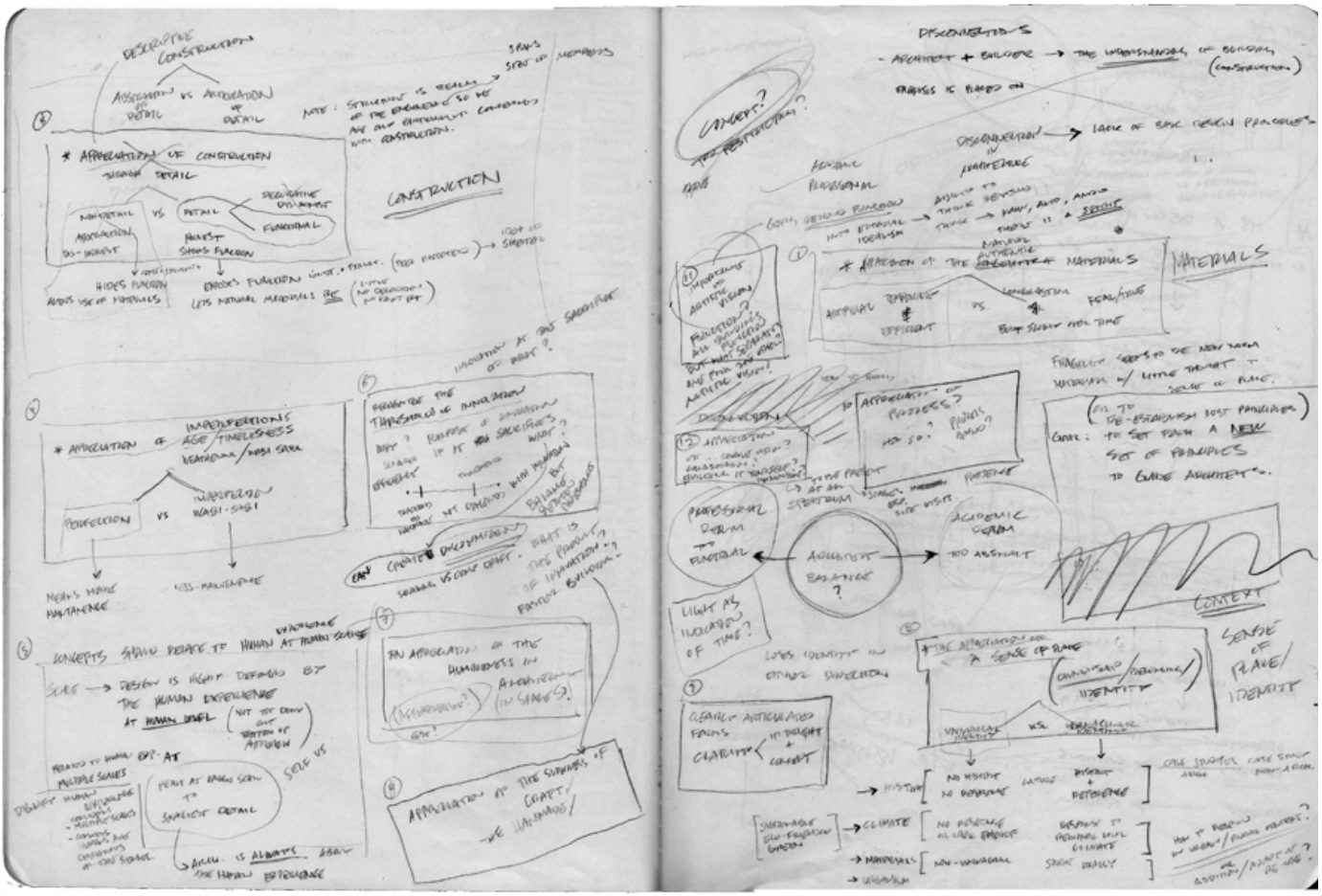


Figure 17: Marlon Cruz Sketchbook. Writings in Search of Presence. 2016.

Visiting Louis Kahn

Visiting Alvar Aalto

Visiting Carlo Scarpa

Visiting Peter Zumthor

Visiting Sigurd Lewerentz

Visiting Olson Kundig

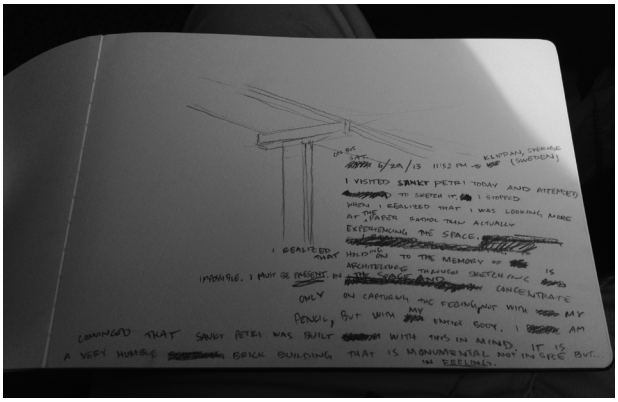
Figure 19: In Search of Architecture with Presence. (Travel from 2013-2019).

Figure Image Credits

Figure 1	Hall, Emma. *"Engineering Technology Building"*, Diablo Valley College Inquirer, Diablo Valley College. 2019. https://www.dvcinquirer.com/news
Figure 2	Photo by Marlon Cruz (Author). Photo taken by Bernard Cruz. 2007.
Figure 3	Wurster, William. *"Wurster Hall Nearing Completion."*, UC Berkeley CED, Sally Woodbridge, College of Environmental Design. 2010. https://ced.berkeley.edu/about-ced/college-history
Figure 4	From Top to Bottom: -Ingels, Bjarke. *"Yes is More: An Archicomic on Architectural Evolution"* (Cologne: Taschen, 2009), Cover Page. -Screen Shot from Bjarke Ingels Website, (Showing Lecture Schedule): https://big.dk/#events
Figure 5	Ingels, Bjarke. *"Yes is More: An Archicomic on Architectural Evolution"* (Cologne: Taschen, 2009), Cover Page.
Figure 6	All drawings, diagrams, and photos by Marlon Cruz (Author).
Figure 7	All drawings, diagrams, and photos by Marlon Cruz (Author).
Figure 8	Scan of Danish Institute for Study Abroad Pamphlet.
Figure 9	Photo by Marlon Cruz (Author).
Figure 10	All photos by Marlon Cruz (Author). Maps drawn by Danish Institute for Study Abroad. (from Program Itinerary Brochure)
Figure 11	All photos by Marlon Cruz (Author).
Figure 12	Photo by Marlon Cruz (Author).
Figure 13	Photo by Marlon Cruz (Author).
Figure 14	Photo by Marlon Cruz (Author).
Figure 15	Wang, Wilfried. (Ed.). *"O'neil Ford Monograph 2: St. Petri Church, Klippan 1962-66, Sigurd Lewerentz"* (Austin: University of Texas at Austin), p.132
Figure 16	From Top to Bottom, Left to Right: -Photo by Marlon Cruz (Author). -Wang, Wilfried. (Ed.). *"O'neil Ford Monograph 2: St. Petri Church, Klippan 1962-66, Sigurd Lewerentz"* (Austin: University of Texas at Austin), p.110 -Ibid. p.133 -Photo by Marlon Cruz (Author). -Wang, Wilfried (Ed.). *"O'neil Ford Monograph 2: St. Petri Church, Klippan 1962-66, Sigurd Lewerentz"* (Austin: University of Texas at Austin), p.123 -Ibid. p.149 -Photo by Marlon Cruz (Author). -Wang, Wilfried. (Ed.). *"O'neil Ford Monograph 2: St. Petri Church, Klippan 1962-66, Sigurd Lewerentz"* (Austin: University of Texas at Austin), p.150
Figure 17	Photo by Marlon Cruz (Author). Scan of Marlon Cruz Sketchbook.
Figure 18	Photo and drawing by Marlon Cruz (Author).
Figure 19	All Photos by Marlon Cruz (Author). Photos taken by Noveshien Galang.

Preface

III. 6/29/2013, 11:52 am



On Bus. Saturday. 6/29/2013 11:52 am Klippan, Sverige (Sweden)

"I visited Sankt Petri Today and attempted to sketch it. I stopped when I realized that I was looking more at the paper rather than actually experiencing the space. I realized that holding on to the memory of architecture through sketching is impossible. I must be present in the space and concentrate only on capturing the feeling, not with my pencil, but with my entire body. I am convinced that Sakt Petri was built with this in mind. It is a very humble brick building that is monumental not in size but…in feeling."

Preface

IV. On the Value of Principles

Architecture is inherently a subjective act. It requires that the architect make a thousand decisions a day based on personal feelings, tastes, and opinions. Decisions which may appear small at first- such as the hardware selection of a door, the material for the frame of a window, the texture of a handrail, or the reflection quality of a floor- but, holistically, decisions like these, as they begin to accumulate, can have a major impact on the overall design quality of a space, in particular how the space makes you feel.

Thus, every design decision made is no small act. Careful design choices must be made at every level of a project, and there is no escape from the inherent subjectivity of these decisions. Personal feelings, tastes, and opinions will in some way influence the work. Therefore, it is imperative, that you, as the architect working in a subjective field, must take a position.

You must have a set of design values that guides your work and the thousands of decisions you make. This is why the development of a set of principles is important. It declares your set of values as a designer and establishes a framework to constantly judge your work against.

And to be clear, no set of principles is ever complete or correct. There is no such thing as the perfect manifesto that will solve all of humanities design woes. In fact, the history of architecture principles has shown this to be true. The only thing that matters is what you believe in and where you fall in the theoretical spectrum of architectural ideas and values in the creation of your work.

You must take a position in architecture, and the following thesis, no matter how naive or incomplete, is an attempt at the first iteration of a set of principles which I believe to be of value in a work of architecture.

Preface

V. The Inherit Incompleteness of Architecture Principles

Architecture is the art of building.

Thus, any manifesto, design theory, set of design values, or principles in architecture are valuable but inherently incomplete. An architect cannot rely on theories alone. One must build buildings in order to attempt to reach the idealism of what architecture theories proclaim.

It follows then that the list of principles identified in this thesis should be treated as a living document to be continually tested, edited, and updated over the course of a career.

The set of principles in this thesis should be tested against the work of architecture it produces. We may never fully understand what produces the qualities of presence, but by continuing to test the principles through an iterative process that allows for changes, it will inevitably get us close to a feeling of presence in architecture.

Introduction

I. The Search for Embodied Presence

Buildings have the capacity to affect our emotions. When designed with care, they can move us and put us into a state of emotional awareness that heightens our everyday experience of living. But unfortunately, a building's ability to elicit any kind of meaningful emotional response is a rare quality. More often than not, buildings tend to take on qualities of passive functionality that lose sight of the potential they have to move the human spirit. We tend to experience most buildings in a kind of unconscious haze as a result, frequently becoming absent-minded in our day-to-day rituals of life. We are surrounded by buildings and utilize them on a daily basis, and yet, very few have meaningful qualities that can register a kind of consciousness that leaves us with a lasting impression. Why is this? What separates those buildings we tend to disregard and those which move us internally?

The answer lies in a building's ability to embody presence.

Presence is a quality not easily defined, but it goes beyond the superficialities of external form and instead, focuses on certain core principles which bring the building and the human experience in harmony. When a building has presence, it moves us emotionally and creates a consciousness of existence that results in large part from its capacity to satisfy our innate human behaviors and drives.

Buildings today have somehow forgotten the importance of creating authentic meaningful connections with the people who use them. We have failed in understanding the reciprocal nature of design, that any built work is ultimately an offering to the people. If this offering is done well, with qualities that move the human spirit, the people will perceive this care and ensure in a building's persistant upkeep and preservation.

But of course, because of design's reciprocal nature, the opposite is also true. If a building fails to connect to our human values, then the people who use it will fail to develop an awareness of, or even care for its existence. This disconnection is what leads to the current treatment of buildings as expendable commodities rather than works of irreplaceable value.

When we design buildings with presence in mind, we establish authentic meaningful connections with the people who use them and acknowledge that the basis of architectural design is a service that originates from an utmost response to the human experience.

Thus, if there is any desire for presence to exist, there must be a way to formulate a set of principles that bring us closer to its qualities. The main question then becomes, what are those exact principles that allow buildings to embody presence? Also, if we can identify these principles, will presence truly be felt simply from their application?

Admittedly, presence in some sense can never be completely designed because of how much personal memory and events of history and culture contribute to the feeling of a space. However, to disregard the attempt to create presence in space because it will somehow create itself is naive.

Buildings exist because we design them with a certain level of intention, and this intention needs re-focusing. We may not be able to fully design presence, but there are undoubtedly certain principles that we can define and control, with intention, in order for a building to register consciousness and elicit emotions more readily.

Architect Louis Kahn once wrote,

"A great building, in my opinion, must begin with the unmeasurable,

must go through measurable means when it is being designed,

and in the end must be unmeasurable." [1]

This is the concern of this thesis. To identify those essential principles that contribute to the feeling of presence in space. It is an attempt to define those "measurable means" that can get us closer to the elusive qualities of the "unmeasurable".

The principles in this thesis are what I believe to be those qualities which can move us and transform buildings into works of architecture.

1 Kahn, Louis. "Between Silence And Light: Spirit in the Architecture of Louis I. Kahn" Ed. John Lobell. (Boston & London: Shambhala Publications, Inc., 2008), p.48.

Introduction

II. Identifying the Principles / The Heritage of Architectural Ideas

The principles identified in this thesis are what I have discovered to be those certain qualities that can bring about a sense of presence in buildings.

Each principle listed is derived from my personal experience in the field of architecture. They derive from building qualities observed in my travels, my education and professional experience, my research from books on a wide-range of topics, as well as meaningful conversations I have had with colleagues. It is important to note that I don't believe each principle to be an original concept in itself but instead, part of the heritage of architectural ideas and writings that, when collected and placed together, create a harmony and quality of architecture that my thesis is trying to attain.

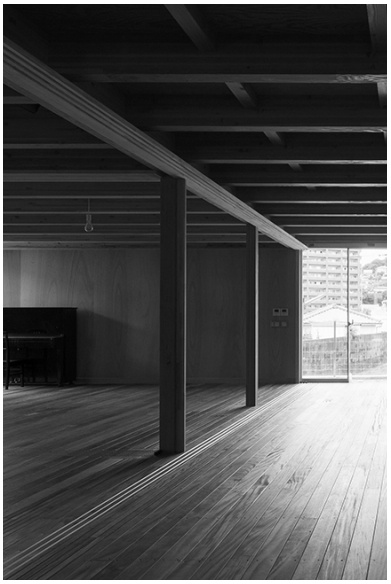
The Principles for Embodied Presence

Principle Synopsis & Framework for Application

1	The Honesty of Material & Construction
2	The Evidence of Human Expression
3	The Movement of the Body
4	The Engagement of the Senses
5	The Compatibility of Materials
6	The Feeling of Belonging
7	The Solace of Nature
8	The Acceptance of Imperfection
9	The Character of Light
10	The Perception of Weight
11	The Subtlety of Proximity & Distance

Principle 1

The Honesty of Material & Construction



Principle 1 The Honesty of Material of Construction

Synopsis

> "In everything that nature makes, nature records how it was made. In the rock is the record of the rock. In man is a record of how he was made. When we are conscious of this, we have a sense of the laws of the universe. Some can reconstruct the laws of the universe from just knowing a blade of grass."
>
> Louis Kahn, *Conversations with Students*

> "No material permits an encroachment into is own circle of forms. Whoever dares to make such an encroachment not withstanding this is branded by the world a counterfeiter."
>
> Adolf Loos, *The Principle of Cladding*

We live in an age of expediency dictated by a system of layered construction, where structure is concealed behind seamless surfaces and materials are disguised as other materials.

The ability for us to read how a building is made and for materials to express their true nature have been denied by the necessities of modern construction. Herein lies the issue, presence in architecture exists only where honesty exists.

There is honesty in the natural and unadorned material whose inherit properties are plainly expressed, in the exposed structure whose forces can easily be traced by the eye, and in the methods of construction where assemblies and the joints between them, are made clear and visible for the unlearned to understand.

Principle 1 The Honesty of Material

Framework for Application

When observing architecture at the scale of materials, honesty is found when the architect pays special attention to a material's inherit aesthetic and structural qualities.

An honest architect will ensure that any building material used in the project will be approached with an attitude that the material is beautiful "as-is", and any modifications made to that material will only be made to further highlight its natural qualities.

Presence in architecture is found through the honest expression of a material's nature.

Framework for the Honesty of Materials:

Method I
Expression of Inherit Surface Qualities in Materials

Method II
Expression of Inherit Structural Properties in Materials

Addendum
The Human Inclination Towards Natural Materials

Principle 1 The Honesty of Construction

Framework for Application

Honesty in construction is found when the architect chooses to express to the observer how certain building elements were made or assembled. Where possible, the architect strives to not deceive the observer but to inform the observer through tectonic expression.

The expression of the construction process leads to a better understanding and appreciation of architecture and thus brings the observe closer to a sense of presence in space.

Framework for the Honesty of Construction:

Method I
Expression of Construction Process

Method II
Expression of Construction Assemblies [Layers of Construction]

Addendum
The Importance of Authenticity and the Rejection of the Image [Symbols of Construction]

Principle 2

The Evidence of Human Expression

Principle 2 The Evidence of Human Expression

Synopsis

> "When entering our old churches...or examining a century old work of rural handicraft, we are seized by emotion. No doubt this is partly due to the trace of human handwork on the surface, the artistic purity of building materials, or the simple lines adapted to our landscape."
>
> Alvar Aalto, *Motifs from Past Ages*

> "Architecture, as I have come to know it, is the art of building, and if it communicates any message of significance, it does so through construction."
>
> Edward R. Ford, *The Architectural Detail*

Each human is born with unique abilities, and it is human nature to have a desire to express these abilities freely.

In a work of architecture, there are two realms of expression- The first is the architect whose unique expression lies in tectonics (the poetry of construction) and the second is the builder whose unique expression lies in craftsmanship (the quality of construction). In our age of accelerating globalization, commercialism, and technological advancements, limitations are placed on these expressions in the form of standardizations.

It is only when the architect and the builder are free to express their unique abilities that presence in architecture is manifested.

Principle 2 The Evidence of Human Expression

Framework for Application

We connect more with objects when we know they contain within them an element of individual expression. The same goes for architecture. When we know a building expresses either the mark of the architect, through tectonics, or the mark of the builder, through craftsmanship, we feel more connected to the architecture.

It is in this recognition of human expression in buildings that the feeling of presence within space emerges.

Framework for the Evidence of Human Expression:

Method I
The Mark of the Architect [Expression in Tectonics]

Method II
The Mark of the Builder [Expression in Craftsmanship]

Addendum
The Importance of the Symbiotic Relationship between the Architect and the Builder :

Architect	=	Expression
Builder	=	Quality of Expression

Principle 3

The Movement of the Body

Principle 3 The Movement of the Body

Synopsis

> "Everyday actions are how we restore and construct a sense of well-being, and it is only during this exercise of freedom that we are most truly ourselves."
>
> Henry Plummer, *The Experience of Architecture*

> "I confront the city with my body; my legs measure the length of the arcade and the width of the square; my gaze unconsciously projects my body onto the facade of the cathedral, where it roams over the mouldings and contours, sensing the size of recesses and projections; my body weight meets the mass of the cathedral door; and my hand grasps the door pull as I enter the dark void behind. I experience myself in the city, and the city exists through my embodied experience. The city and my body supplement and define each other. "
>
> Juhani Pallasmaa, *The Body in the Centre*

We interact with buildings through the movement of our bodies. This movement can be modest in the way our hands turn door handles, pull window latches, or push gates open, or this movement can be pronounced in the way our entire bodies are invited to engage quick level changes, precarious staircases, or sweeping ramps. Spaces can also entice the body to move when designed with visual depth and versatility, tempting us forward through curiosity and the power of choice.[1]

Today, with the overemphasis on utility and the development of automation, environments have become places where behavior is standardized and the freedom to activate our bodies in space is limited. It is only when the building engages our bodies and we are fully aware of this movement that presence in architecture is felt.

Principle 3 The Movement of the Body

Framework for Application

Spaces that activate the movement of the body, whether in large, small, or even visual gestures invigorate us and make us feel renewed. There is great value in an architecture that motivates the body. With this movement, our bodies are physically engaging the building- a kind of choreography in space that makes us feel connected to the architecture.

If presence is to be found in architecture it can be found in how the building engages with the human body in space.

Framework for the Movement of the Body:

Method I [1]
Large Scale Gestures [Movement of the Feet]
Captured by Changes in the Ground Plane

Method II [1]
Small Scale Gestures [Movement of the Hands]
Captured by Mechanisms of Actuation

Method III [1]
Visual Gestures [Movement of the Mind]
Captured by Depth of Visual Field

Addendum [1]
The Importance of Challenging the Body

1 Plummer, Henry. *"The Experience of Architecture"* (United Kingdom: Thames & Hudson, 2016)

Principle 4

The Engagement of the Senses

Principle **4** The Engagement of the Senses

Synopsis

> "Every touching experience of architecture is multi-sensory; qualities of space, matter and scale are measured equally by the eye, ear, nose, skin, tongue, skeleton and muscle. Architecture strengthens the existential experience, one's sense of being in the world, and this is essentially a strengthened experience of self...Architecture involves several realms of sensory experience which interact and fuse into each other."
>
> Juhani Pallasmaa, *The Eyes of the Skin*

> "Material is endless. Take a stone: You can saw it, grind it, drill into it, split it, or polish it - it will become a different thing each time. Then take tiny amounts of the same stone, or huge amounts, and it will turn into something else again. Then hold it up to the light - different again. There are a thousand different possibilities in one material alone. This is the kind of work I love, and the longer I do it the more mysterious it seems to become."
>
> Peter Zumthor, *Atmospheres*

The emotion we feel when we enter a space is highly influenced by the way the materials of that space engage our senses. When materials are intentionally detailed and finished to receive the body and carefully composed to appeal to our visual, tactile, auditory, and olfactory senses we connect with the building in a more intimate level. Comfort is found when priority is given to establish harmony between building and body.

Today, there is an overly pragmatic attitude towards the selection of materials and their relationship to the senses. Presence in architecture can only be felt when great care is taken to explicitly engage our senses. It is through this engagement that we become aware of our own bodies in space, which in turn heightens the architectural experience.

Principle **4** The Engagement of the Senses

Framework for Application

We experience every work of architecture through our senses. It follows then that the architect must have a strong sensibility for how materials will react with the human in terms of seeing, hearing, touching, and smelling. This requires material understanding on the part of the architect but also an empathy towards human needs.

An architecture that considers the human senses generates a feeling of unity within the building rather than opposition. When we enter its spaces, we feel as though the building is speaking to us because it has considered us.

By interacting with our senses, the building is brought down to human scale, and it is in this engagement that presence manifests itself.

Framework for the Engagement of the Senses:

Method I
Use of Materials with an Auditory Quality [Sense of Hearing]

Method II
Use of Materials with a Tactile Quality [Sense of Touch]

Method III
Use of Materials with an Olfactory Quality [Sense of Smell]

Addendum [2]
The Importance of Vision in Collaboration with the Other Senses in the Use of Materials :

Vision *with* Sense of Hearing
Vision *with* Sense of Touch
Vision *with* Sense of Smell

2 Pallasmaa, Juhani. *"The Eyes of the Skin: Architecture and the Senses"* (London: Academy Group, Ltd., 1996)

Principle 5

The Compatibility of Materials

Principle 5 The Compatibility of Materials

Synopsis

> "Buildings are artificial constructions. They consist of single parts which must be joined together. To a large degree, the quality of the finished object is determined by the quality of the joins."
>
> Peter Zumthor, *Thinking Architecture*

> "I believe in getting your hands dirty as an architect. To know the processes of construction, to know the building- this is our language. If you don't understand how the materials are going to work, if you don't understand the nature of the materials, then you don't have an architect's vocabulary. The language of architecture also has to include the nature of materials."
>
> Glenn Murcutt, *From the Beginning: Thirteen Questions*

Material is the medium of the architect, and just as a painter relies on a deep understanding of color and the relationships made in a color wheel, the architect must also develop the knowledge of how differing materials will react visually when composed within a space.

Material characteristics such as texture, color, reflectiveness, weight, and temperature differ from material to material, and it is in this diversity of qualities that harmonious or disharmonious material relationships can be created.

Quite often, spaces lack presence due to a perfunctory attitude towards material relationships and how they are composed in space. To find presence in architecture, a conscientious approach must be given towards finding the right balance between materials of disparate qualities.

Principle 5 The Compatibility of Materials

Framework for Application

At a basic level, architecture is the bringing together of various materials to create space. It is in these material relationships where the architecture can either fail or be successful in registering emotive qualities.

Ultimately, in order to find presence, the architect must understand material relationships and how to compose their disparate qualities harmoniously.

The architect who masters the compositional relationships of materials undoubtedly determines, and controls, the emotive quality of a space. And it is in the capturing of emotion through materials that presence can be found.

Framework for the Compatibility of Materials:

Method I [3]
Establish visual harmony in Material Compositions between differing Material Characteristics

Characteristics include but are not limited to:

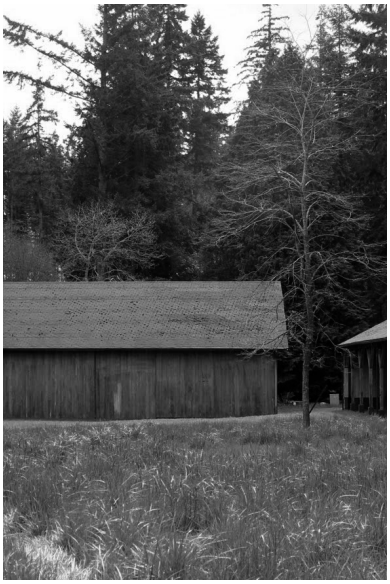
Texture	
Hardness/Softness	
Reflective Qualities	
Color	[Hue / Tint / Tone / Shade]
Weight	[Heaviness / Lightness]
Strength	[Durable / Fragile]
Transparency	[Translucent/Opaque]
Value	[Modest/Precious]

Addendum
The Importance of Developing a Material Intuition in the Selection of Material Relationships

3 Zumthor, Peter. "Atmospheres" (Basel: Birkhauser, 2006)

Principle 6

The Feeling of Belonging



Principle 6 The Feeling of Belonging

Synopsis

> "There is the paradox: how to become modern and return to sources; how to revive an old, dormant civilization and take part in universal civilization. The problem is not simply to repeat the past, but rather to take root in it in order to ceaselessly invent."
>
> Paul Ricoeur, *Universal Civilization and National Cultures*

> "Things are seen too much as a question of form. The most difficult problems are naturally not involved in the search for forms for contemporary life; it is a question of working our ways to forms behind which real human values lie."
>
> Alvar Aalto, *Between Humanism and Materialism*

Any act of building naturally becomes an act of change that has an impact on its surroundings. Thus, the challenge of any built work becomes the degree of meaningful connection between itself and the existing context of which it is taking part.

The more a building connects meaningfully to place, whether through a response to landscape, climate, history, or culture, the more a sense of belonging is created. It is in this sense of belonging that presence in architecture is found.

Architects must try to avoid the superficialities of form and instead should find substance through a genuine response to context. It is through this approach that the feeling of belonging can manifest itself in a newly built work.

Principle 6 The Feeling of Belonging

Framework for Application

Any new building should strive to establish a relationship with the place it is being a part of. To do this, the architect must understand the essence of a place through its context and respond accordingly. It is through the quality and subtlety of an architect's response that a new building can begin to feel as though it has always belonged. Empathy towards a place is then established which brings about a sense of presence.

Framework for the Feeling of Belonging:

Method I
Establish a Building's Relationship with a place through:

A Response to Surrounding Physical Context
A Response to Surrounding Landscape / Topography
A Response to Historical Context
A Response to Cultural Context
A Response to Regional Climate

Addendum
The Importance of Avoiding a Superficial Response to Context

The Importance of Memory and the Feeling of Belonging in Architecture
[Building as Background]

The Importance of Finding the Essence of what a Building and Program Desires to Be [4]
[Beauty in Service of Function]

4 Kahn, Louis. *"Essential Texts" Edited by Robert Twombly* (New York & London: W.W. Norton & Company, 2003)

Principle 7

The Solace of Nature

Principle 7 The Solace of Nature

Synopsis

> "Human life is not intended to oppose nature and endeavor to control it, but rather to draw nature into an intimate association in order to find union with it...This kind of sensibility has formed a culture that deemphasizes the physical boundary between residence and surrounding nature and establishes instead a spiritual threshold."
>
> Tadao Ando, *Beyond Horizons in Architecture*

> "In the creation of a garden, the architect invites the partnership of the Kingdom of Nature. In a beautiful garden, the majesty of Nature is ever present, but Nature reduced to human proportions and thus transformed into the most efficient haven against the aggressiveness of contemporary life."
>
> Luis Barragan, *Pritzker Prize Acceptance Speech*

We often see nature as an independent element kept separate from the built world. It is only when we invite nature within, in the form of well-curated views and larger architectural gestures, that the multitude of nature's benefits can be felt.

A connection towards nature should not simply be windows with inadvertent views; rather, we should have well-intentioned gestures that compose buildings and nature into a unified relationship. Buildings should reach out and embrace natural elements such as the landscape, flora, fresh air, sunlight, and water and have their presence felt closely to engage the senses.

By integrating nature into everyday life, we feel a sense of comfort and ease, which brings the feeling of presence to architecture.

Principle 7 The Solace of Nature

Framework for Application

In order to find solace with nature, the architect must think in two scales. The first is at the scale of the building where the building can be shaped to embrace nature. This act allows us to feel a sense of connection and responsibility to the nature that enters in as well as to the surrounding landscape of which it is an inherit part.

The second is at the scale of the human body through our senses. We can create connections to nature through visual connections, tactile connections, auditory connections, or olfactory connections. It is only when nature can connect to our senses that we can begin to find comfort in its properties.

Solace is found in the way a building or the human body connects with nature, and it is in this solace that presence can also be felt.

Framework for the Solace of Nature:

Method I
Connect Building to Nature through Form [5] [Building In Harmony with Environment]

Method II
Connect Human to Nature through Senses [Human in Harmony with Environment through our Senses: Visual, Tactile, Auditory, and Olfactory]

Addendum
The Importance of Japanese Design Concepts
[Borrowed Scenery - Shakkei]
[Forest Bathing - Shinrin-Yoku]

The Importance of the Healing Properties of Nature

5 Jacobson, Max. Silverstein, Murray. Winslow, Barbara. *"Patterns of Home: The Ten Essentials of Enduring Design"* (Newtown: The Tauton Press, Inc., 2005)

Principle 8

The Acceptance of Imperfection

Principle **8** The Acceptance of Imperfection

Synopsis

> "Imperfection is in some sort essential to all that we know in life. It is the sign of life in a mortal body, that is to say, of a state of progress and change...and in all things that live there are certain irregularities and deficiencies which are not only signs of life, but sources of beauty."
>
> John Ruskin, *The Stones of Venice*

> "Upright, upright, why must everything be upright? It might be beautiful even though it is crooked."
>
> Sigurd Lewerentz, *Markuskyrkan*

With the passage of time, any built work will begin to visibly express its age. Its materials, once pristine, will transform through the exposure of its surfaces to nature or from the constant everyday use by the human body.

To many, this patina of wear is an undesirable quality, and they prefer to return the building to a state of perfection. Or they select faux materials that attempt to deny the signs of age all together.

In architecture, this ideal state of perfection is a lie, as a building is always in a constant state of change. It is when buildings accept imperfection and decide to bear the markings of their history honestly and forthrightly that presence in architecture is found.

Principle 8 The Acceptance of Imperfection

Framework for Application

There is beauty in the aging of materials. The intricacies of a well-worn surface tell its history and give character to buildings.

As architects, we must learn to accept and anticipate the qualities that arise from imperfection, in particular imperfection gained through weathering and patina.

Emotions can be stirred by the qualities of imperfection. Surface characteristics attract and engage the observer giving a sense of presence to place.

Framework for the Acceptance of Imperfection:

Method I
Design Strategies that Accept Weathering

Method II
Design Strategies that Accept Patina

Addendum
The Importance of Maintenance
[Between Weathering and Deterioration]

The Importance of Aesthetic Qualities of Wabi-Sabi

Principle 9

The Character of Light

Principle 9 The Character of Light

Synopsis

> "We knew that the museum would always be full of surprises. The blues would be one thing one day; the blues would be another thing another day, depending on the character of the light. Nothing static, nothing static as an electric bulb, which can only give you one iota of the character of light. So the museum has many moods as there are moments in time, and never as long as the museum remains as a building will there be a single day like the other."
>
> Louis Kahn, *Light is the Theme*

> "More elusive and often unspoken as it lies largely beyond the capacity of words, is the world of light, which exists independently of the objects it clothes. This is the realm of ambiance and mood, shadow and reflection, tonality and temperament - ethereal and fluid aspects of buildings that a person can apprehend and feel through circuits of perception and sensibility; as the poet might say, can touch with the soul but not with the body, nor order or measure by use of the mind."
>
> Henry Plummer, *The Architecture of Natural Light*

In architecture, natural light is the principal controller of mood. Stand in a room with natural light and watch hour-to-hour how it effortlessly transforms the feeling of a space. As the day moves forward, the changing light will gradually alter the character of spaces and consequently our emotions.

By having an understanding of the character of light, we can control more readily the way spaces feel, bringing us closer to a feeling of presence. The ways in which we control light in architecture are through an understanding of building orientation, thoughtful window placement, and knowledge of the absorbing and reflecting qualities of materials.

It is in the mastery of these elements that the emotive qualities of natural light can be expressed to heighten the architectural experience and give presence to space.

Principle 9 The Character of Light

Framework for Application

As architects we compose form, space, and materials, but it is only in conjunction with natural light that these elements can express their full potential of developing a sense of character. To the architect, light is a kind of ethereal material that must also require mastery. The architect must be proficient in understanding how light impacts architecture at multiple scales, from orientation to the reflective quality of materials. If the architect can have mastery over the various qualities of natural light, especially in relation to a building's program, character is introduced and consequently the feeling of presence in space.

Framework for the Character of Light:

Method I
Building Orientation in Conjunction with Natural Light
[Understand Light Qualities from Differing Solar Orientations]

Method II
Building Program in Conjunction with Natural Light
[Understanding Light Qualities in Relation to Activities in Each Room]

Method III [6]
Building Form and Detail in Conjunction with Natural Light - Strategies by Henry Plummer :
[Evanescence - Orchestration of Light]
[Procession - Choreography of Light]
[Veils of Glass - Refraction of Light]
[Atomization - Sifting of Light]
[Canalization - Channeling of Light]
[Atmospheric Silence - Unified Mood]
[Luminescence- Materialization of Light]

Method IV
Materials in Conjunction with Natural Light
[Understanding the Reflective Quality of Materials in order to Establish Mood of Place]

Addendum
The Importance of Natural Light [Natural vs Artificial]

6 Plummer, Henry. *"The Architecture of Natural Light"* (London: Thames & Hudson, Ltd., 2009)

Principle 10

The Perception of Weight

Principle 10 The Perception of Weight

Synopsis

> "We are all restrained and condemned by the weight of gravity...The constructive process, the daily concentration and effort appeal to me more than the light fantastic, more than the quest for the ethereal. Everything we choose in life for its lightness soon reveals its unbearable weight."
>
> Richard Serra, *Weight*

> "Architecture is the interface between ground and sky...I think we all strive for a certain lightness, but in recognition that there is weight too. There is a beautiful posture in yoga where half of the body is rooted into the ground, while the other half strives to go into the sky, like a rocket. So you can propel yourself up into the sky and deep into the ground at the same time. That state of equilibrium is very important."
>
> Bijoy Jain, *Interview with Studio Mumbai*

Buildings are extremely heavy objects that have the ability to either express or suppress the perception of their weight. Today, there has been an overemphasis on perceived lightness, especially with the advancement in material technology that can make buildings appear as light as possible.

The origin of this trend could be traced to the early modernists who also found inspiration in the newest technology of their day: the steamship, the automobile, and the airplane. However, the fallacy of their inspiration lies in the fact that these are all objects of movement and travel, which a building is not. A building should instead focus on the nature of its construction, which desires to be anchored to the land.

Presence is found in the way an uninterrupted mass confidently anchors itself to the earth below. The awareness of incredible weight is what gives a feeling of presence.

Principle 10 The Perception of Weight

Framework for Application

In order to feel a sense of weight in architecture its structural forces must be visible to the observer through the selective expression of structural members.

The observer can feel the enormous weight of a building through visualizing the forces being transferred from member to member. This perception of weight can give the observer a sense of presence.

Framework for the Perception of Weight:

Method I
Selective Expression of Structural Forces [Exterior or Interior]

Addendum
The Importance of Hierarchy in the Selective Expression of Structural Forces

Principle 11

The Subtlety of Proximity & Distance

Synopsis

> "Whenever we bring different things together, the question of proportion comes up, the relation between things and their position. Proportion is not only a question of actual measurements, but also of the forces at work in the measurements."
>
> Paul Klee, *The Thinking Eye*

> "Architecture with emptiness is thus always unfinished: If not literally, then by the space it makes and the potential it shows. We become engaged with the intervals and open ends."
>
> Michael Benedikt, *An Architecture of Reality*

There is an unexplainable energy that exists in the space between objects. Place two objects in the landscape one inch apart, then separate them by three feet, now twelve. Each new distance will come with an energy in relation to your position in space.

The development of this spatial void can give a feeling of presence in space. Quite often spaces are filled with visual clutter and with little thought of the spatial relationship between elements which can make a space feel overwhelming.

It is only when we can find the appropriate distance and proximity between elements that the natural qualities of a room can be appreciated fully, which in turn gives a place a sense of presence.

Principle 11 The Subtlety of Proximity & Distance

Framework for Application

Often architects desire to fill spaces as much as possible with complexities of program and visual clutter, rather than focusing on the pleasure gained from the tranquil experience of emptiness.

To realize presence in architecture requires that the architect develop a sense of awareness for the spatial intervals, or the emptiness, between objects and how our body moves both physically and visually within these voids.

The subtlety of objects placed in relationship to the body, near or far, can offer a sense of clarity, simplicity, and comfort- all elements which give rise to a sense of presence in architecture.

Framework for the Subtlety of Proximity & Distance:

Method I
Reduce Visual and Spatial Clutter [Essentials Only]

Method II
Focus on Clarity, Simplicity, and Directness in the
Composition of 2D and 3D Spatial Elements

Method III
Design with an Emphasis on the Lived Experience
[How the Body Will Experience Each Architectural Element When Moving Through Spaces - Space Time Relationship]

Addendum
The Importance of the Japanese Concept of Ma

Bibliography

Bibliography & Recommended Reading

1 The Honesty of Material & Construction

Benedikt, Michael. *"For An Architecture of Reality"*
(New York: Lumen, Inc., 1987)

Benedikt, Michael. *"Reality and Authenticity in the Experience Economy"*
(Architectural Record, 2001, Vol. 189, Num.11), 84.

Ford, Edward R. *"The Architectural Detail"*
(New York: Princeton Architectural Press, 2011)

Ford, Edward R. *"The Details of Modern Architecture Volume 1"*
(Cambridge & London: The MIT Press, 1990)

Ford, Edward R. *"The Details of Modern Architecture Volume 2: 1928-1988"*
(Cambridge & London: The MIT Press, 1996)

Kahn, Louis. *"Essential Texts" Edited by Robert Twombly*
(New York & London: W.W. Norton & Company, 2003)

Loos, Adolf. *"The Principles of Cladding" Spoken into the Void: Collected Essays 1897-1900*
(Cambridge & London: The MIT Press, 1982), p.66-69

Ruskin, John. *"The Seven Lamps of Architecture"*
(New York: The Noonday Press, 1961)

Fehn, Sverre. Edited by Per Olaf Fjeld. *"The Thought of Construction"*
(New York: Rizzoli International Publications, Inc., 1983)

Yu, Mayine L. *"Skins, Envelopes, and Enclosures: Concepts For Designing Building Exteriors."*
(New York: Routledge, 2014)

Allen, Edward. Rand, Patrick. *"Architectural Detailing: Function, Constructibility, Aesthetics."*
(Hoboken: John Wiley & Son,s Inc., 2016)

2 The Evidence of Human Expression

Frampton, Kenneth. *"Studies in Tectonic Culture: The Poetics of Construction in Nineteenth and Twntieth Century Architecture"*
(Cambridge & London, The MIT Press, 1995)

Schwartz, Chad. *"Introducing Architectural Tectonics"*
(New York: Routledge, 2017)

Pye, David. *"The Nature and Art of Workmanship"*
(London: The Herbert Press, 1968)

Windeck, Georg. *"Construction Matters"*
(Brooklyn: PowerHouse Books, 2016)

Studio Mumbai. Edited by Francesca Serrazanetti, Matteo Schubert. *"Studio Mumbai: Inspiration and Process in Architecture"*
(Milan: Moleskine SpA , 2013)

Studio Mumbai. *"Studio Mumbai: Praxis"*
(Tokyo: Toru Kato, 2012)

3 The Movement of the Body

Plummer, Henry. *"The Experience of Architecture"*
(United Kingdom: Thames & Hudson, 2016)

McCarter, Robert. *"The Space Within: Interior Experience as the Origin of Architecture"*
(London: Reaktion Books, Ltd., 2016)

4 The Engagement of the Senses

Pallasmaa, Juhani. *"An Architecture of the Seven Senses". Questions of Perception. Phenomenology of Architecture.* (San Francisco: William Stout Publishers, 1994)

Pallasmaa, Juhani. *"The Eyes of the Skin: Architecture and the Senses"* (London: Academy Group, Ltd., 1996)

Zumthor, Peter. *"Atmospheres"* (Basel: Birkhauser, Basel 2006)

Zumthor, Peter. *"Thinking Architecture"* (Basel: Birkhauser, Basel 2005)

5 The Compatibility of Materials

Zumthor, Peter. *"Atmospheres"* (Basel: Birkhauser, Basel 2006)

Loos, Adolf. "Building Materials" *Spoken into the Void: Collected Essays 1897-1900* (Cambridge & London: The MIT Press, 1982), p.62-65

Jacobsen, Max. Silverstein, Murray. Winslow, Barbara. *"Patterns of Home: The Ten Essentials of Enduring Design"* (Newtown: The Tauton Press, Inc., 2005), p. 253-281

6 The Feeling of Belonging

MacKay-Lyons, Brian. *"Local Architecture: Building Place, Craft, and Community"* (New York: Princeton Architectural Press, 2015)

Mackay-Lyons, Brian. *"Ghost: Building an Architectural Vision"* (New York: Princeton Architectural Press, 2008)

Goldberger, Paul. *"Why Architecture Matters"* (New Haven, Yale University Press, 2009)

Brand, Stewart. *"How Buildings Learn: What Happens After They're Built"* (New York: Penguin Books, 1995)

Canizaro, Vincent B. (Ed.). *"Architectural Regionalism: Collected Writings on Place, Identity, Modernity, and Tradition"* (New York: Princeton Architectural Press, 2007)

Lechner, Norbert. *"Heating, Cooling, Lighting: Sustainable Design Methods for Architects"* (Hoboken: John Wiley & Sons, Inc., 2015)

7 The Solace of Nature

Jacobsen, Max. Silverstein, Murray. Winslow, Barbara. "*Patterns of Home: The Ten Essentials of Enduring Design"* (Newtown: The Tauton Press, Inc., 2005), p. 51-73

Li, Qing. *"Shinrin-Yoku: The Art and Science of Forest-Bathing"* (United Kingdom: Penguin Random House, 2018)

Keane, Marc P. *"Japanese Garden Design"* (Tokyo: Charles E. Tuttle Company, Inc., 1996)

8 The Acceptance of Imperfection

Mostafavi, Mohsen. Leatherbarrow, David. *"On Weathering"* (Cambridge, Massachusetts. London, England: The MIT Press, 1993)

Koren, Leonard. *"Wabi Sabi: For Artists, Designers, Poets, & Philosophers"* (Berkeley, California: Stone Bridge Press, 1994)

Koren, Leonard. *"Wabi Sabi: Further Thoughts"* (Point Reyes, California: Imperfect Publishing, 2015)

9 The Character of Light

Plummer, Henry. *"The Architecture of Natural Light"*
(London: Thames & Hudson Ltd., 2009)

Jacobsen, Max. Silverstein, Murray. Winslow, Barbara. *"Patterns of Home: The Ten Essentials of Enduring Design"*
(Newtown: The Tauton Press, Inc., 2005), p. 99-127

10 The Perception of Weight

Serra, Richard. *"Writings Interviews", Weight.*
(London: The University of Chicago Press, Ltd., 1994), p.183

Macdonald, Agnus J. *"Structure & Architecture"*
(Oxford: Architectural Press, 2002)

11 The Subtlety of Proximity & Distance

Keane, Marc P. *"Japanese Garden Design"*
(Tokyo: Charles E. Tuttle Company, Inc., 1996)

Serra, Richard. Foster, Hal. *"Conversations About Sculpture"*
(New York: Richard Serra and Hal Foster, 2018)

Zumthor, Peter. *"Atmospheres"*
(Basel: Birkhauser, Basel 2006)

Further Reading:

Conrads, Ulrich. *"Programs and Manifestoes on 20th-Century Architecture"*
(Cambridge: The MIT Press, 1964)

Jencks, Charles. Kropf, Karl (Ed.). *"Theories and Manifestoes of Contemporary Architecture"*
(Chichester, West Sussex: Wiley-Academy, 2006)

Aalto, Alvar. Edited by Goran Schildt. *"Alvar Aalto in His Own Words"*
(New York: Goran Schildt and Alvar Aalto Foundation, 1997)

McCarter, Robert. *"Aalto"*
(New York: Phaidon Press Inc., 2014)

McCarter, Robert. *"Carlo Scarpa"*
(New York: Phaidon Press Inc., 2017)

Lobell, John. *"Between Silence and Light: Spirit in the Architecture of Louis I. Kahn"*
(Boston & London: Shambhala, 2008)

Wang, Wilfried (Ed.). *"O'neil Ford Monograph 2: St. Petri Church, Klippan 1962-66, Sigurd Lewerentz"*
(Austin: University of Texas at Austin)

Epigraph Credits

1 Kahn, Louis. *"Conversations with Students"*
(Houston, Texas: Rice University School of Architecture; Lars Lerup; Dean; Princeton Architectural Press, 1998), p18.

Loos, Adolf. *"The Principles of Cladding" Spoken into the Void: Collected Essays 1897-1900.*
(Cambridge & London: The MIT Press, 1982), p.66-69.

2 Aalto, Alvar. Edited by Goran Schildt. *"Alvar Aalto in His Own Words", Motifs from Past Ages, 1922.*
(New York: Goran Schildt and Alvar Aalto Foundation, 1997), p.32-35.

Ford, Edward R. *"The Architectural Detail"*
(New York: Princeton Architectural Press, 2011), p.13.

3 Plummer, Henry. *"The Experience of Architecture"*
(United Kingdom: Thames & Hudson, 2016), p.9.

Pallasmaa, Juhani. *"The Eyes of the Skin: Architecture and the Senses"*
(London: Academy Group, Ltd., 1996), p.26.

4 Pallasmaa, Juhani. *"The Eyes of the Skin: Architecture and the Senses"*
(London: Academy Group, Ltd., 1996), p.28.

Zumthor, Peter. *"Atmospheres"*
(Basel: Birkhauser, 2006), p.24-25.

5 Zumthor, Peter. *"Thinking Architecture"*
(Basel: Birkhauser, 2005), p.13

Murcutt, Glenn. *"Local Architecture: Building Place, Craft, and Community", From the Beginning: Thirteen Questions*
(New York: Princeton Architectural Press, 2015), p.45.

6 Ricoeur, Paul. Edited by Vincent B. Canizaro. *"Architectural Regionalism: Collected Writings on Place, Identity, Modernity, and Tradition.", Universal Civilization and National Cultures, 1965.* (New York: Princeton Architectural Press, 2007). p.43.

Aalto, Alvar. Edited by Goran Schildt. *"Alvar Aalto in His Own Words", Between Humanism and Materialism, 1955.*
(New York: Goran Schildt and Alvar Aalto Foundation, 1997), p.176-177.

7 Ando, Tadao. Edited by Charles Jencks and Karl Kropf. *"Theories and Manifestos of Contemporary Architecture", Beyond Horizons in Architecture, 1991*
(West Sussex, England: Wiley-Academy, 2006), p.257.

Barragan, Luis. *"The Pritzker Architecture Prize: Luis Barragán, 1980 Laureate Acceptance Speech"*
(Chicago: The Hyatt Foundation, 1980), p.2.

8 Ruskin, John. *"The Stones of Venice",*
(New York: Da Capo Press, 1960), p.172

Lewerentz, Sigurd. John Swedenmark, Parish of Skarpnack, *"Markuskyrkan", Chapel Brochure*
(Stockholm: Ulla Ortberg, 2010), p.Dust Jacket

9 Kahn, Louis. Compiled by Nell E. Johnson. *"Light is the Theme: Louis I. Kahn and the Kimbell Art Museum, Comments on Architecture by Louis Kahn"*
(Fort Worth, Texas: Kimbell Art Foundation, 1975), p.16

Plummer, Henry. *"The Architecture of Natural Light"*
(London: Thames & Hudson, Ltd., 2009), p.15

10 Serra, Richard. *"Writings Interviews" Weight*
(London: The University of Chicago Press, Ltd., 1994), p.183

Belogolovsky, Vladimir. *"Bijoy Jain: Architecture is Not About an Image, It is About Sensibility"* Archdaily.com.
https://www.archdaily.com/798179/bijoy-jain-architecture-is-not-about-an-image-it-is-about-sensibility (Accessed October 24, 2019).

11 Paul Klee. *"Paul Klee Notebooks Volume 1: The Thinking Eye"*
(Basel: Schwabe & Co, Ltd., 1956), p.361

Michael Benedikt. *"For An Architecture of Reality"*
(New York: Lumen, Inc., 1987), p.58

Image Credits

1 2 3 4 5 6 7 8 9 10 11

1	Project:	Church of Eaves / Tezuka Architects / 2014
	Location:	Arouda Yahatahigashi Kitakyushu, Japan
	Image:	Katsuhisa Kida / Fototeca
2	Project:	Fondazione Querini Stampalia / Carlo Scarpa / 1949
	Location:	Venice, Italy
	Image:	Elise / I'arancio Pinguino
3	Project:	Kitamura House / Sutejiro Kitamura / 1944
	Location:	Kyoto, Japan
	Image:	Henry Plummer / The Experience of Architecture
4	Project:	Copper House II / Studio Mumbai / 2011
	Location:	Chondi, Maharashtra, India
	Image:	Bijoy Jain / Studio Mumbai
5	Project:	Alvar Aalto House / Alvar Aalto / 1936
	Location:	Munkkiniemi, Helsinki, Finland
	Image:	Marlon Cruz
6	Project:	Bloedel Reserve Sheep Sheds / Prentice & Virginia Bloedel / 1951
	Location:	Bainbridge Island, Washington, United States
	Image:	Suzy / Kitchen Bouquet
7	Project:	Longbranch Cabin / Jim Olson / 2014
	Location:	Longbranch, Washington, United States
	Image:	Olson Kundig
8	Project:	Zumthor Studio / Peter Zumthor / 1986
	Location:	Haldenstein, Graubünden, Switzerland
	Image:	Peter Zumthor / Zumthor Studio
9	Project:	Belavali House / Studio Mumbai / 2008
	Location:	Kalyan Dombivli, India
	Image:	Bijoy Jain / Studio Mumbai
10	Project:	Ahmedabad House / Studio Mumbai / 2014
	Location:	Ahmedabad, India
	Image:	Bijoy Jain / Studio Mumbai
11	Project:	Castelvecchio Museum/ Carlo Scarpa / 1959
	Location:	Verona, Italy
	Image:	Robert McCarter

Methodology

Thesis Goals & Objectives

The goal of this thesis is to search for a set of principles that bring about a sense of presence in architecture and then to test those principles in a design project as a way to understand their implications when utilizing them as a framework for design.

The methodology of this thesis is as follows:

1 To identify, through research, the principles which bring about a sense of presence in architecture.

2 To write a framework (rules and methods) for each principle to be used in the application of a design project.

3 To find a building site and to record its existing conditions.

4 To apply the principles through the design of the building on the selected site.

5 To understand the implications of utilizing principles as a framework for design.

6 To utilize the list of principles as a living document and as a basis for design in my architectural career moving forward.

The objectives of this thesis are as follows:

1 Understand how these principles work together and their challenges.

2 Understand how these principles are affected by building type, size, and program.

3 Understand where these principles fail and where they are successful.

4 Critique, comment, and possibly amend the list of principles through lessons learned.

5 Conclude if these are indeed the correct principles through actual design work.

6 Conclude whether presence can in fact be designed.

The Proposed Site & Program

I. Issues of Site & Program Selection in Conjunction with Principles

It is important to note the issues surrounding site and program selection in conjunction with the application of a set of principles.

The difficulty of selecting a site and program for a project that will test a set of principles are:

1 These principles, in theory, have the ability to be applied to any project type regardless of site and program.

2 There is a risk of designing a project for the sake of the principles themselves rather than finding a solution to a design problem.

Thus, in the selection of a project site and program for this thesis, it is imperative that the principles exist solely as an underlying framework acting only in support of the solution to a design problem or issue. By doing so, it creates the condition of a "real life" design project where principles can only be applied when deemed necessary to a site or programmatic need. In this thesis, the principles will act as a kind of "intellectual program", which needs to work in harmony with the "building program" that supports the function of the building.

Ultimately, this way of working poses an interesting question; how can an architect's individual design principles, in this case embodied presence, be applied in conjunction with the needs of a project and client?

The Proposed Site & Program

II. A Return to Making & Material Understanding in the Education of the Architect

The site and program for this thesis design project was inspired by the set of principles themselves.

Upon reflecting on the list of principles for embodied presence it became clear that in order for an architect to utilize the principles effectively it would require that one have a deep material understanding as well as advanced knowledge in how to build. However, how can this be fulfilled given the current state of architectural education?

Over the past few decades the education of the architect has drastically transformed. In the past, the architect would simply require mastery in the art of construction, building materials, and structures. But today, the knowledge of the architect has expanded to include a whole range of topics which include sustainability, social issues, design computing, historic preservation, adaptive reuse, and even issues involving urban design and infrastructure. It seems that the breadth of knowledge architecture students are required to take on leaves little room to delve into the simple topic of designing a well made building. Although all of these topics have their place, we must not forget that architecture is fundamentally the art of building.

Today, it seems the mastery in the art of making and the development of material understanding is slowly disappearing from the curriculum of the architect.

Evidence of this can be found in architecture studios, where projects often stay in the design development phase, due to their size and scope, without resolving any real construction details or issues. Evidence of this disappearance can also be found in studios where it is no longer a requirement to understand how to build just as long as the "image" of architecture in renderings are made perfect. In fact one can probably go through an architectural education today without once picking up a hammer.

Thus, the question becomes: where does one go to simply learn the fundamentals of

building and the art of construction? Where does one go to master materials, detailing, and how to develop a stronger aesthetic sense of materiality and tectonics?

These questions have lead me to try to resolve these issues through the creation of a new building addition to the University of Washington's Architecture Hall, which will attempt to reunite the education of the architect with that of the act of building.

In order to design a building an architect must first have an understanding of how one is built. This is the basis for the site and program of this thesis and the project against which my principles of embodied presence will be tested.

The Proposed Site & Program

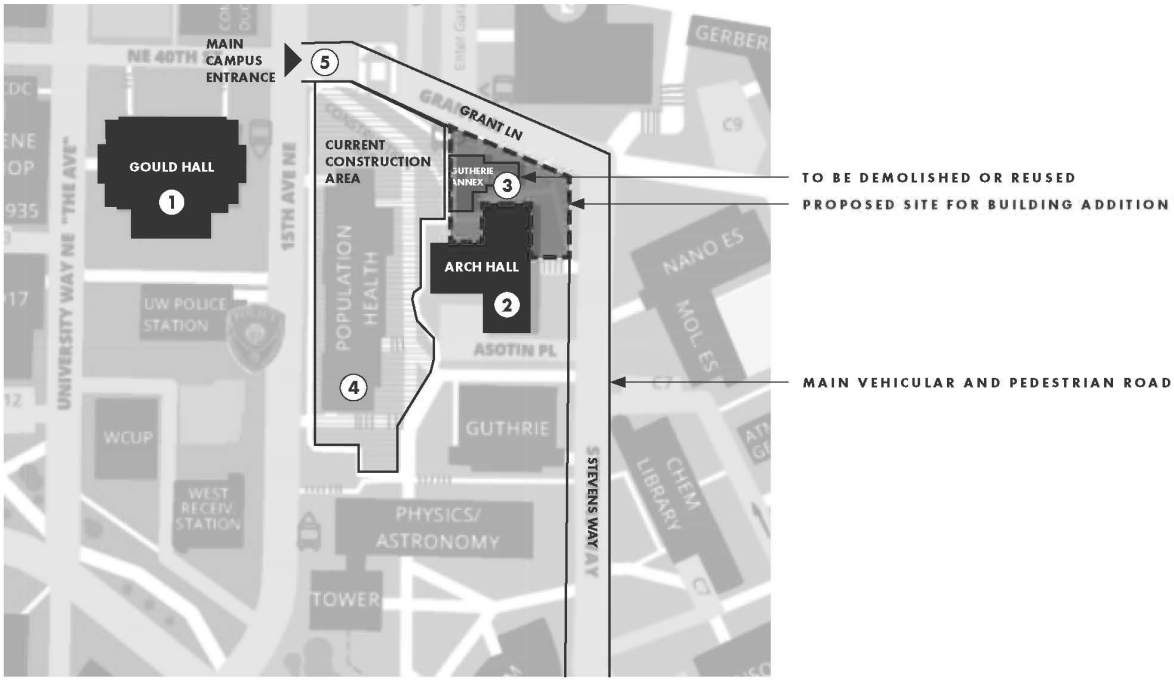
Photo by Marlon Cruz (Author) Image: Architecture Hall. 2019

The Proposed Site & Program

III. The Proposed Site

Location: Architecture Hall
The University of Washington Campus
Seattle, Washington

Site: A building addition to Architecture Hall that will be built in the adjacent lot currently held by the temporary building Gutherie Annex 4.



1 GOULD HALL

2 ARCH HALL

3 GUTHERIE ANNEX 4

4 POPULATION HEALTH BUILDING (UNDER CONSTRUCTION)

5 CAMPUS ENTRANCE FROM 15TH AVE NE

Diagram by Marlon Cruz. Images from University of Washington.

The Proposed Site & Program

IV. The Proposed Program

The goal of the program will be to bring together the studio environment with that of the act of making. This will be accomplished with the following program:

1. Covered Yard for Construction Education
2. Open Yard for Full-Scale Construction Mock-ups

> Note:
> These two spaces will be the highlight of the architecture program. It will be an area in which students will have space to learn construction and build full-scale tectonic models and mock-ups. It will be an area under "constant construction" where students can physically engage with the built environment learning how materials and real details come together. Professionals in the field, both architects and general contractors, will come here to collaborate with students to have their mock-ups built as way for students to have hands on learning and to create a more integrated architecture community.

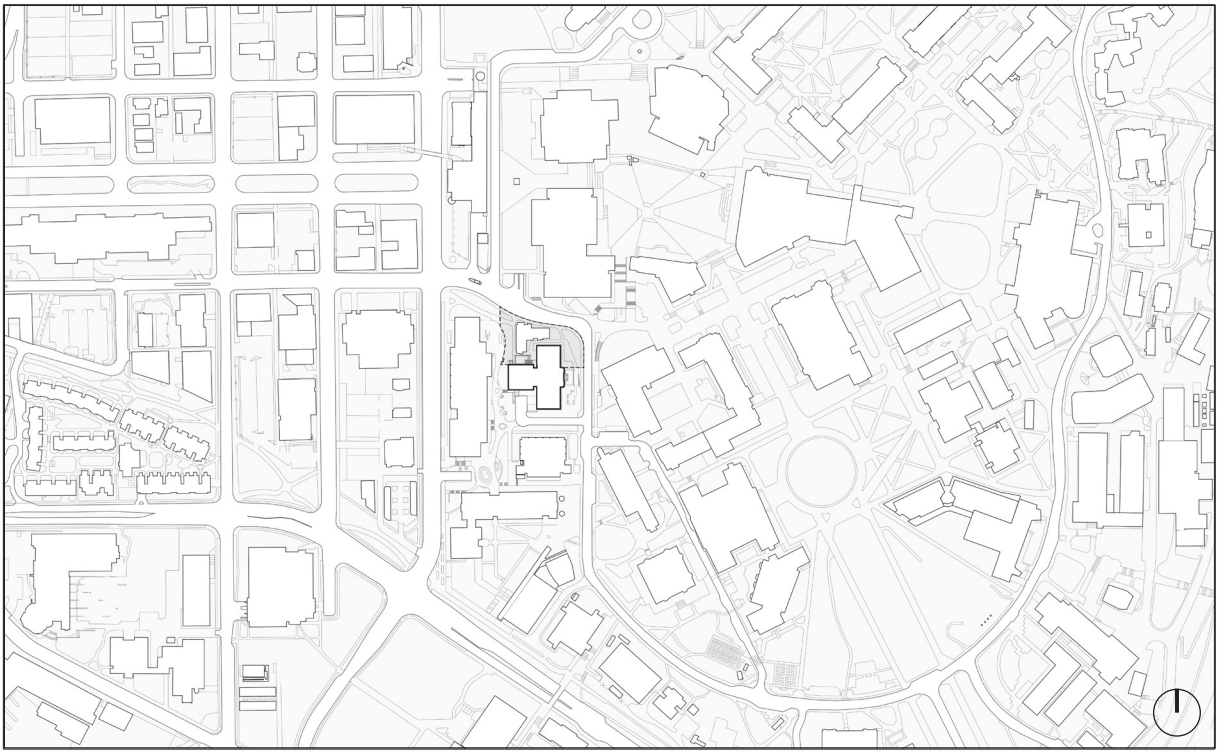
3. Support Spaces for Programs:
   - Small Office / Plan Hut with Storage
   - Tool Storage
   - Material Storage
   - First Aid Room

4. Conversion of Existing Spaces in Architecture Hall to Support Learning of Construction.
   - New Entrance
   - New Lobby
   - New Classroom Studio Spaces (Ground Level)

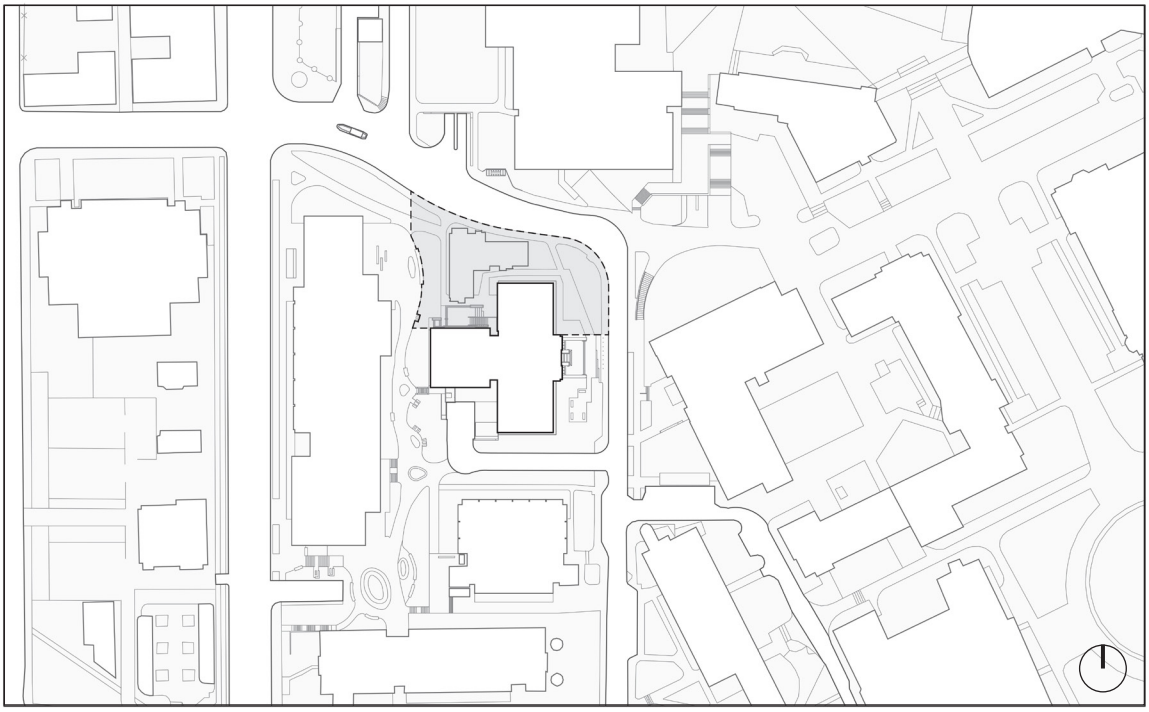
The Proposed Site & Program

V. Existing Site Conditions: Drawings

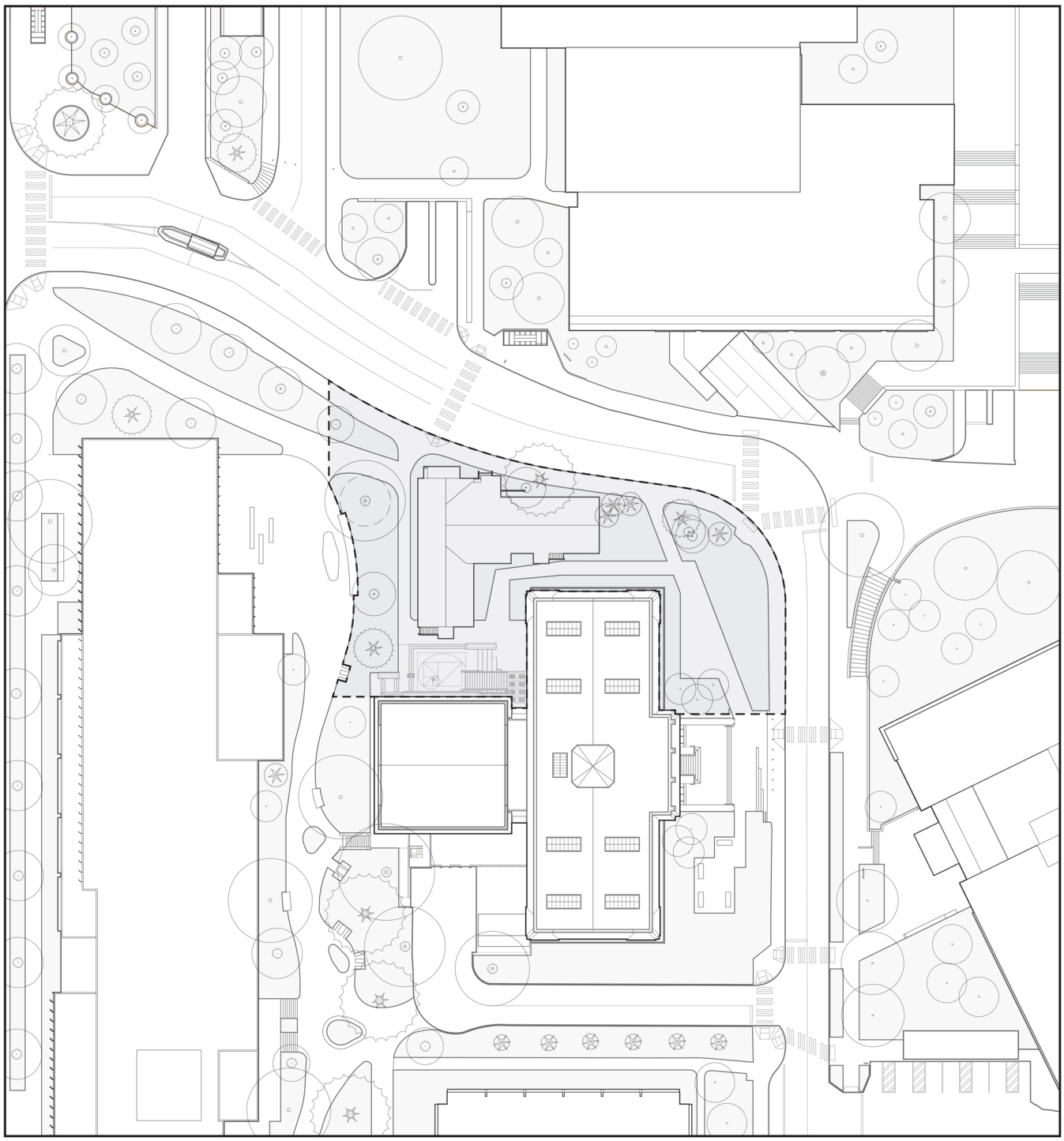
All drawings and diagrams by Marlon Cruz unless otherwise noted.



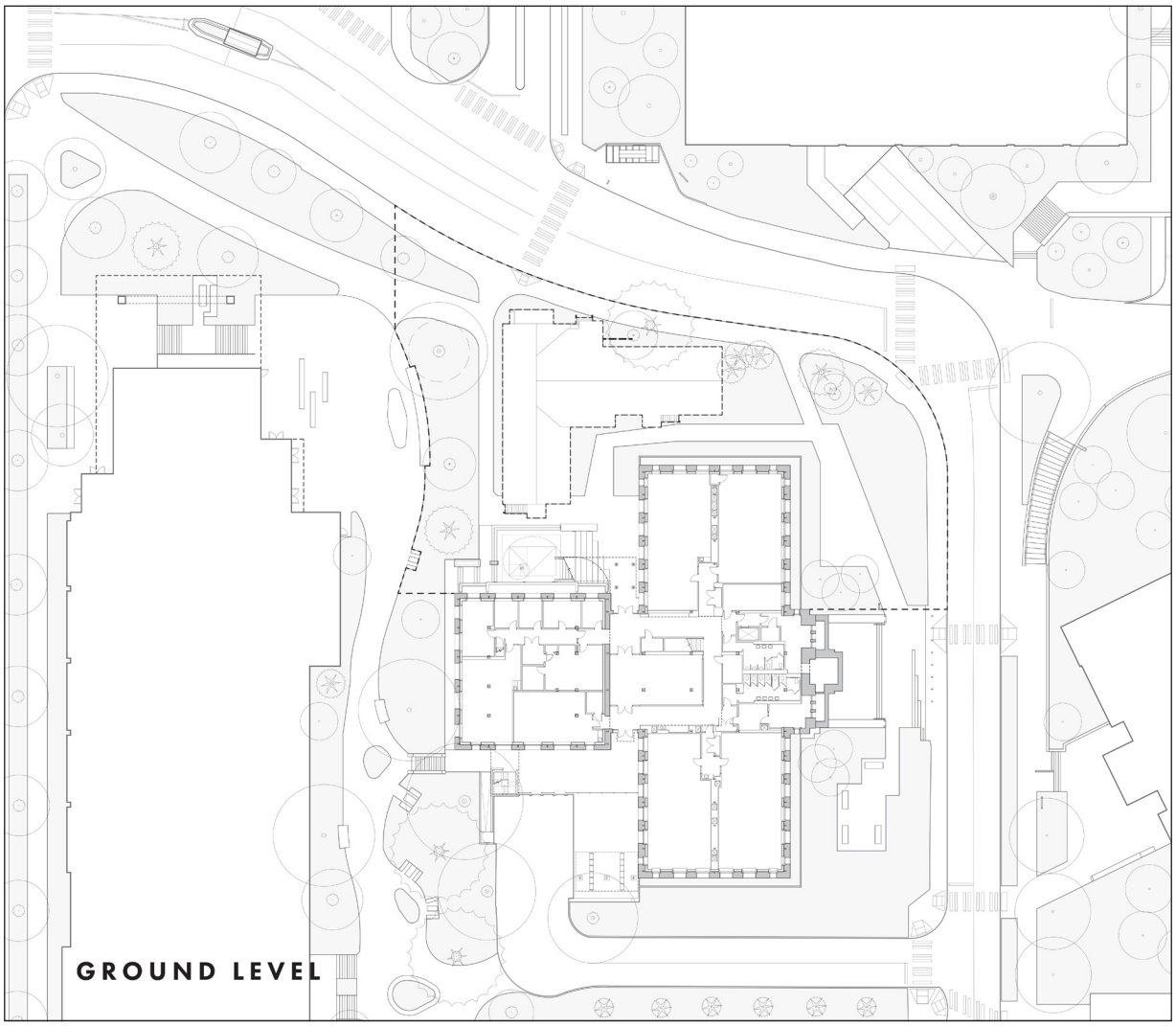
LOCATION PLAN

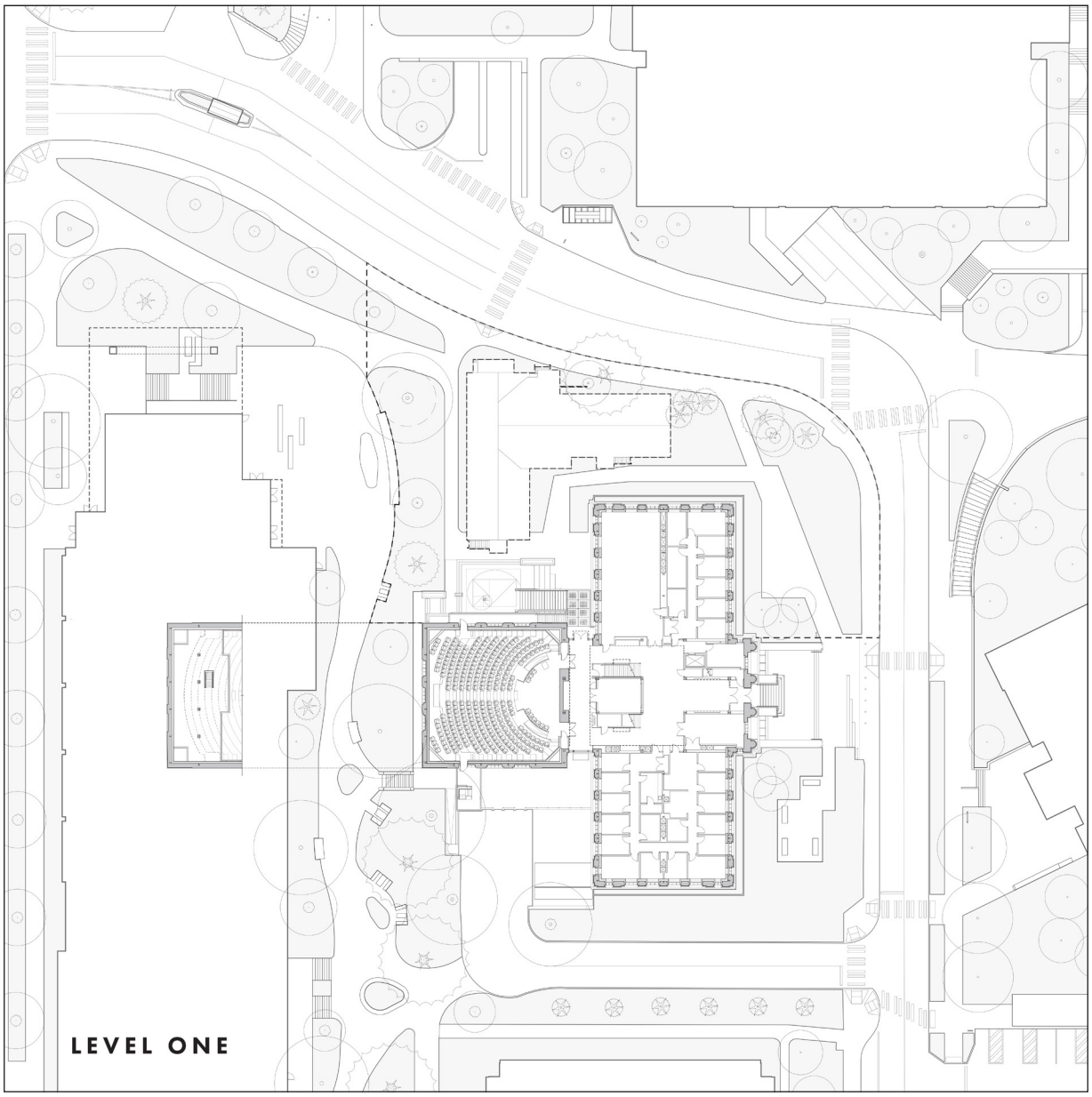


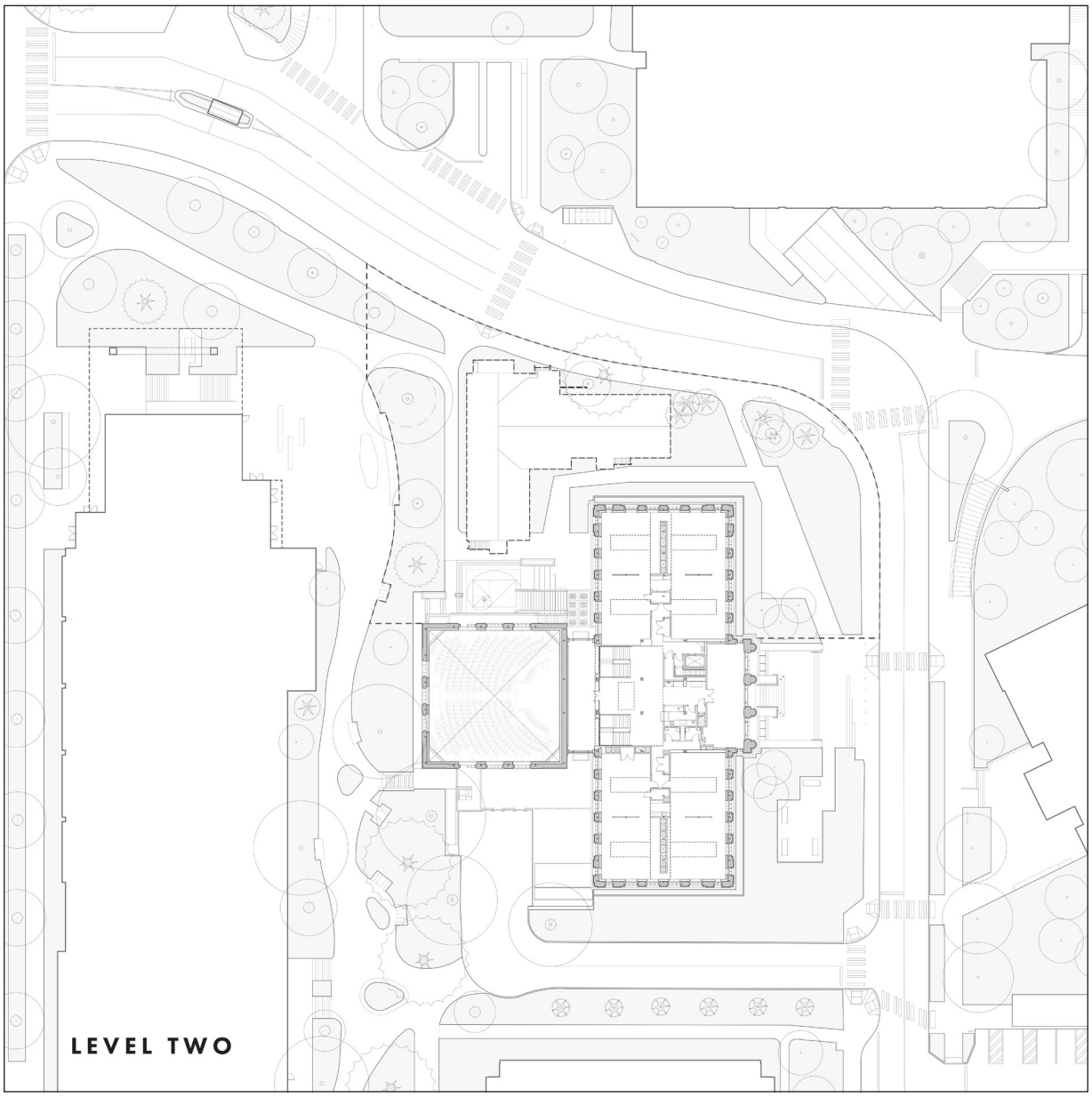
CONTEXT PLAN

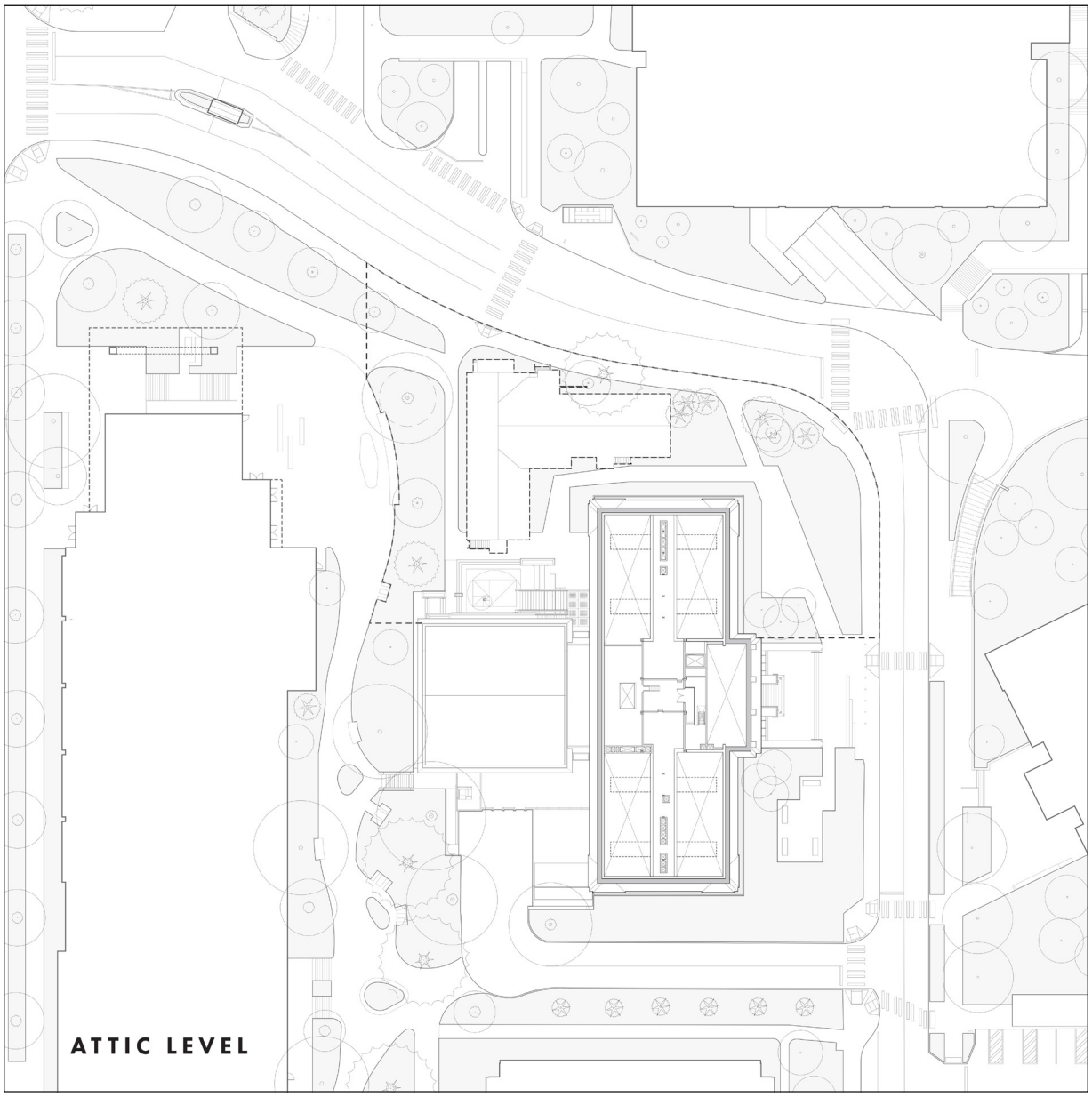


SITE PLAN


GROUND LEVEL

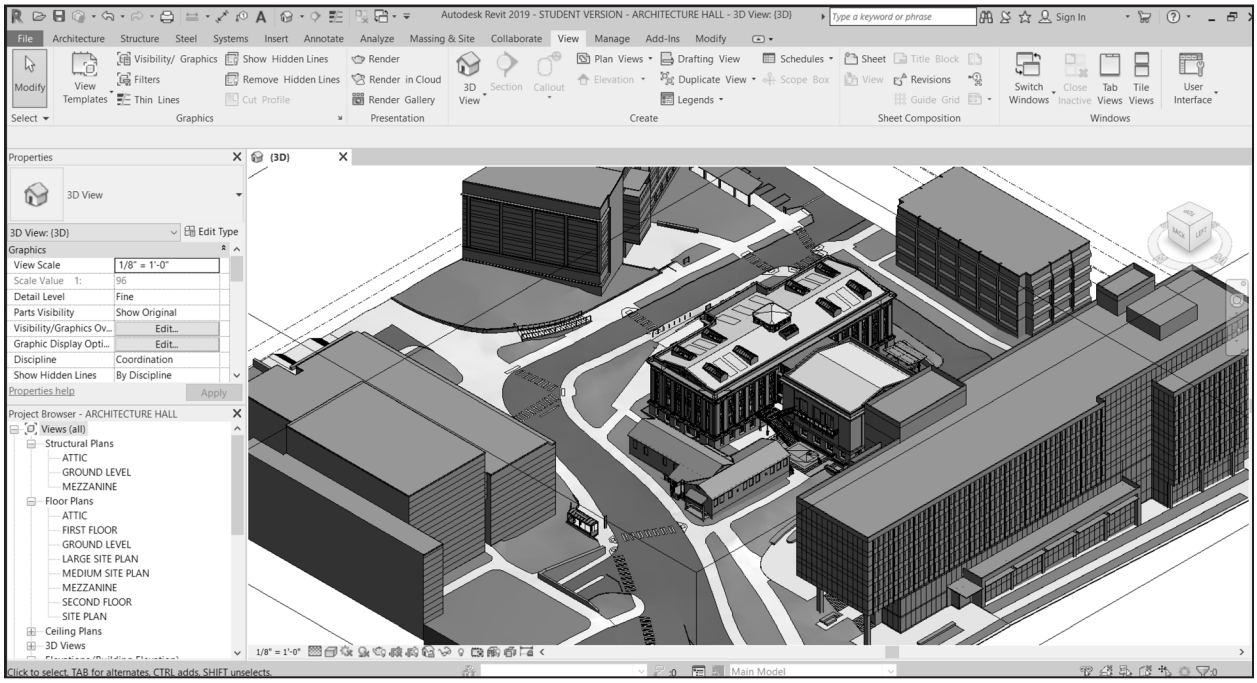

LEVEL ONE

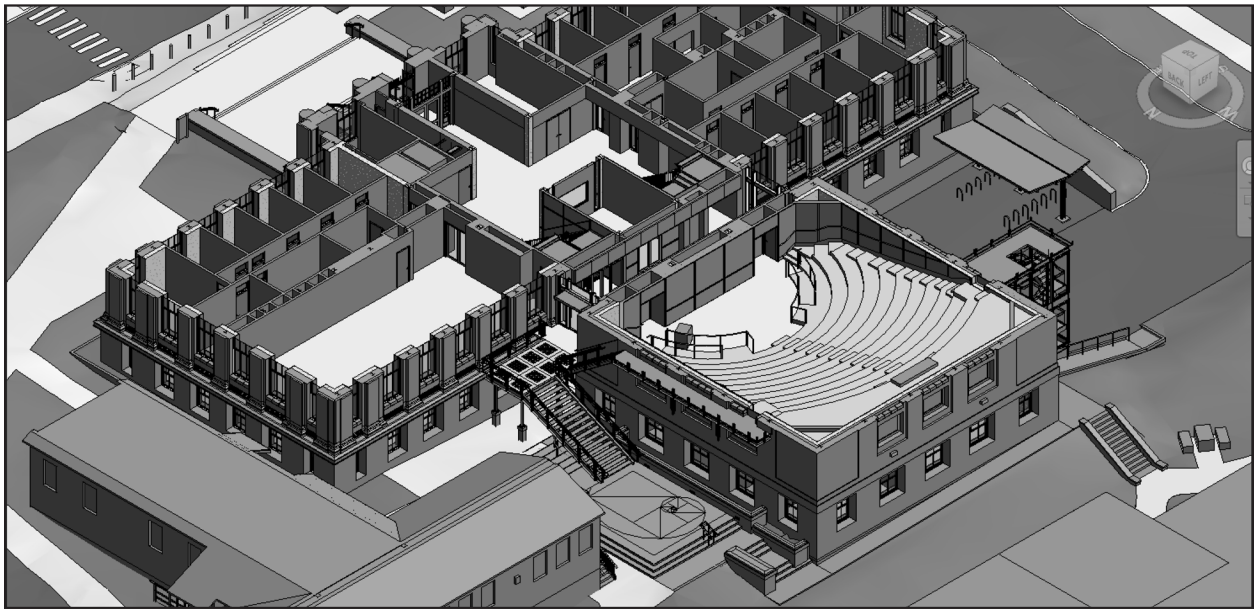

LEVEL TWO


ATTIC LEVEL

The Proposed Site & Program

V. Existing Site Conditions: Modeling





Extensive modeling in Revit (Building Information Modeling Program) was created as a way to understand the existing conditions of Architecture Hall and the surrounding site.
(3D Model by Marlon Cruz created from existing PDF drawings courtesy of University of Washington and Thomas Hacker Architects Inc.).

The Proposed Site & Program

V. Existing Site Conditions: Photos

A Conversation with History

The Mark of Construction

Tectonic Expression

Qualities of presence exist in Architecture Hall. They include a respect towards history and tectonic expression. Thus, the question becomes how will the new design respond to these qualities?
(All photos by Marlon Cruz).

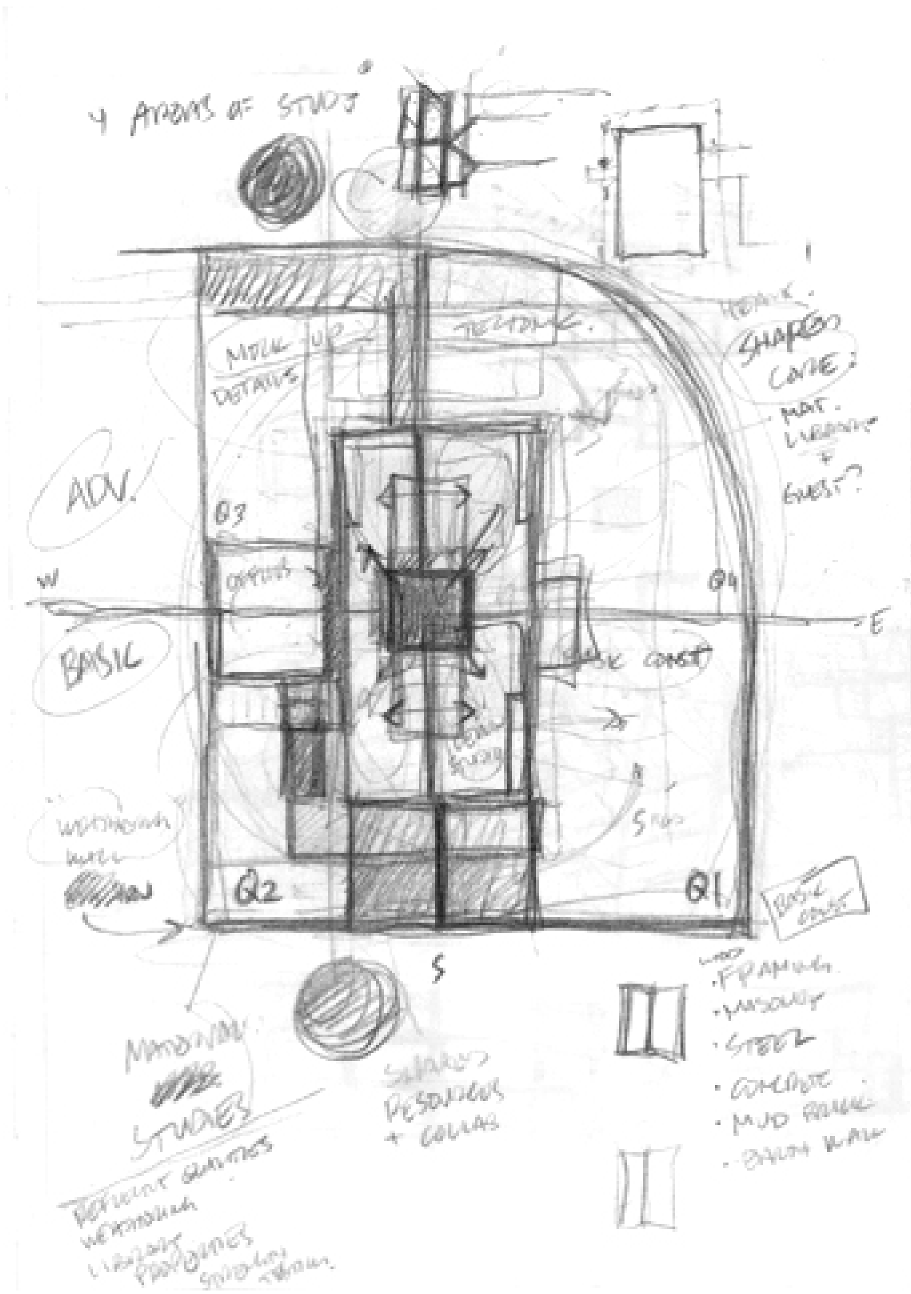
Process Sketches

I. The Early Concept

The sketch on the following page shows the initial desire to occupy all four of the outdoor spaces created by the existing form of Architecture Hall. This concept allowed each existing ground level studio to have immediate access to outdoor construction space.

Originally, the idea was to divide the open spaces into four quadrants with each quadrant emphasizing a different studio related to the act of construction. Quadrant One (bottom, right) would be a studio emphasizing *Basic Construction*, Quadrant Two (bottom, left) would be a studio emphasizing *Material Studies*, Quadrant Three (top, left), would be a studio emphasizing 1-to-1 *Construction Mock-Ups* to understand technical details, and finally, Quadrant Four (top, right) would be a studio emphasizing *Tectonics & Individual Expression* - a culmination of the construction education learned in the three previous studios. Note that the lower half, Quadrants One and Two would be "Basic" Construction Studios, while the upper half, Quadrants Three and Four, would represent the "Advanced" Construction Studios and lastly, the center of Architecture Hall, at the ground level, would transform to become a core that connected all the studio programs with a material library and study space.

This early concept became the framework for what would eventually become a single room occupying a single quadrant for the act of construction.

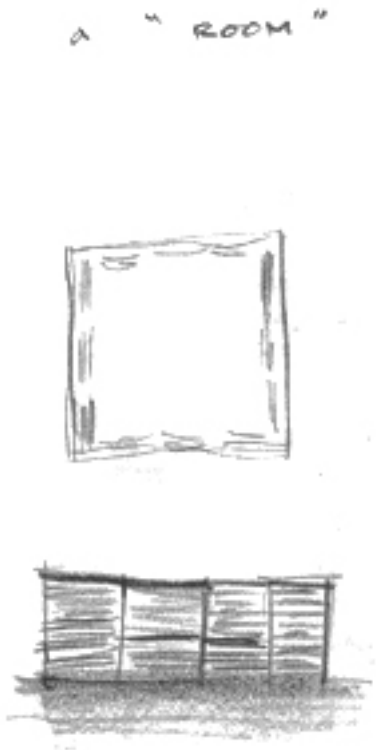

ADV.
BASIC
Q1
Q2
W
E
S
STEEL
STUDIES

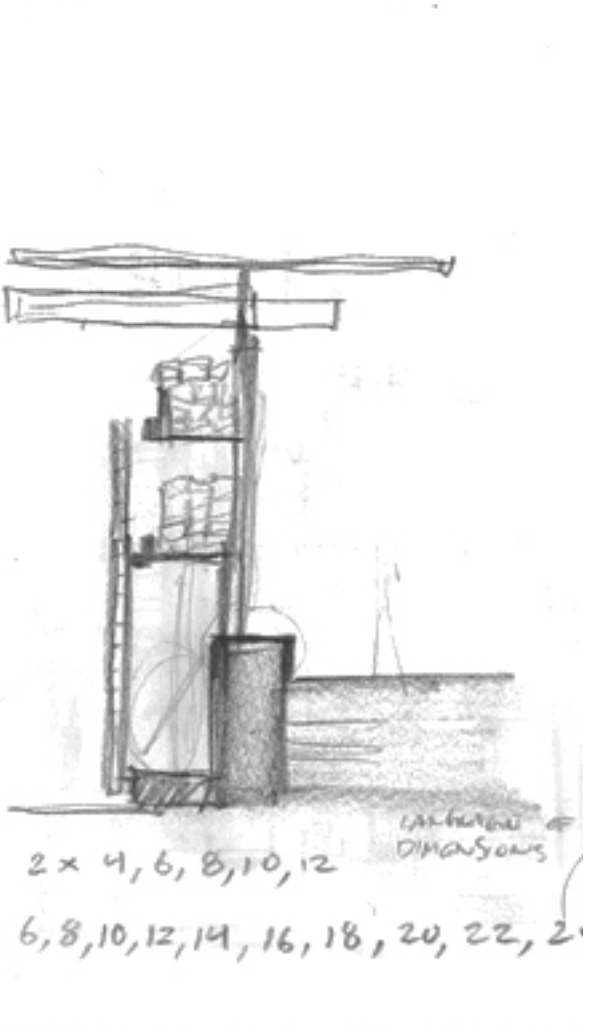
Process Sketches

II. A Single Room

Drawn on the next page is the sketch which became the concept of the building. It is a single room in which to teach students the fundamentals of construction through the act of building. The room will be placed outdoors, adjacent to Architecture Hall, and covered by a simple roof with its walls made of the resources the student will use: 2x4 dimensional lumber.

The lumber will placed on steel shelves and expressed to the exterior, thus the wall becomes a living facade whose appearance changes with time from each use within. In this space, students will learn carpentry and how to build - a necessary skill which architecture is inextricably linked. It is also in this single room, of simplicity and modesty, that I test the principles of presence.


A " ROOM "

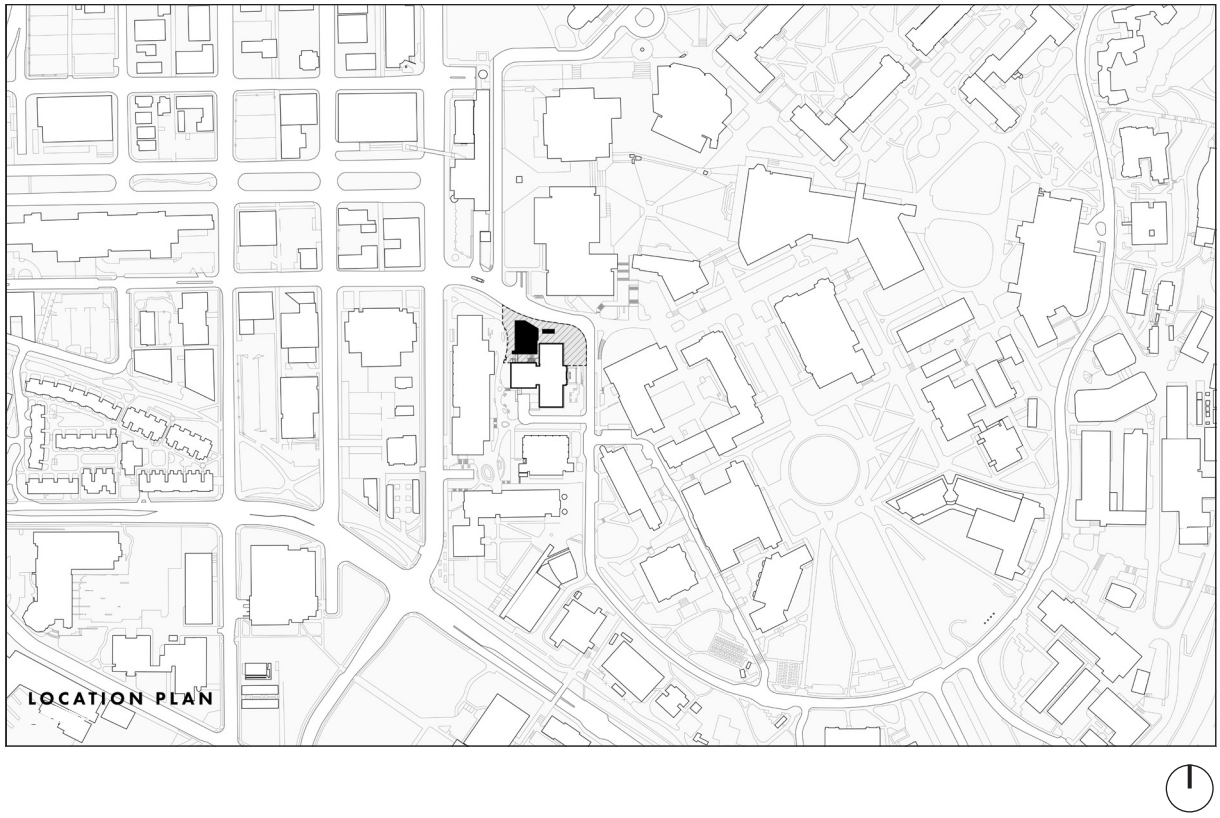

2 x 4, 6, 8, 10, 12
6, 8, 10, 12, 14, 16, 18, 20, 22,

The Final Design

I. Context & Orthographics

The Final Design

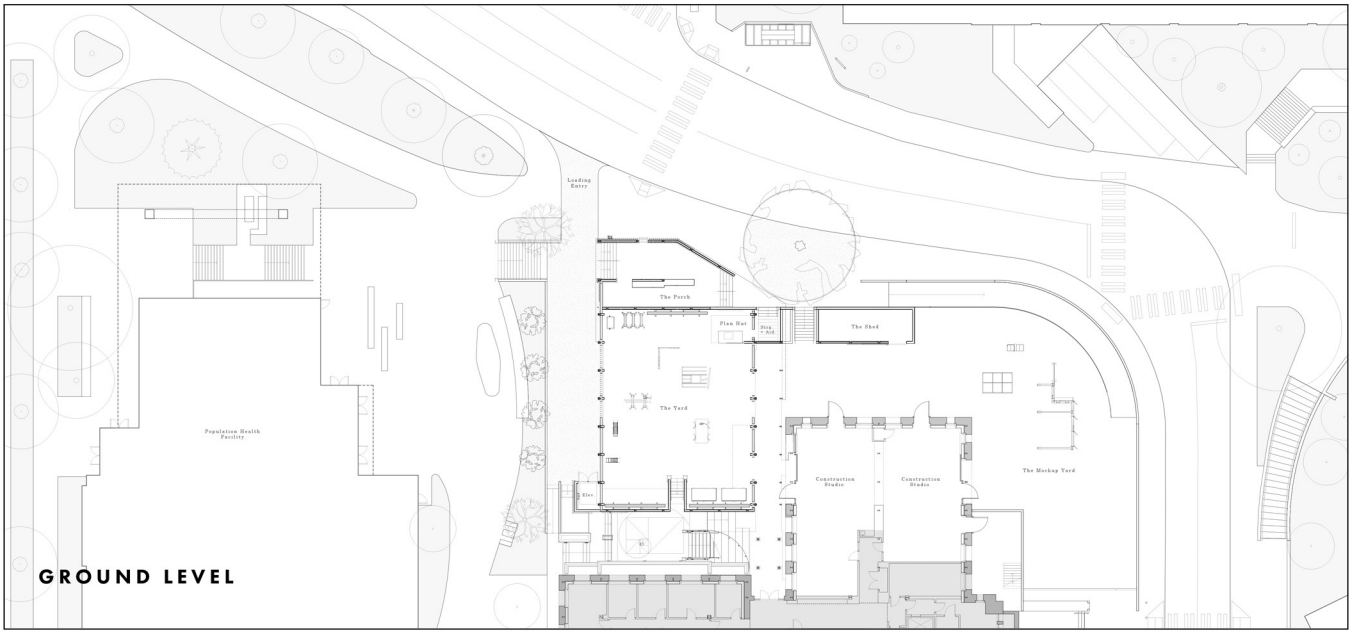
I. Context & Orthographics *Location Plan*

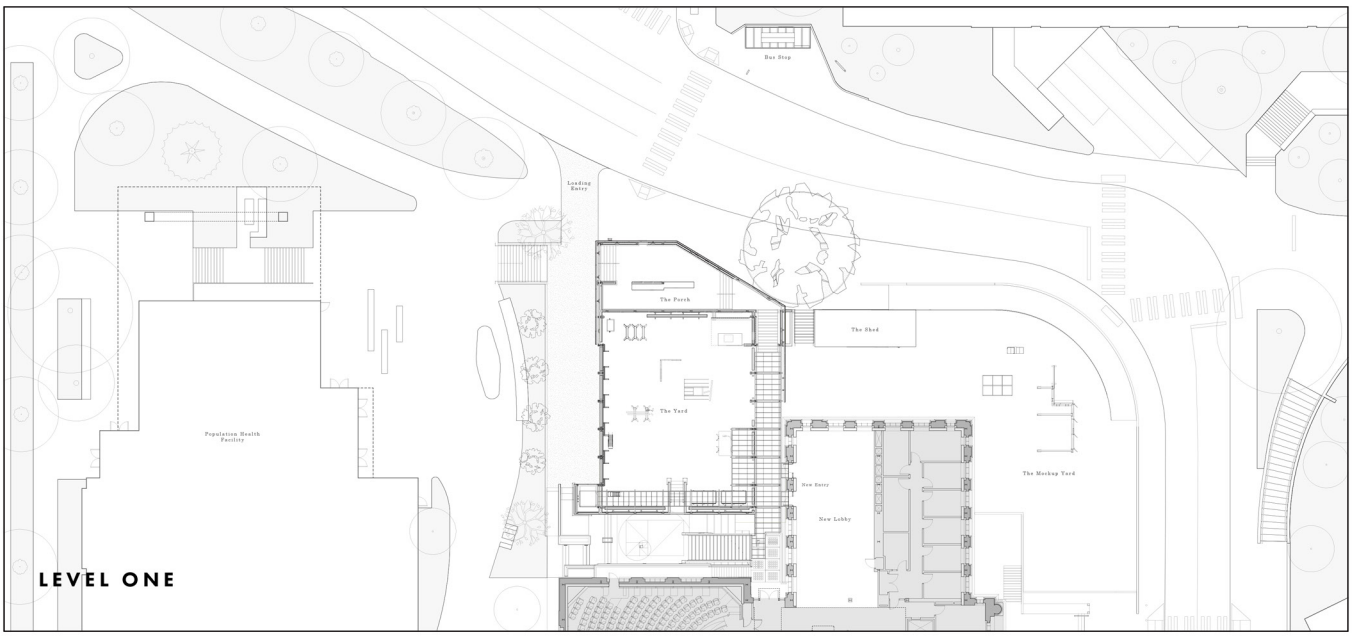


The Final Design

I. Context & Orthographics

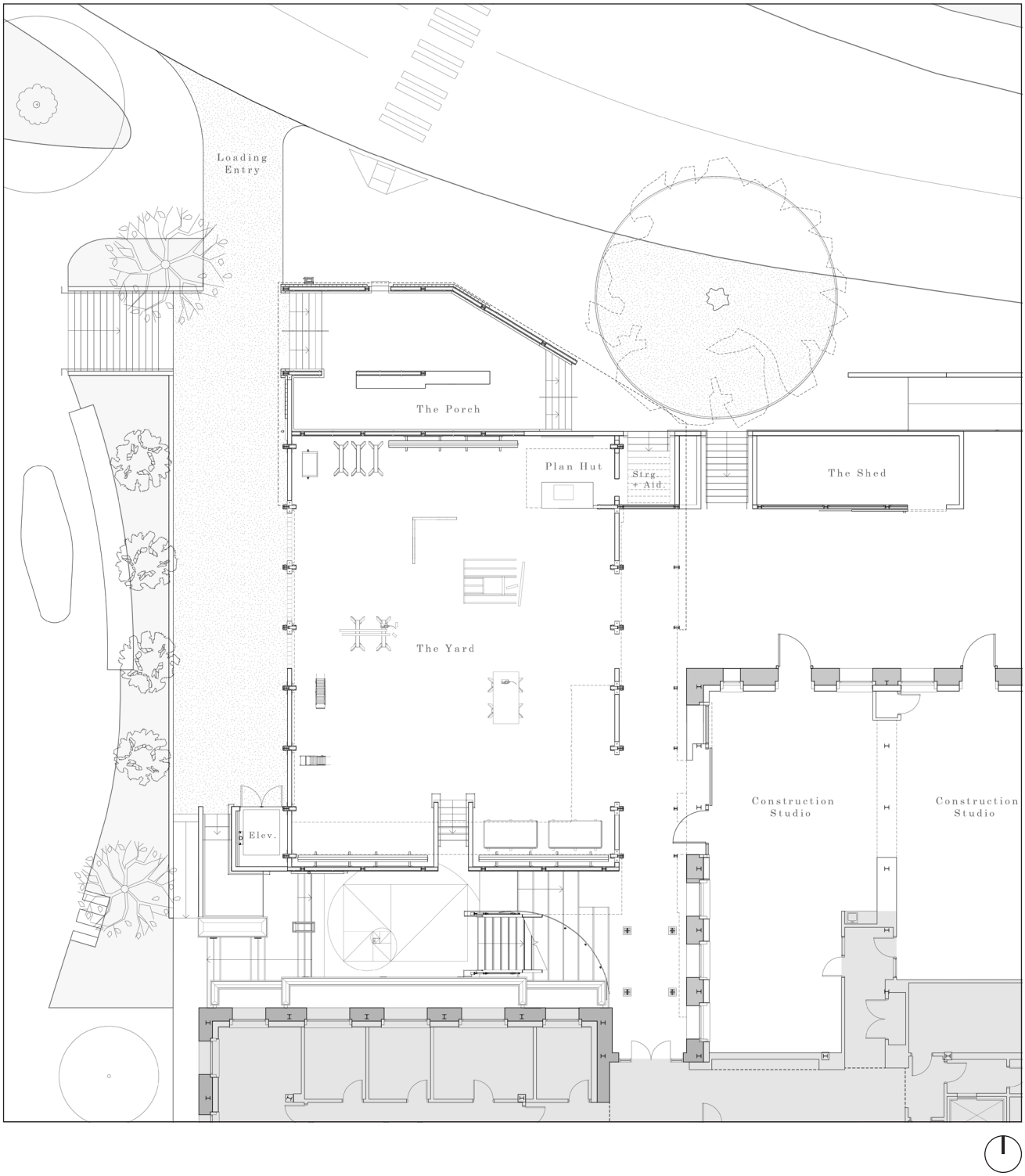
Plans with Context





The Final Design

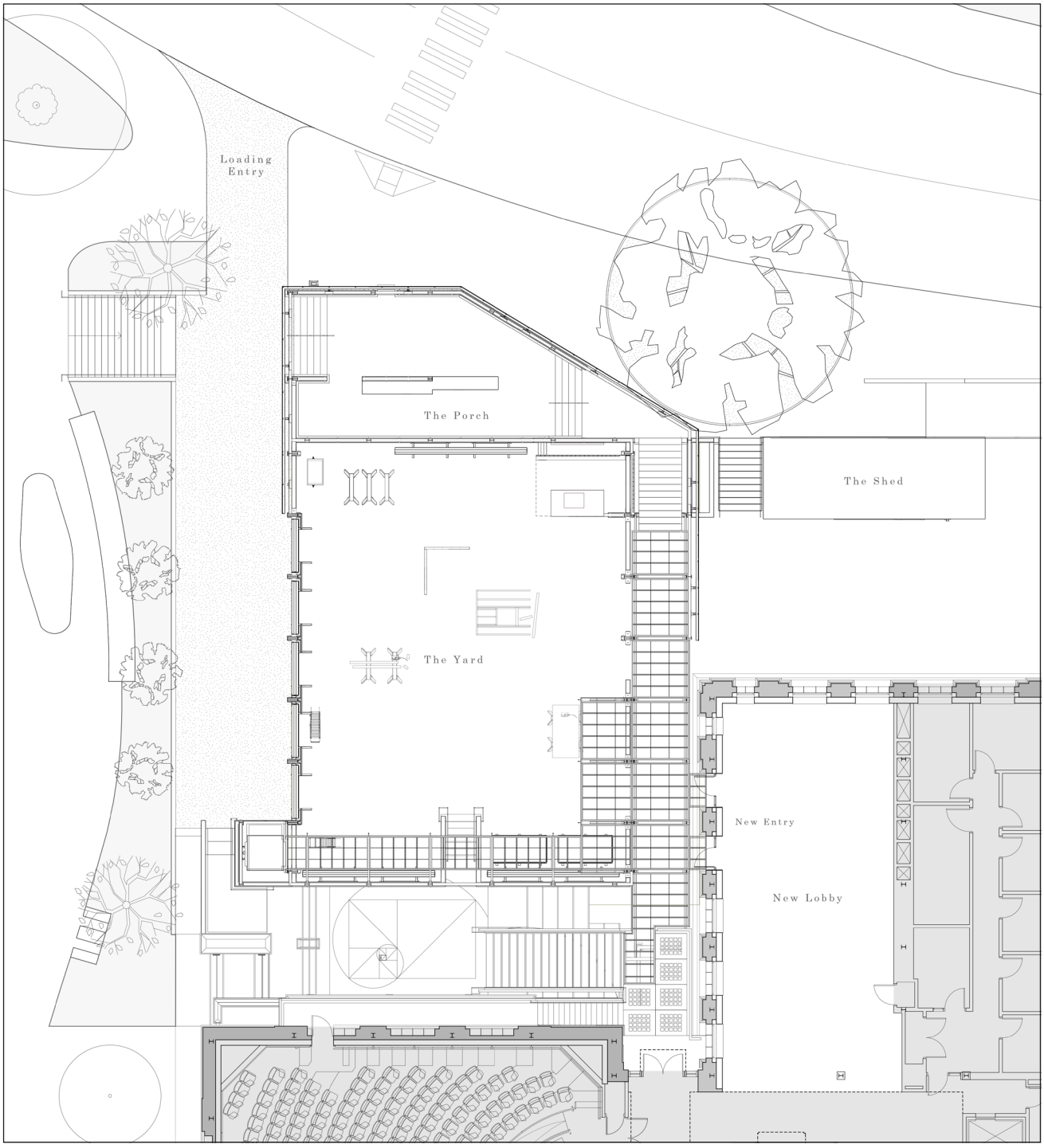
I. Context & Orthographics *Ground Level Plan*



The Final Design

I. Context & Orthographics

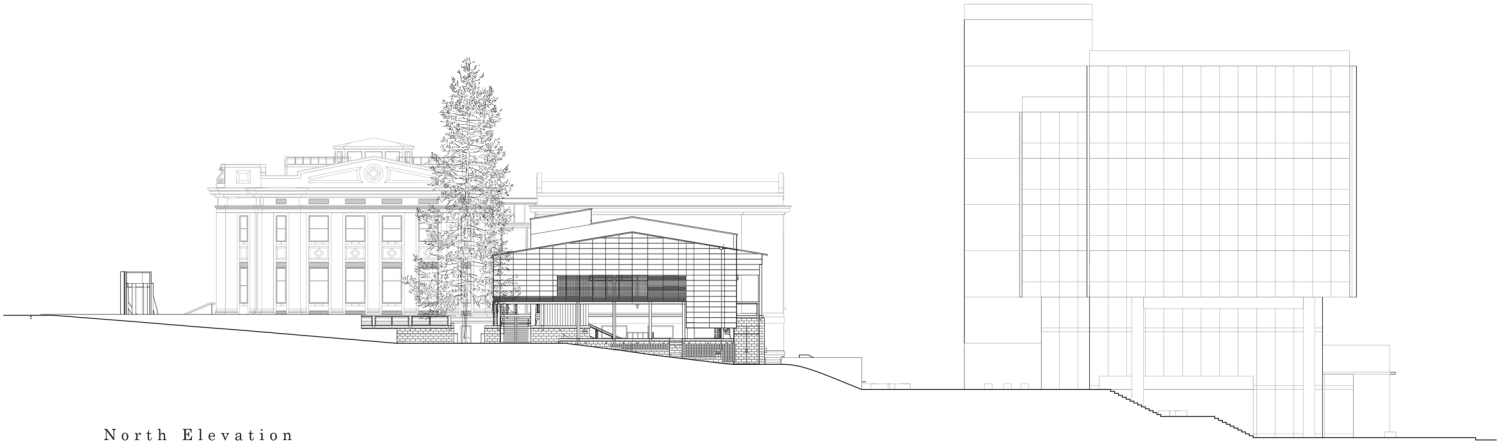
Level One Plan



The Final Design

I. Context & Orthographics *Elevations*

East Elevation

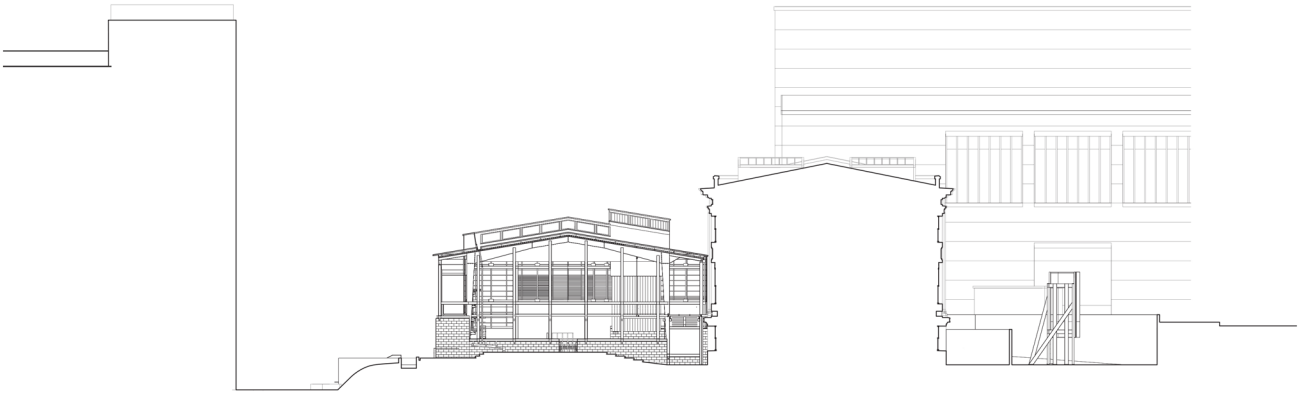


North Elevation

The Final Design

I. Context & Orthographics *Elevations (Cont.)*

West Elevation



South Elevation

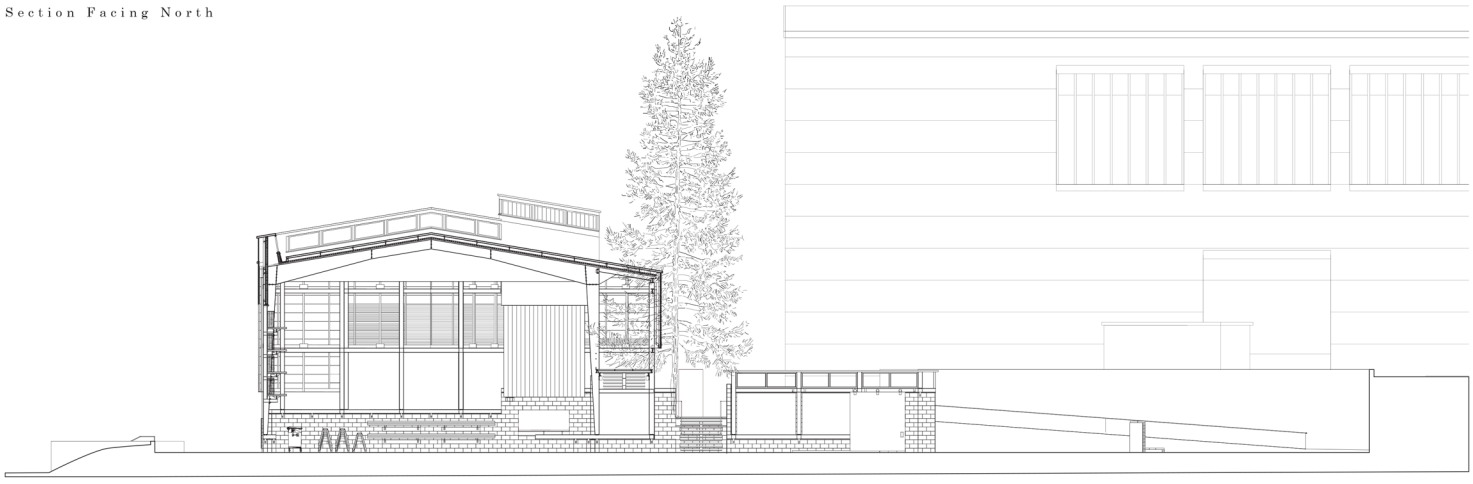
The Final Design

I. Context & Orthographics

Sections

Section Facing East

Section Facing North



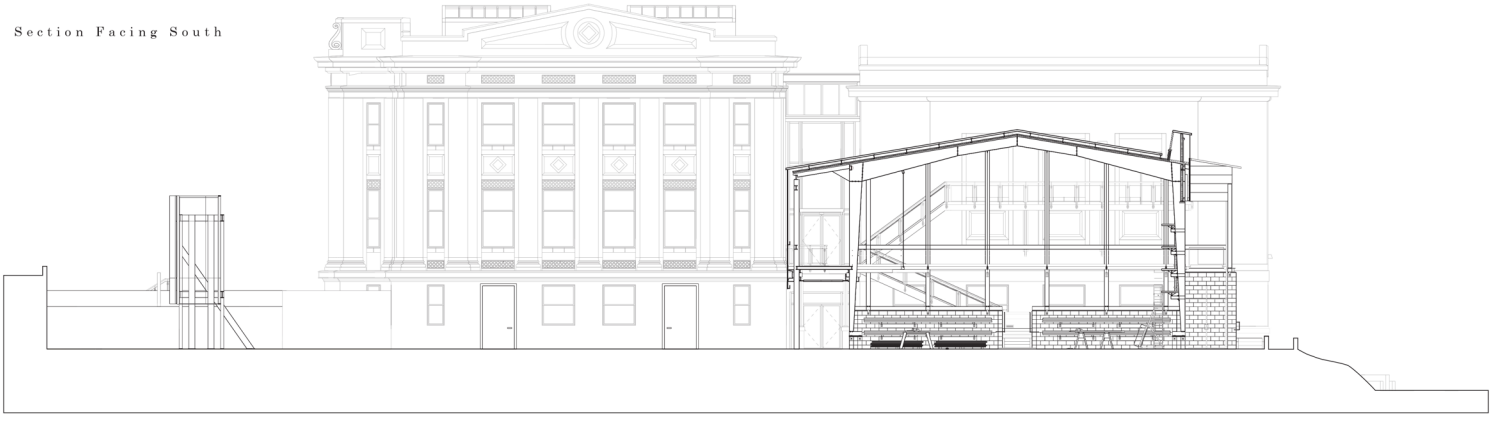
The Final Design

I. Context & Orthographics

Sections (Cont.)

Section Facing North

Section Facing South



The Final Design

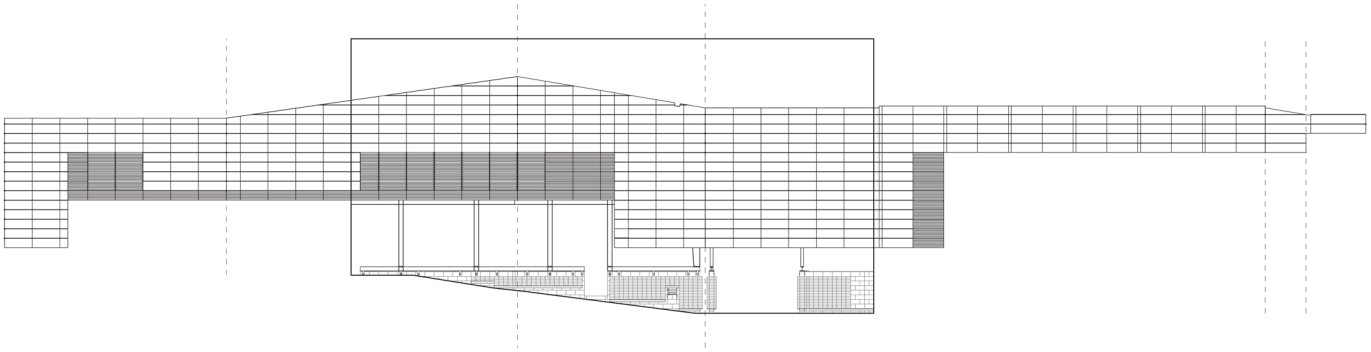
II. Applied Principles

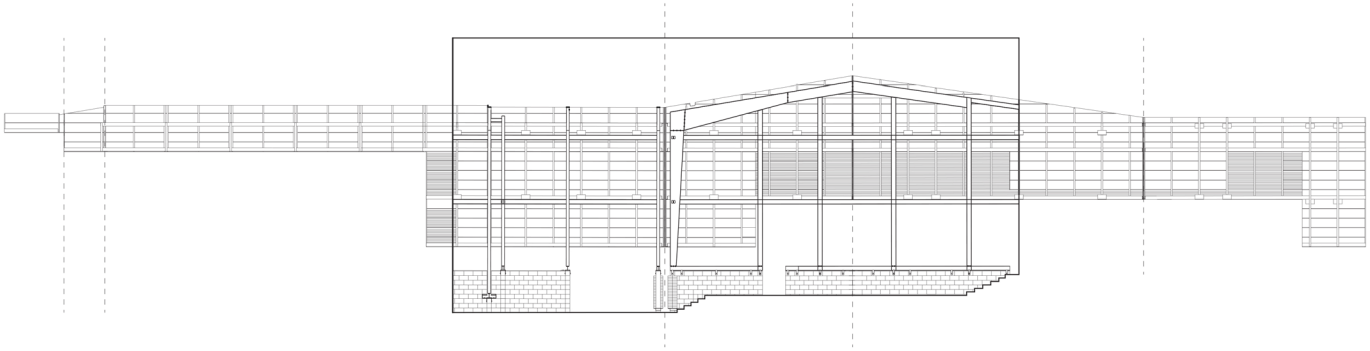
1

THE HONESTY OF MATERIAL & CONSTRUCTION

Project Application

Honest expression through
the visibility of a layered
construction system.





1

THE HONESTY OF MATERIAL & CONSTRUCTION

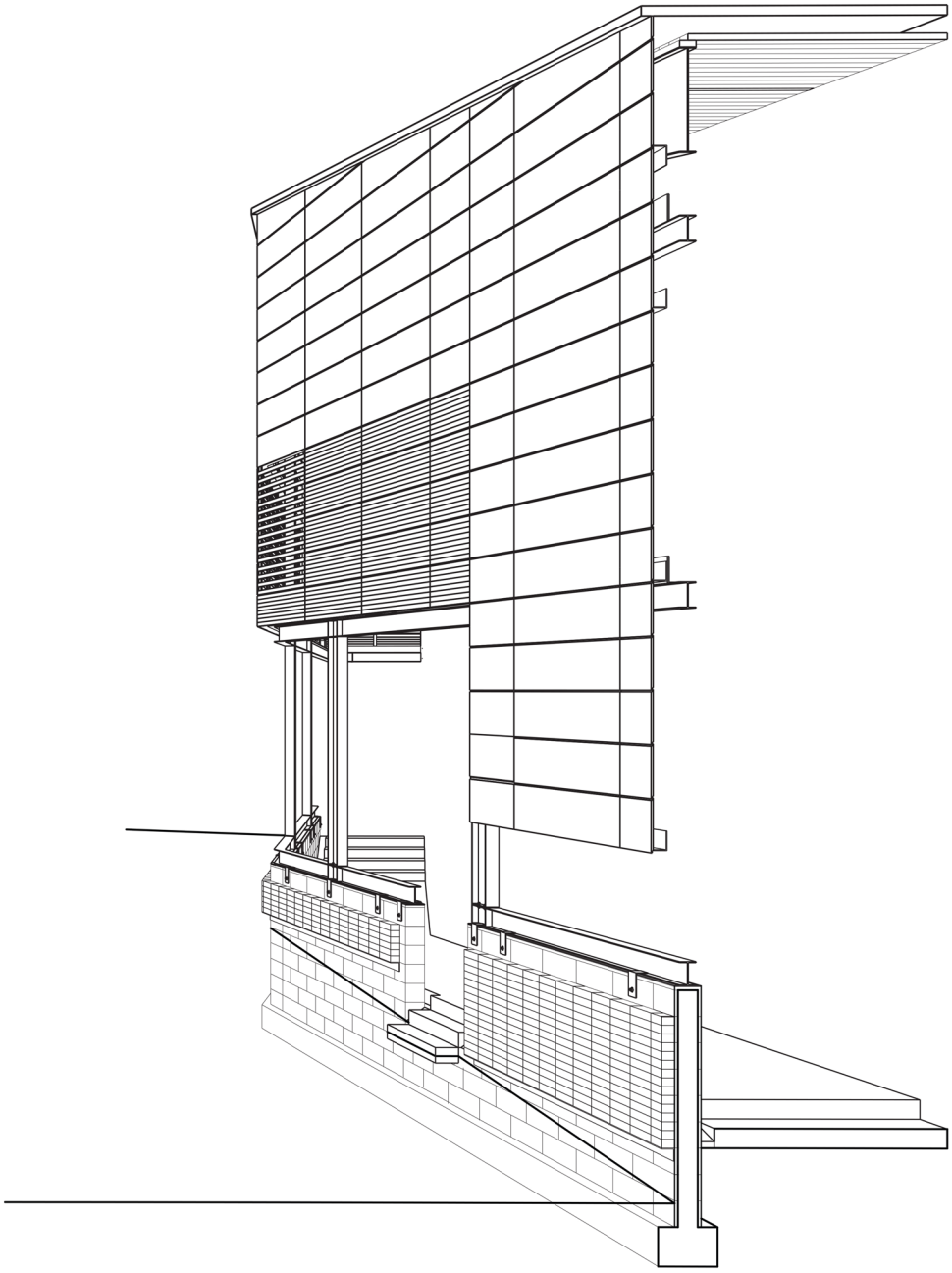


fig. 1 a

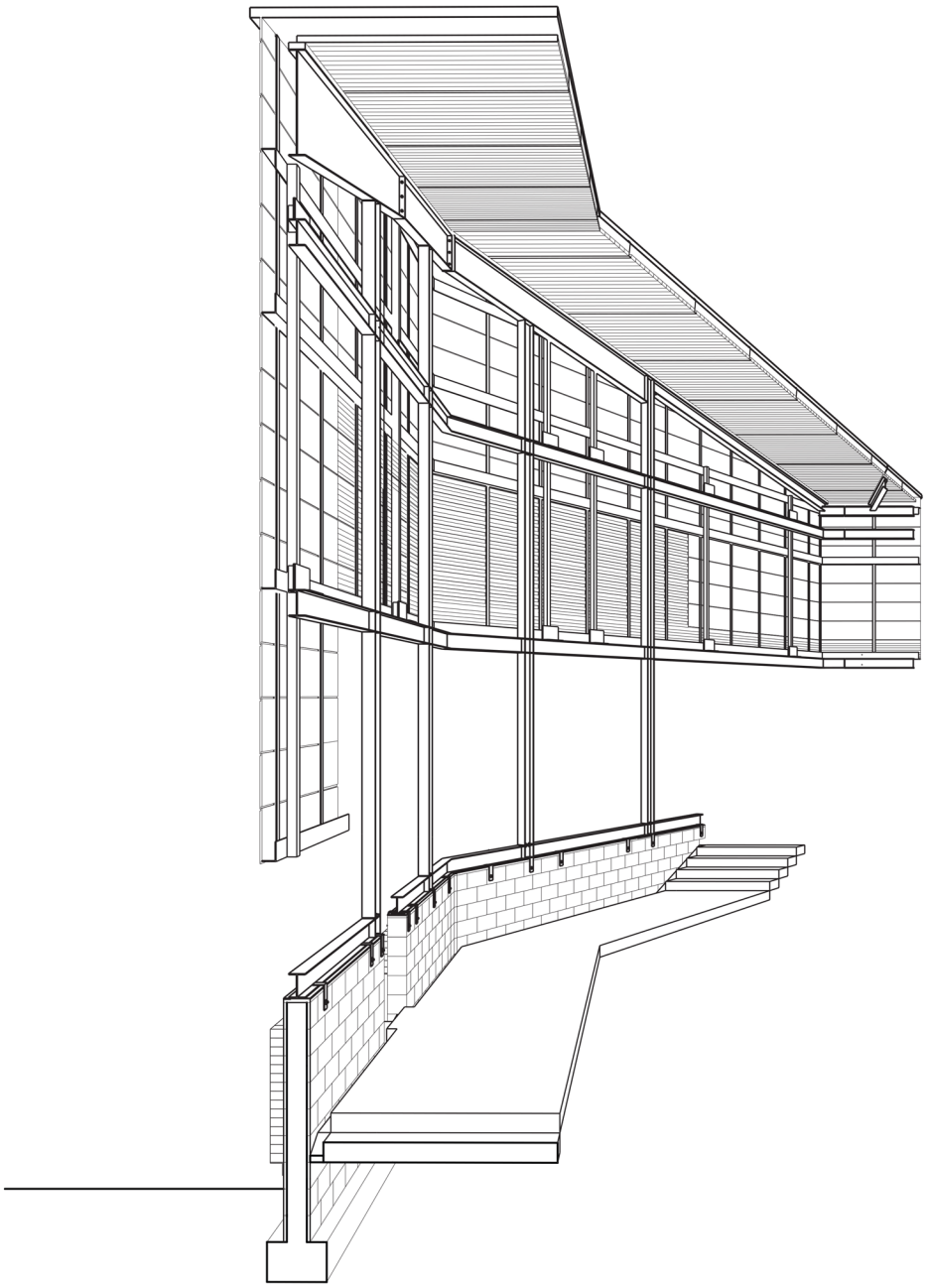


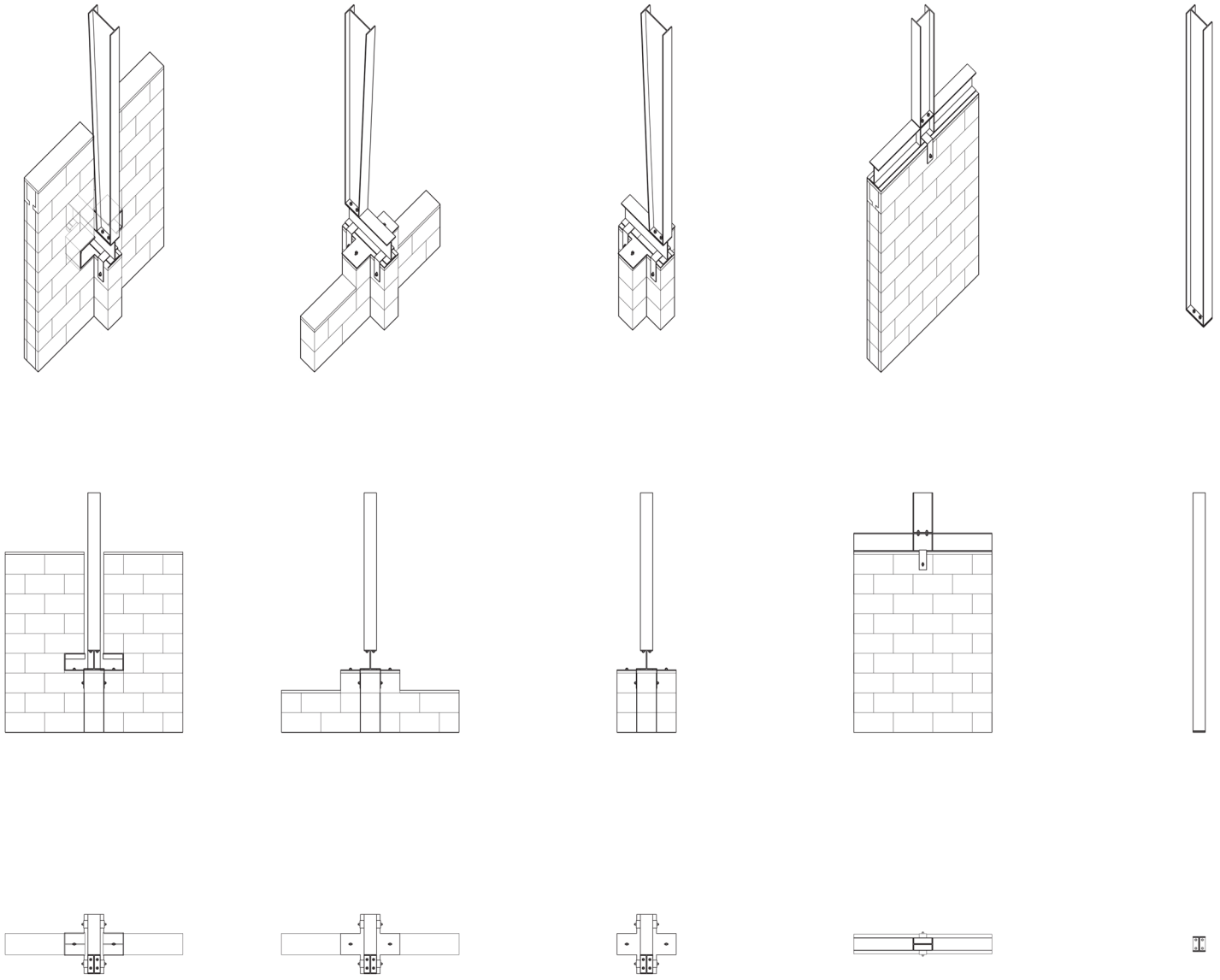
fig. 1 b

2

THE EVIDENCE OF HUMAN EXPRESSION

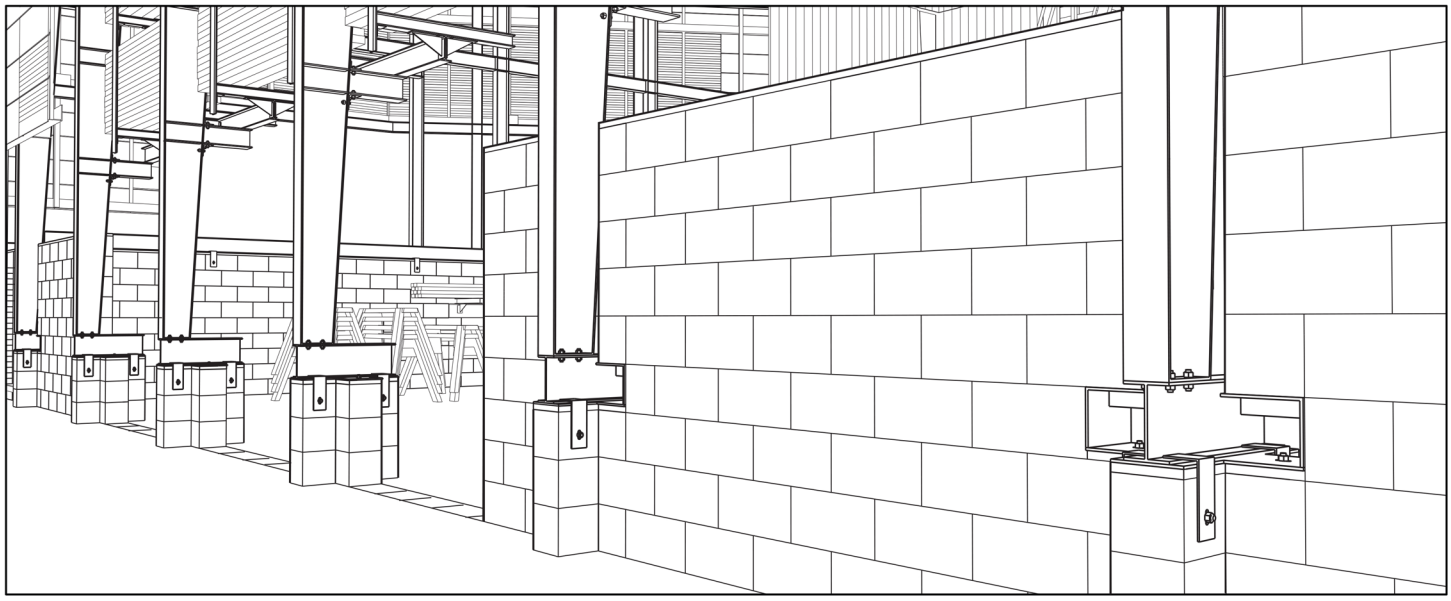
Project Application

Human expression through the
hierarchy of tectonic solutions
for how a column meets the ground.



2

THE EVIDENCE OF HUMAN EXPRESSION



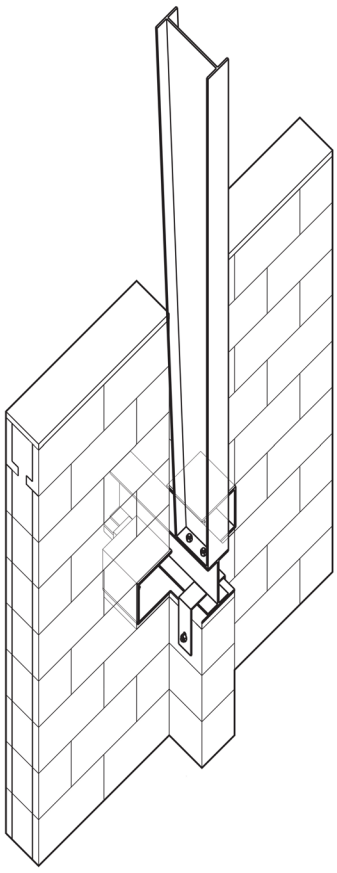
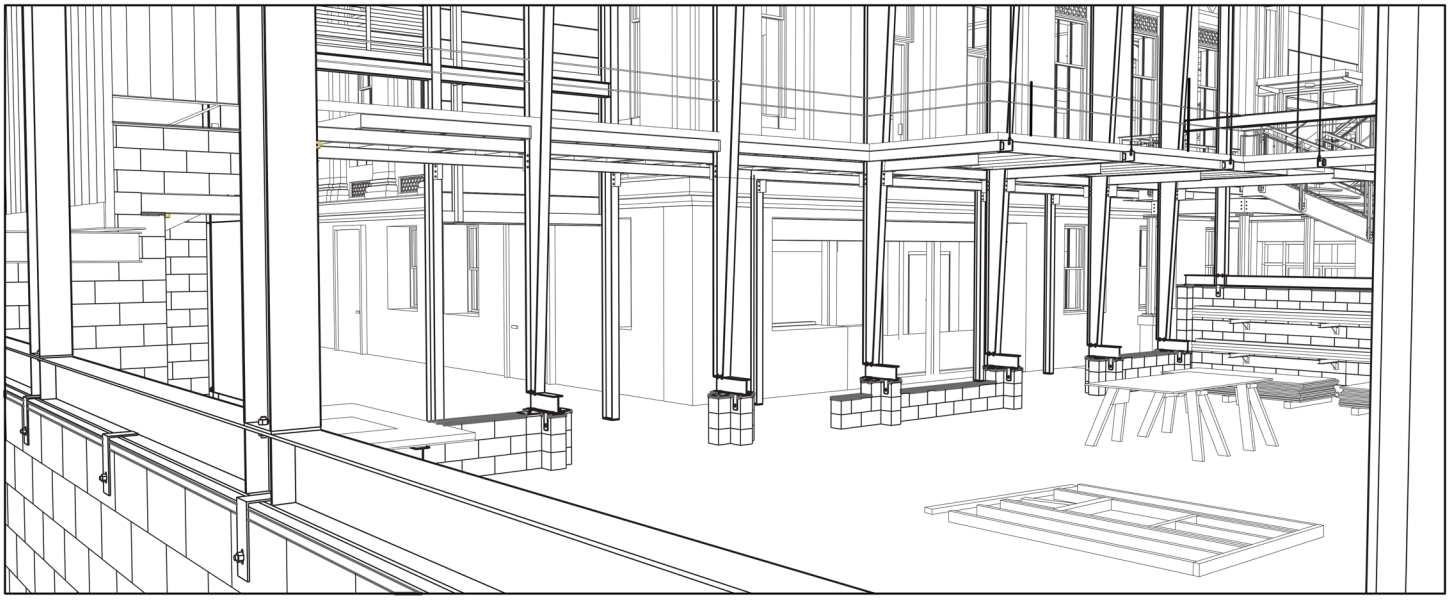


fig. 2 a



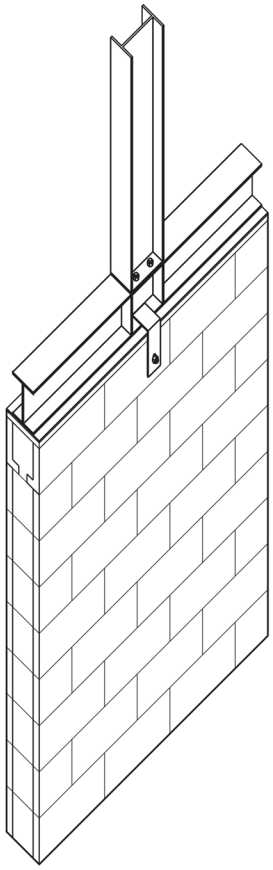


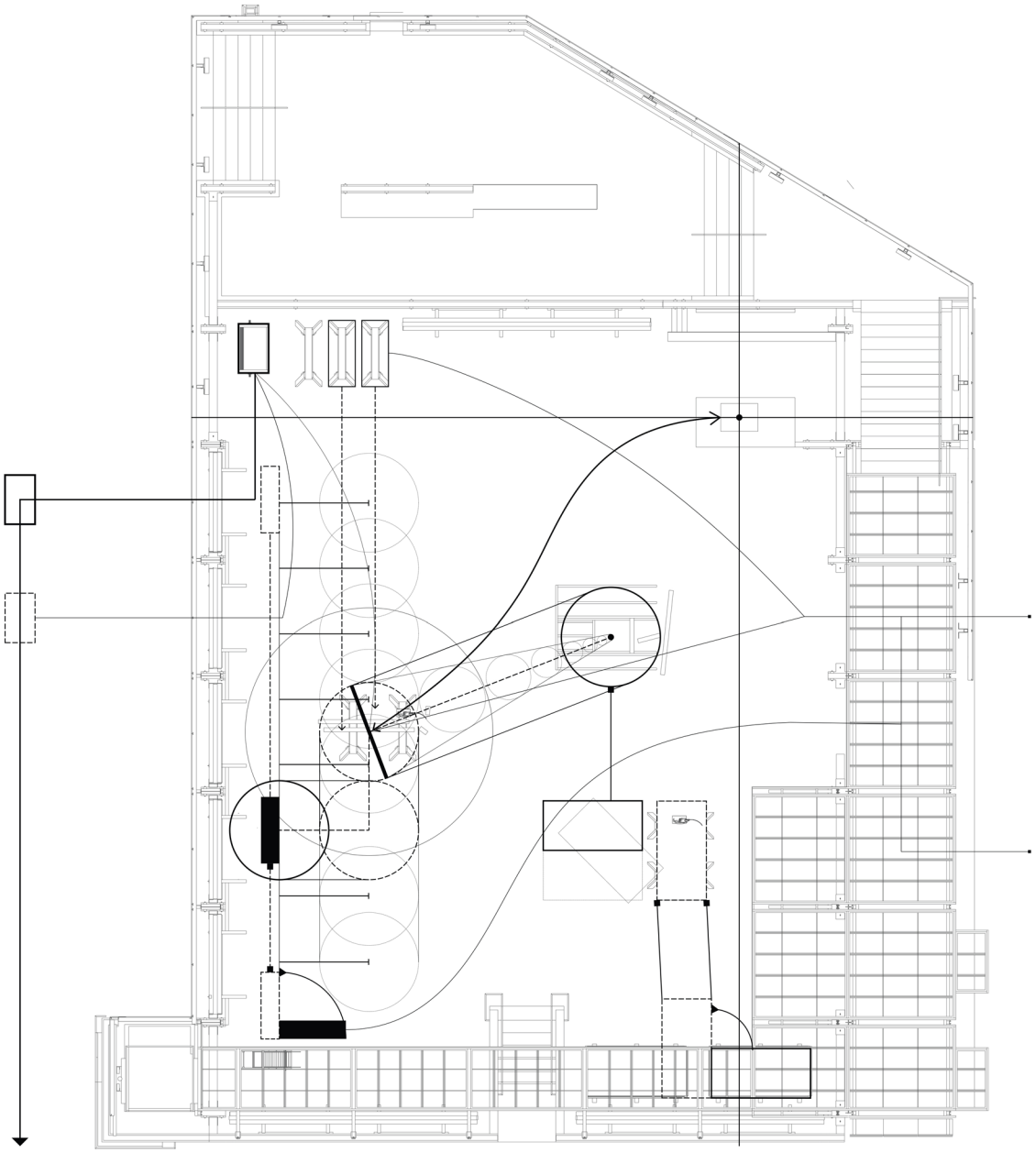
fig. 2 b

3

THE MOVEMENT OF THE BODY

Project Application

Movement of the body in
acquiring tools and materials,
a choreography in space.



3

THE MOVEMENT OF THE BODY

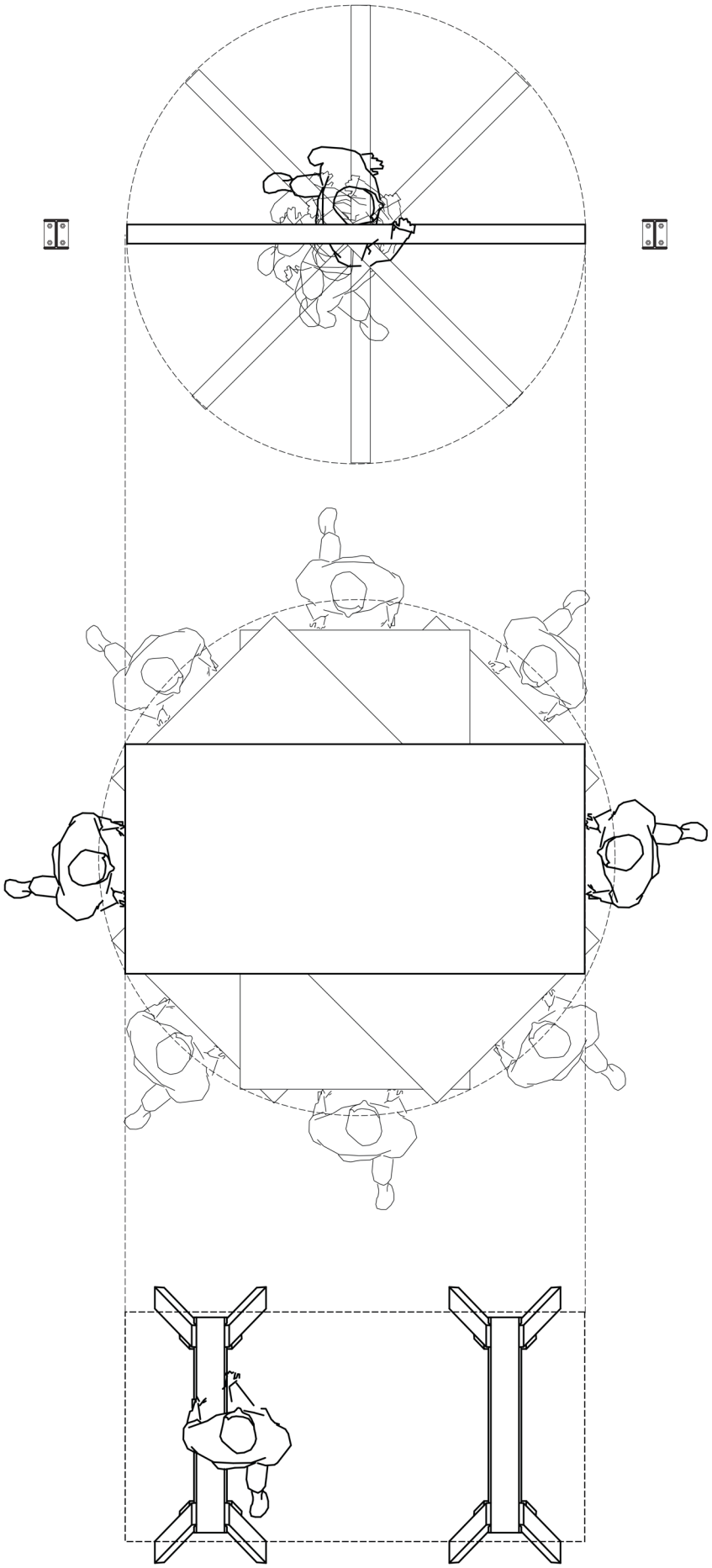
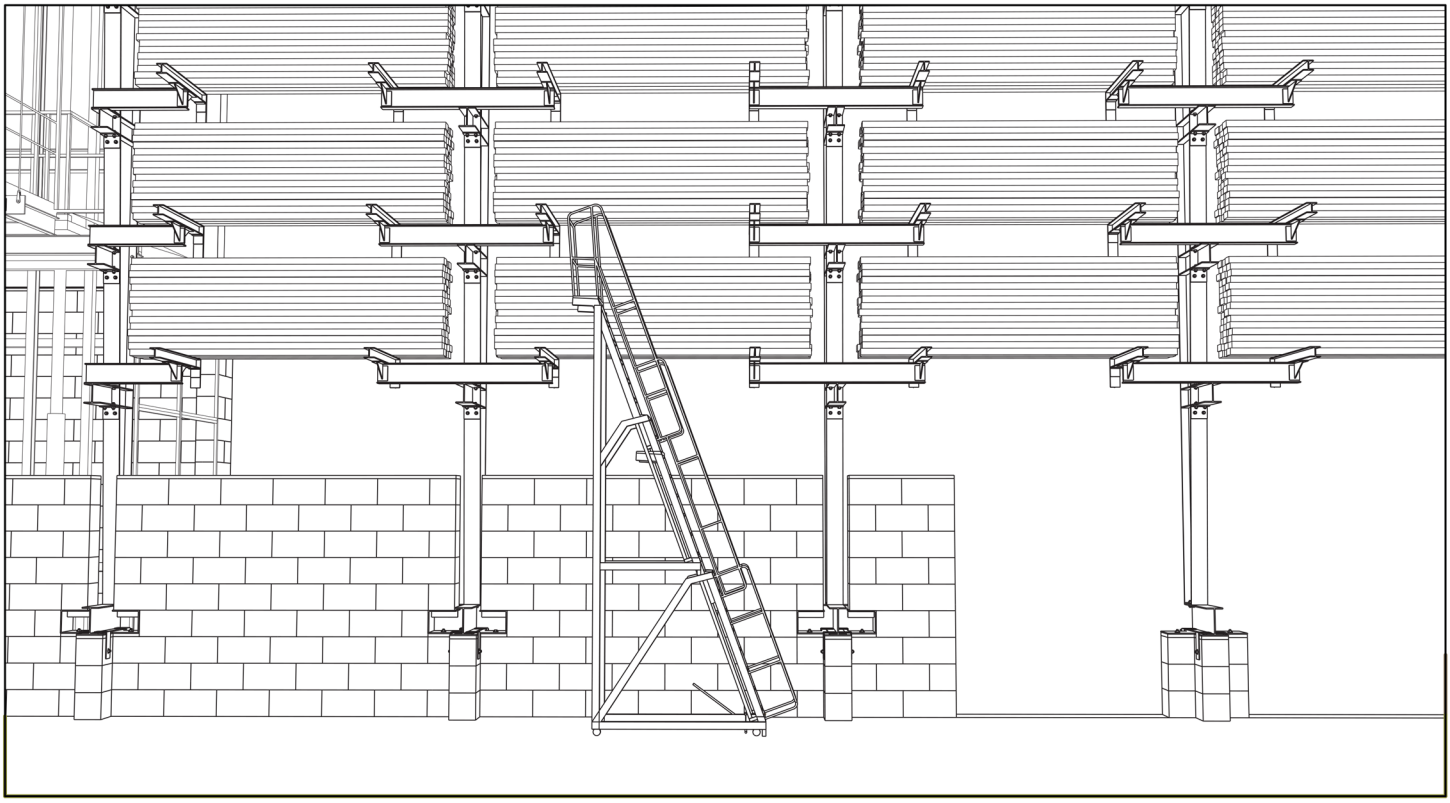


fig. 3 a



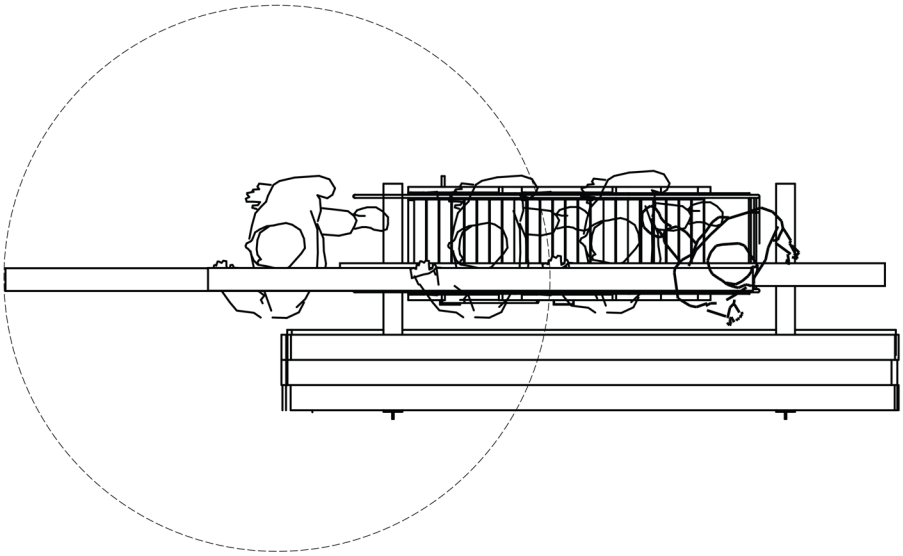


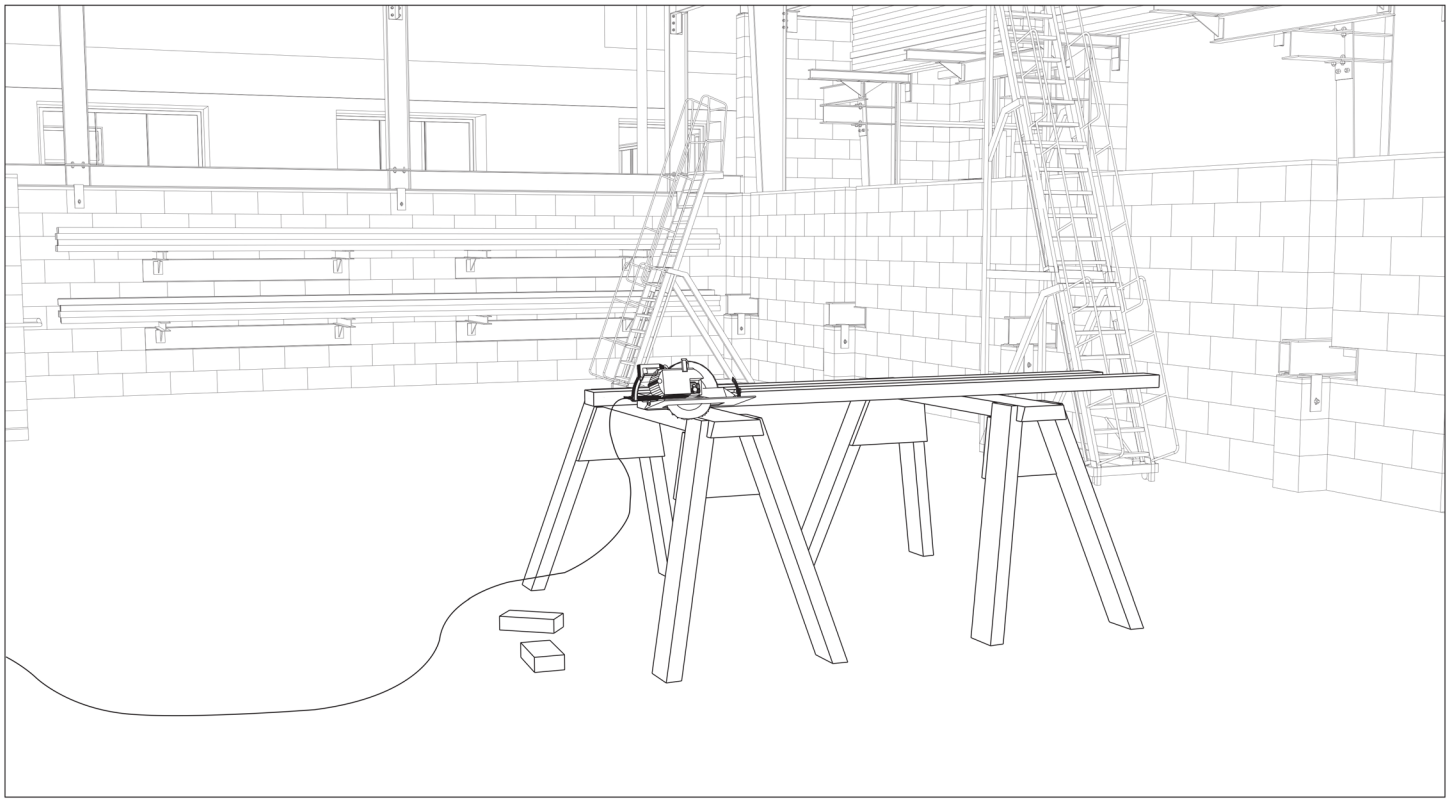
fig. 3 b

4

THE ENGAGEMENT OF THE SENSES

Project Application

The senses engaged through the
touch of the warm handrail,
and the sound and smells of materials
being worked in space.



4

THE ENGAGEMENT OF THE SENSES

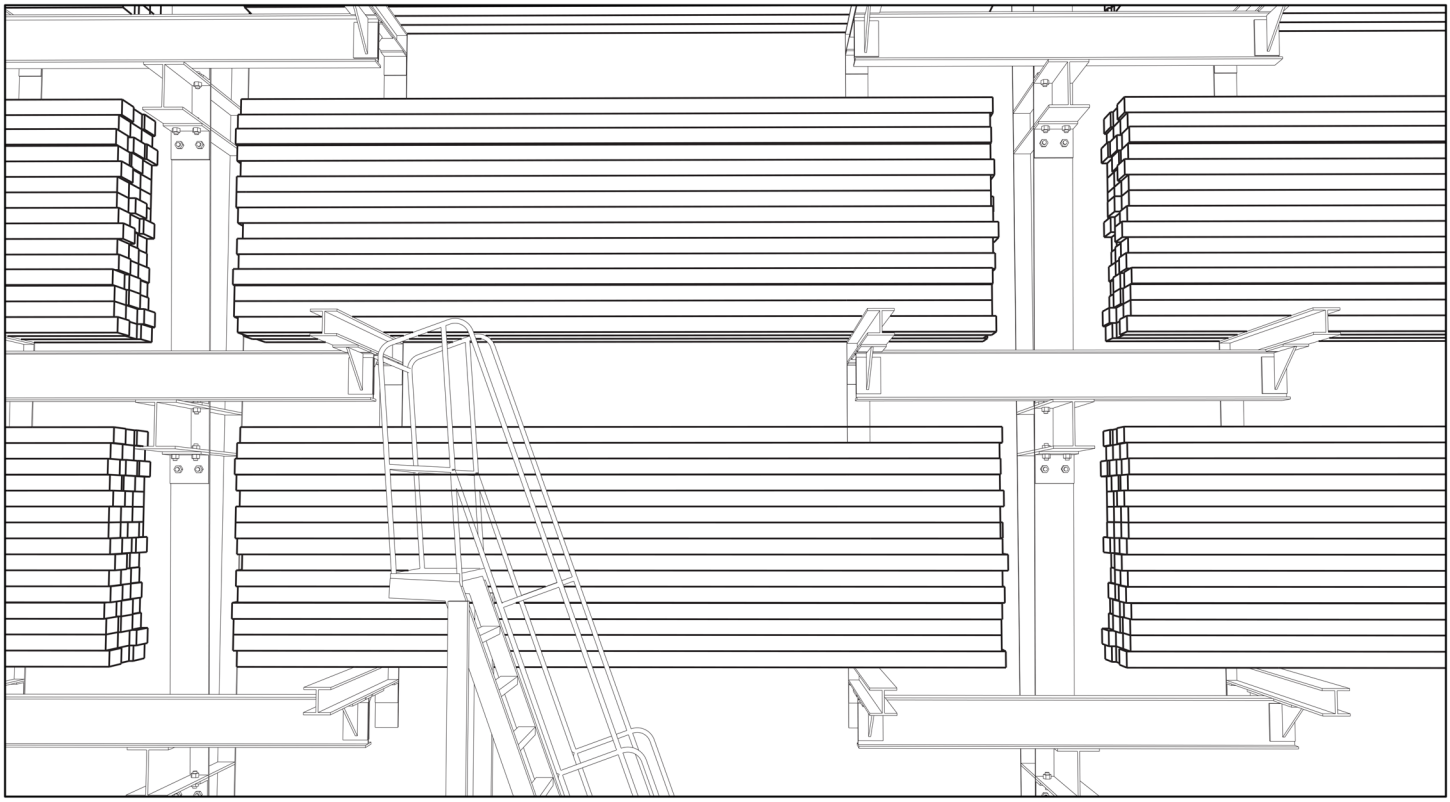


fig. 4 a

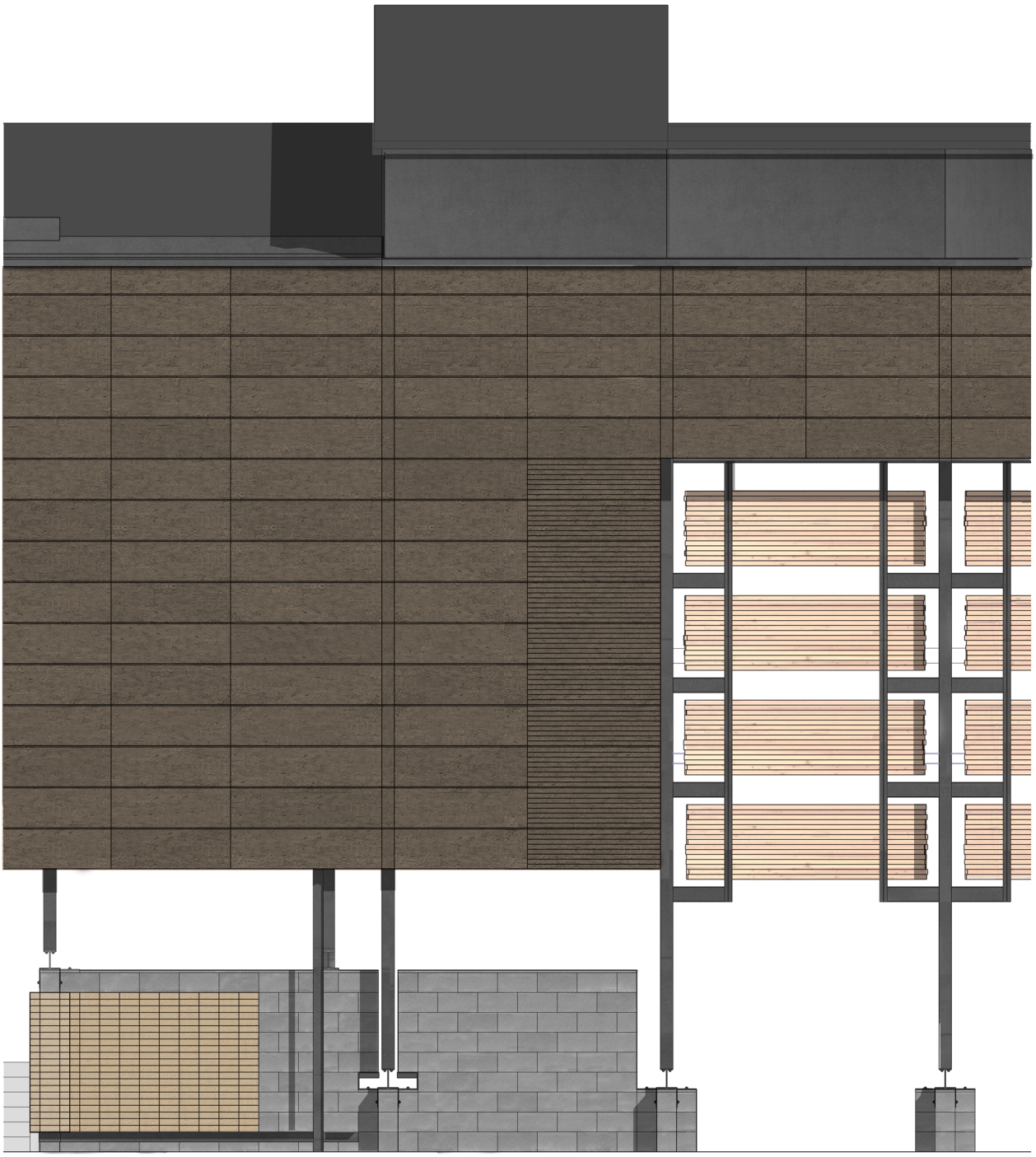
fig. 4 b

5

THE COMPATIBILITY OF MATERIALS

Project Application

The dark exterior contrasting with
the light and warm within,
a material dialouge with history.



5

THE COMPATIBILITY OF MATERIALS

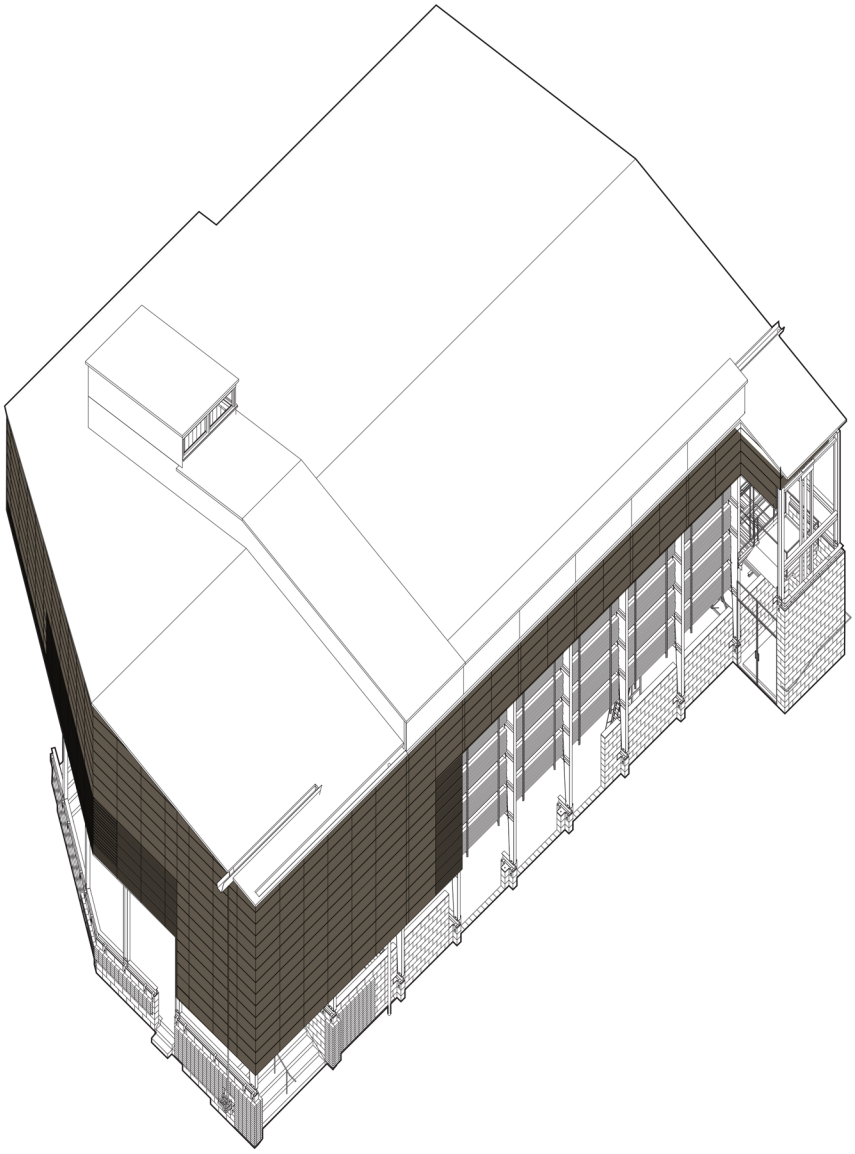


fig. 5 a

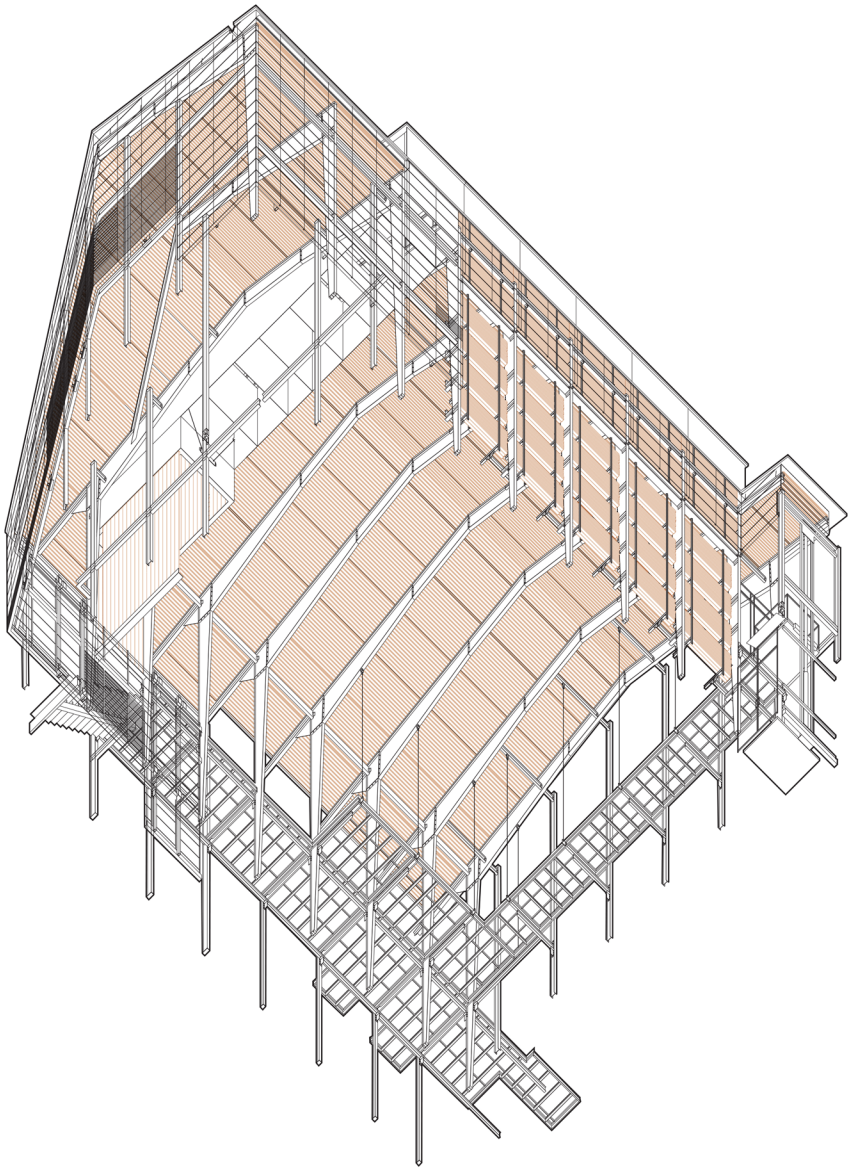


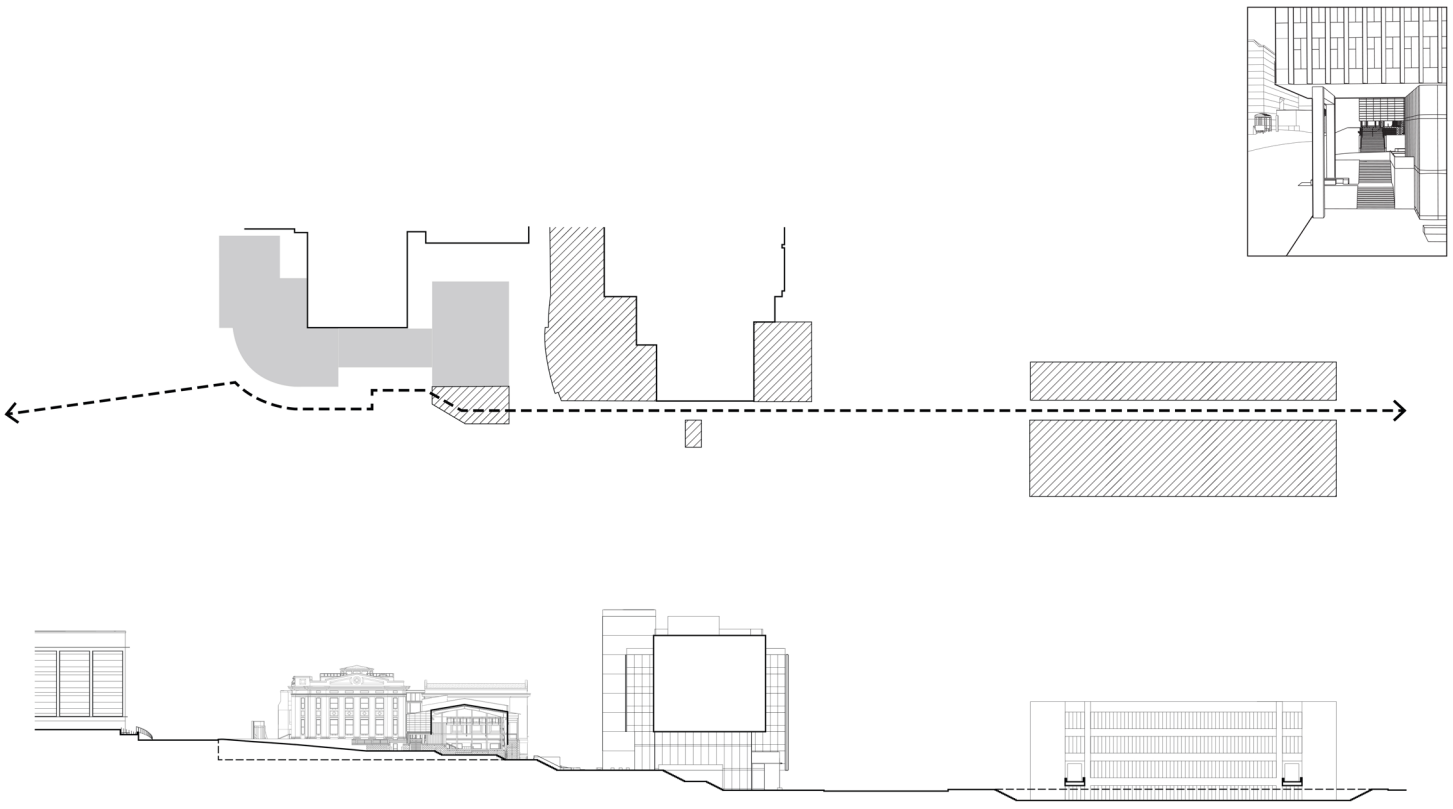
fig. 5 b

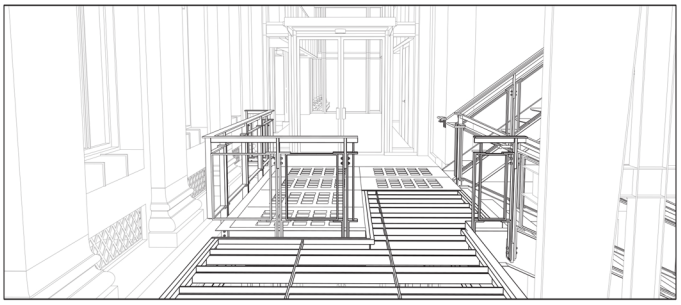
6

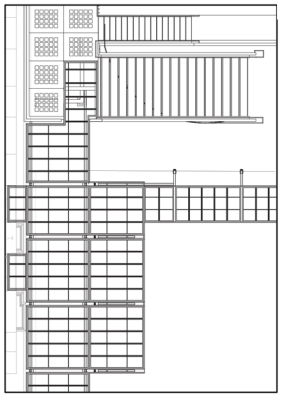
THE FEELING OF BELONGING

Project Application

Neither preservation nor complete erasure,
rather a conversation held between
generations across time.







6

THE FEELING OF BELONGING

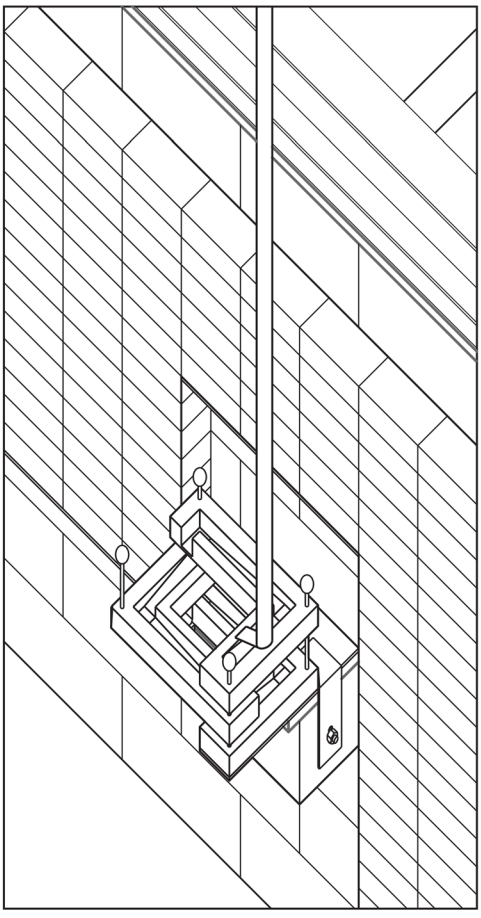
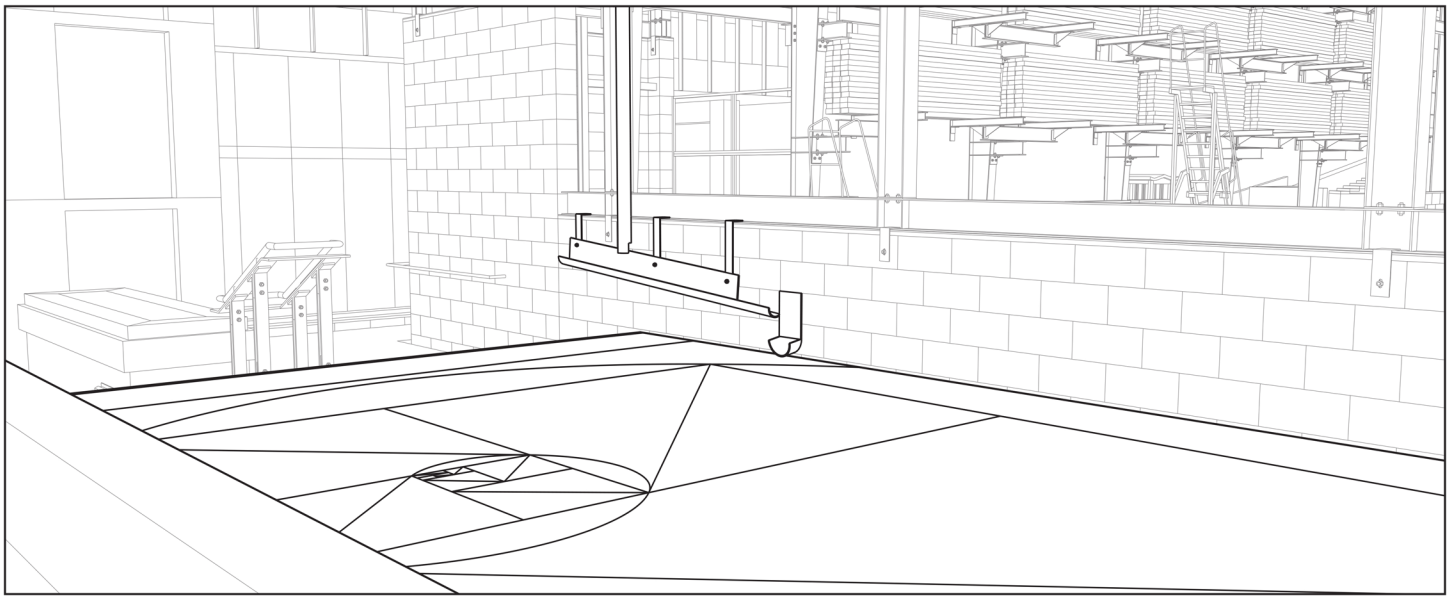
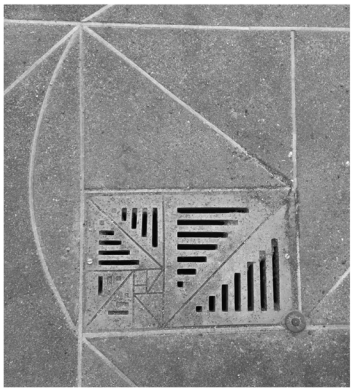


fig. 6 a





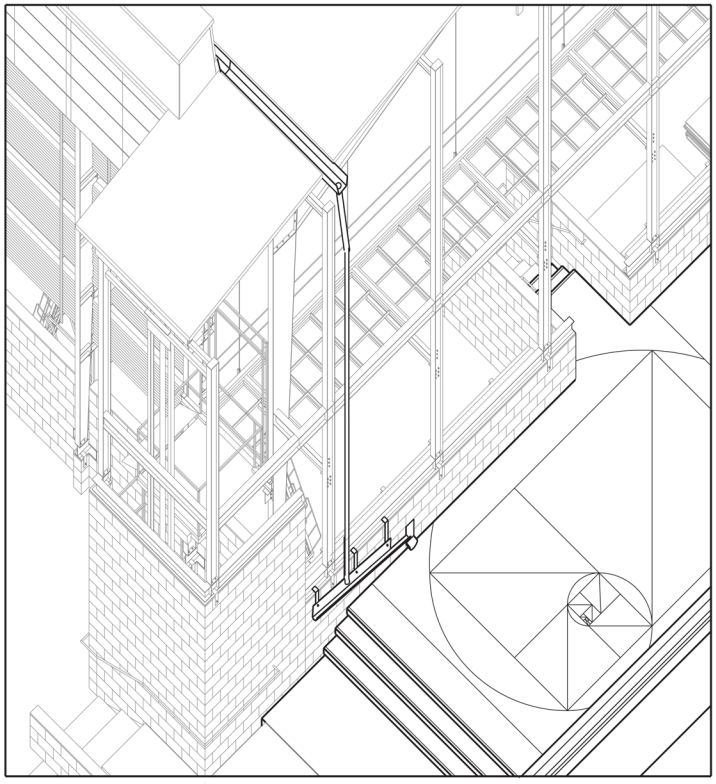


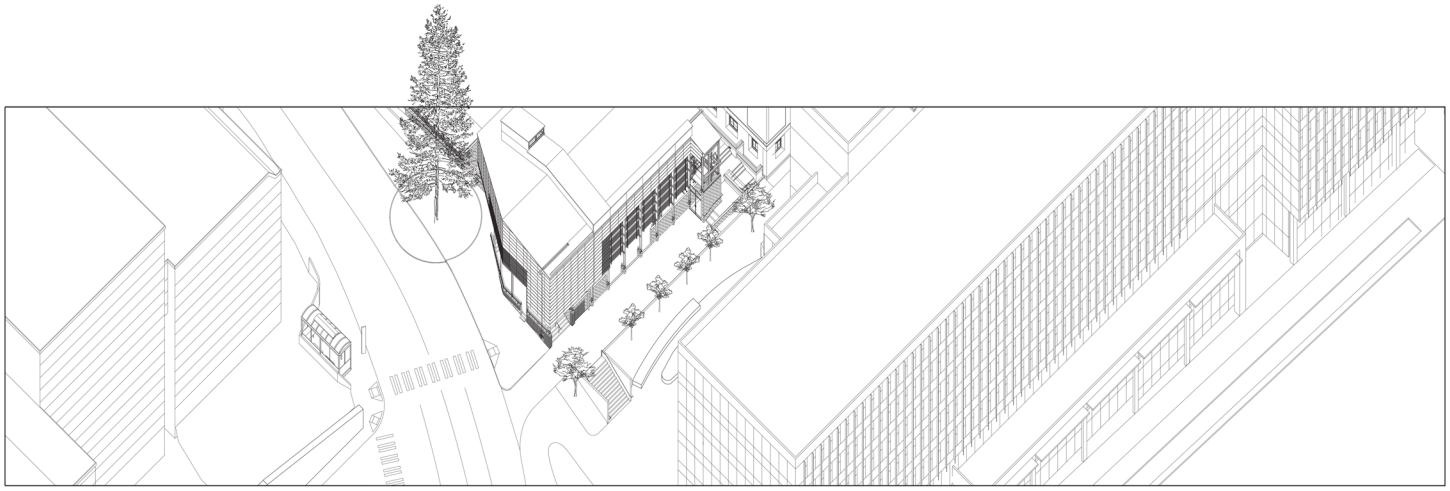
fig. 6 b

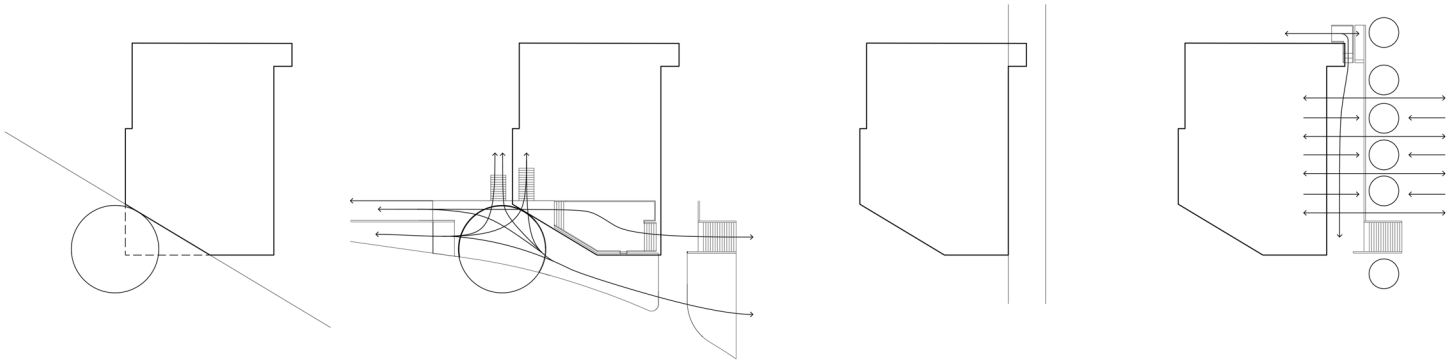
7

THE SOLACE OF NATURE

Project Application

Solace in two gestures towards nature,
a circle scribed and
a colonnade of man and nature.





7

THE SOLACE OF NATURE

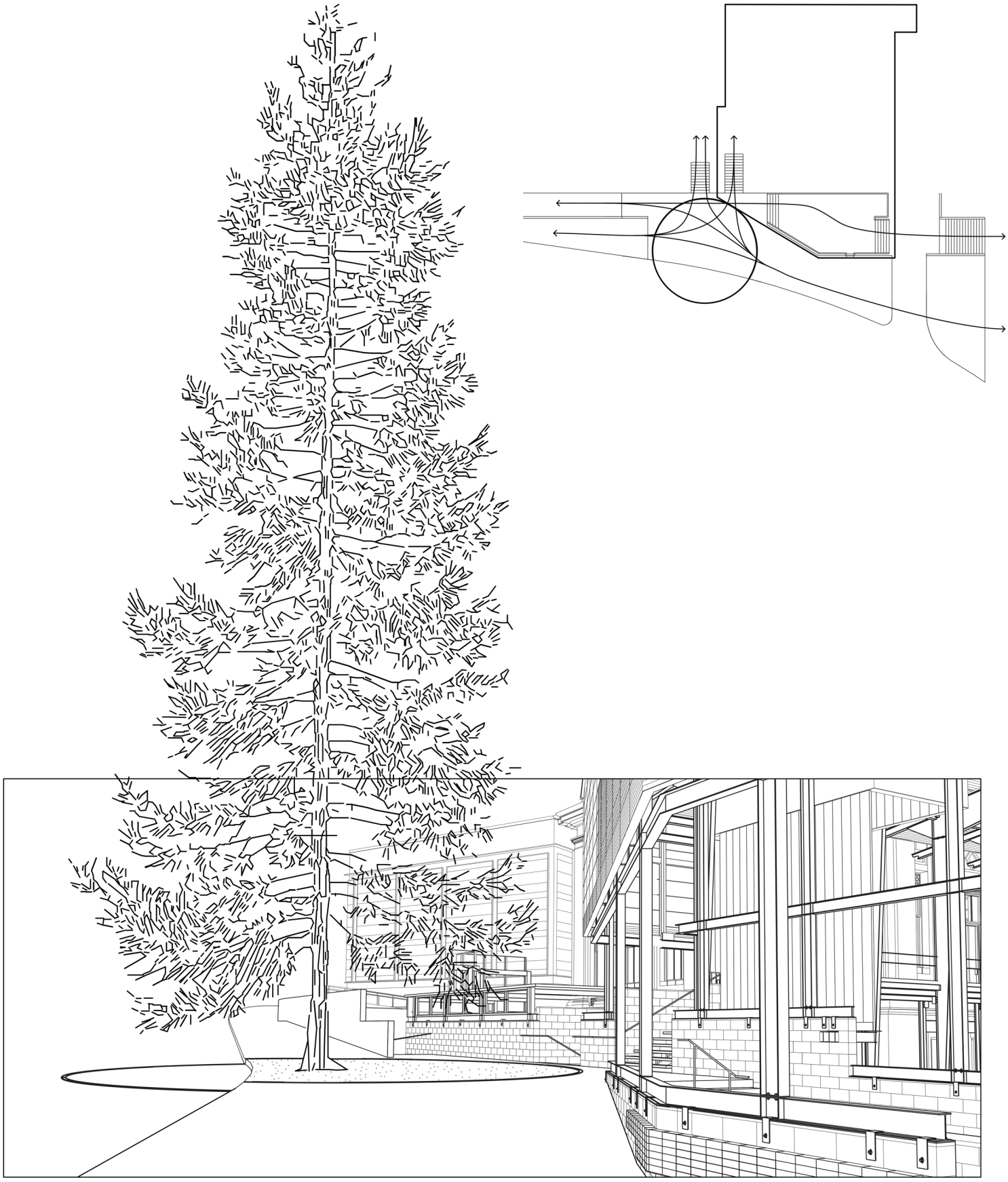


fig. 7 a

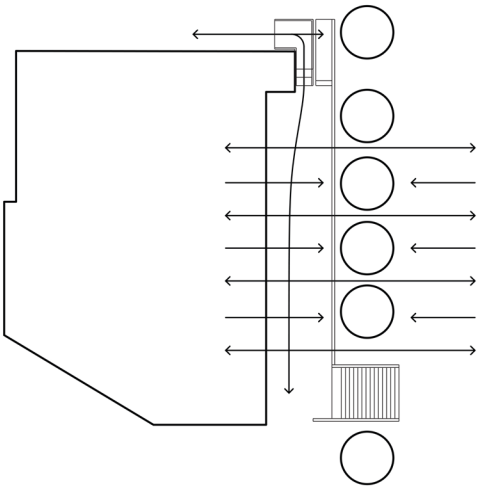


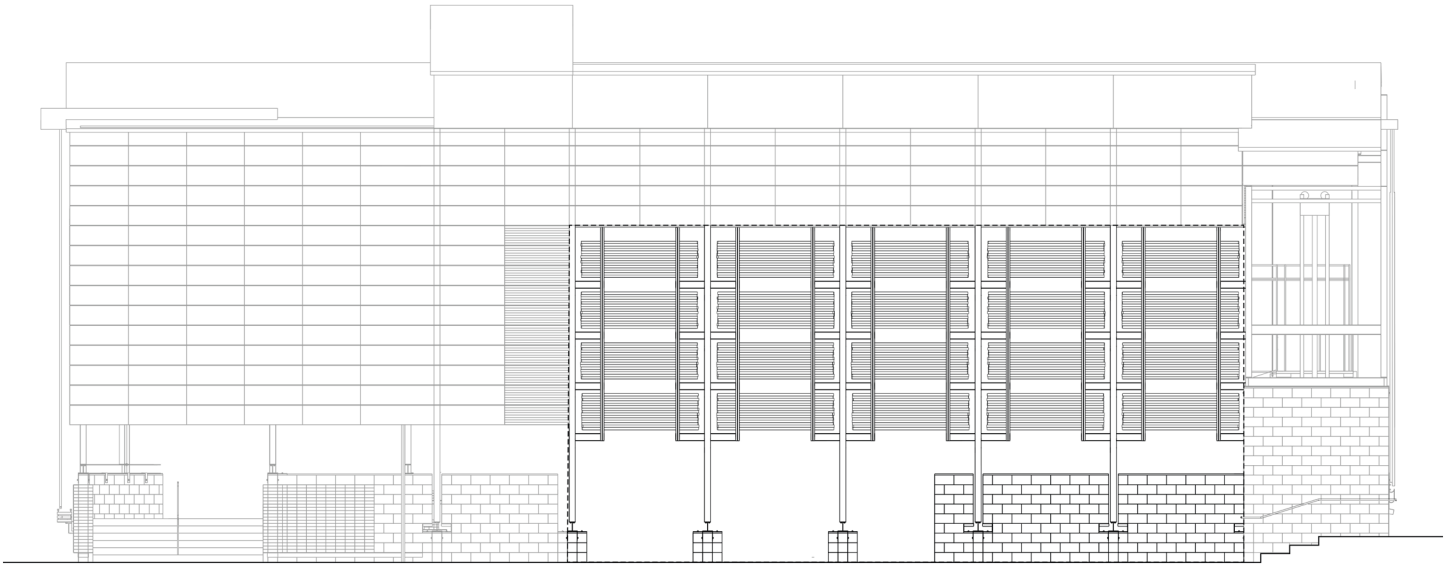
fig. 7 b

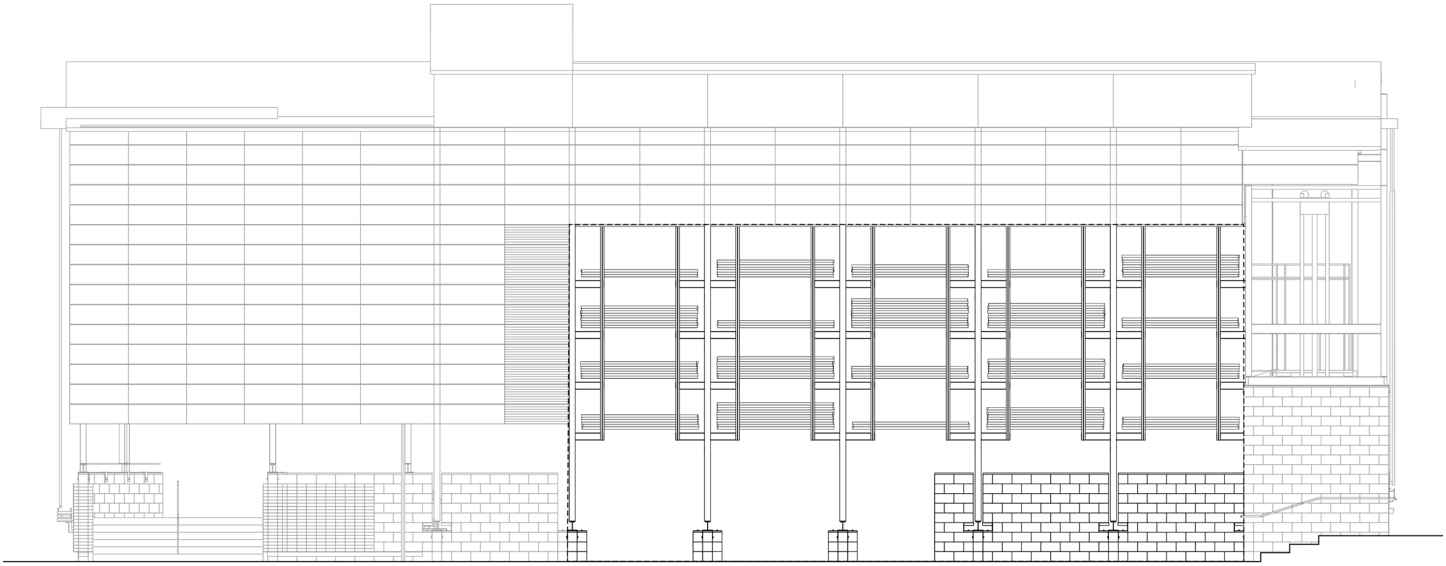
8

THE ACCEPTANCE OF IMPERFECTION

Project Application

An imperfect wall with life,
to be filled and emptied,
and exposed to the elements.





8

THE ACCEPTANCE OF IMPERFECTION

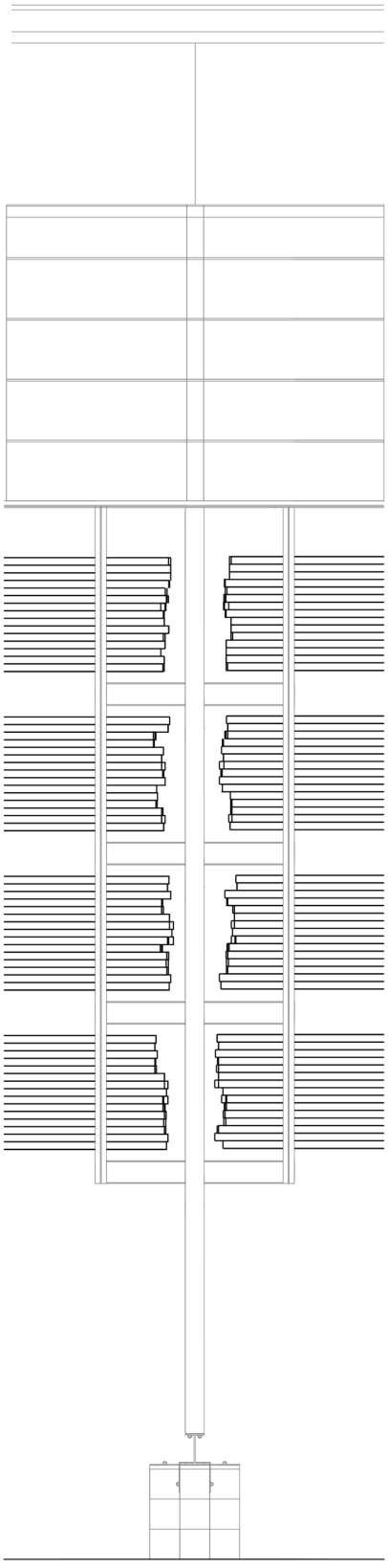
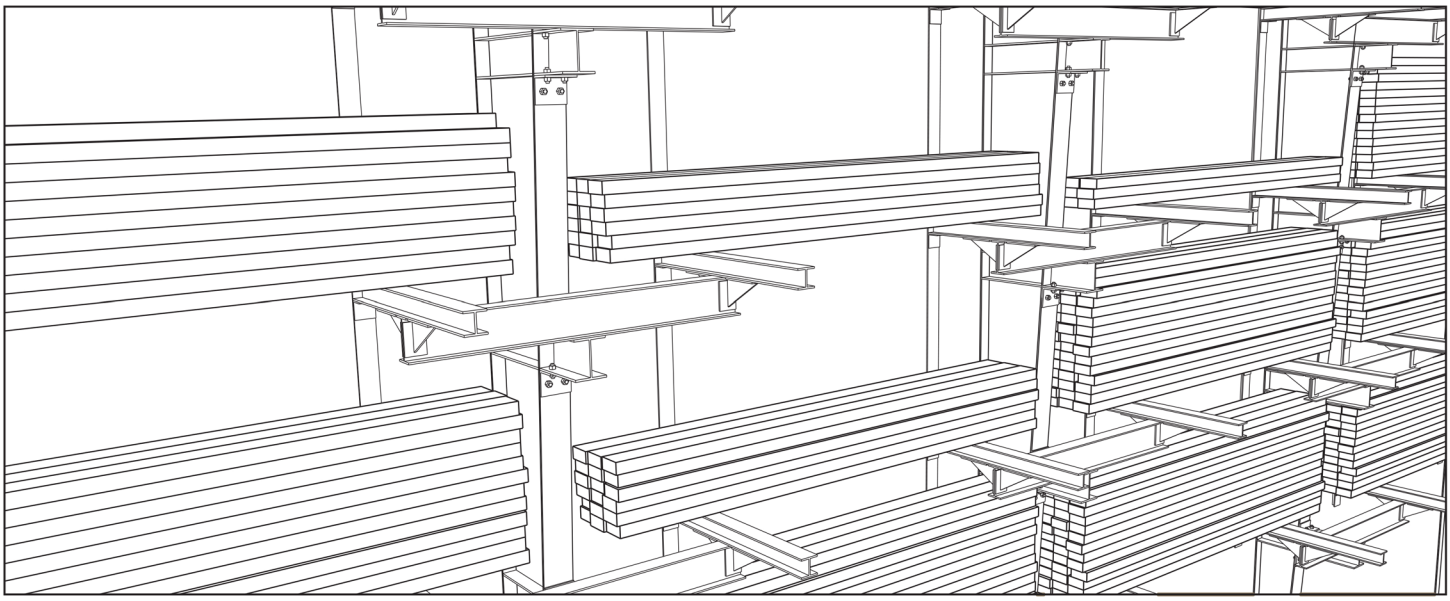


fig. 8 a



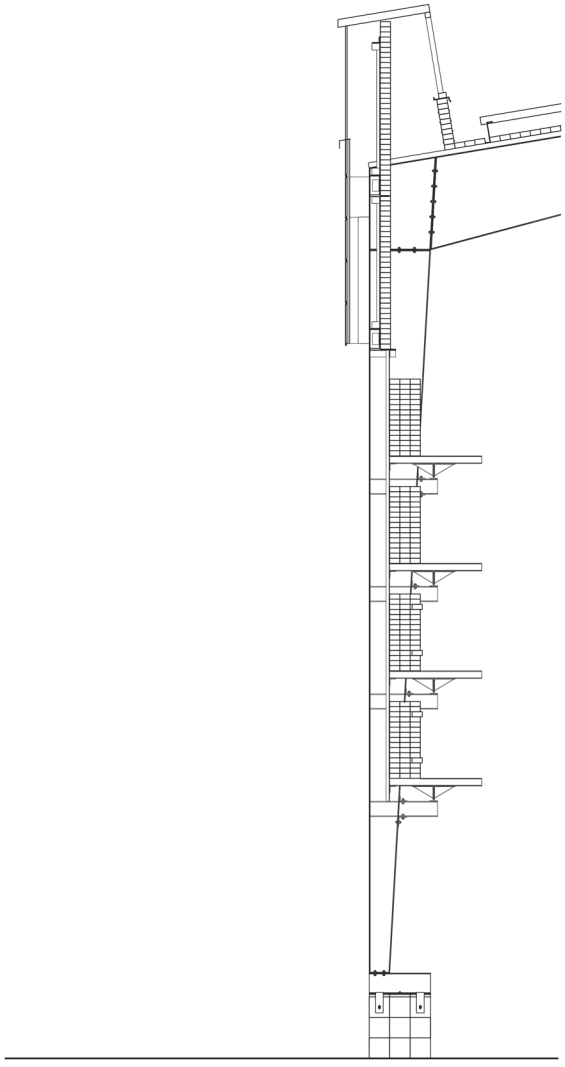


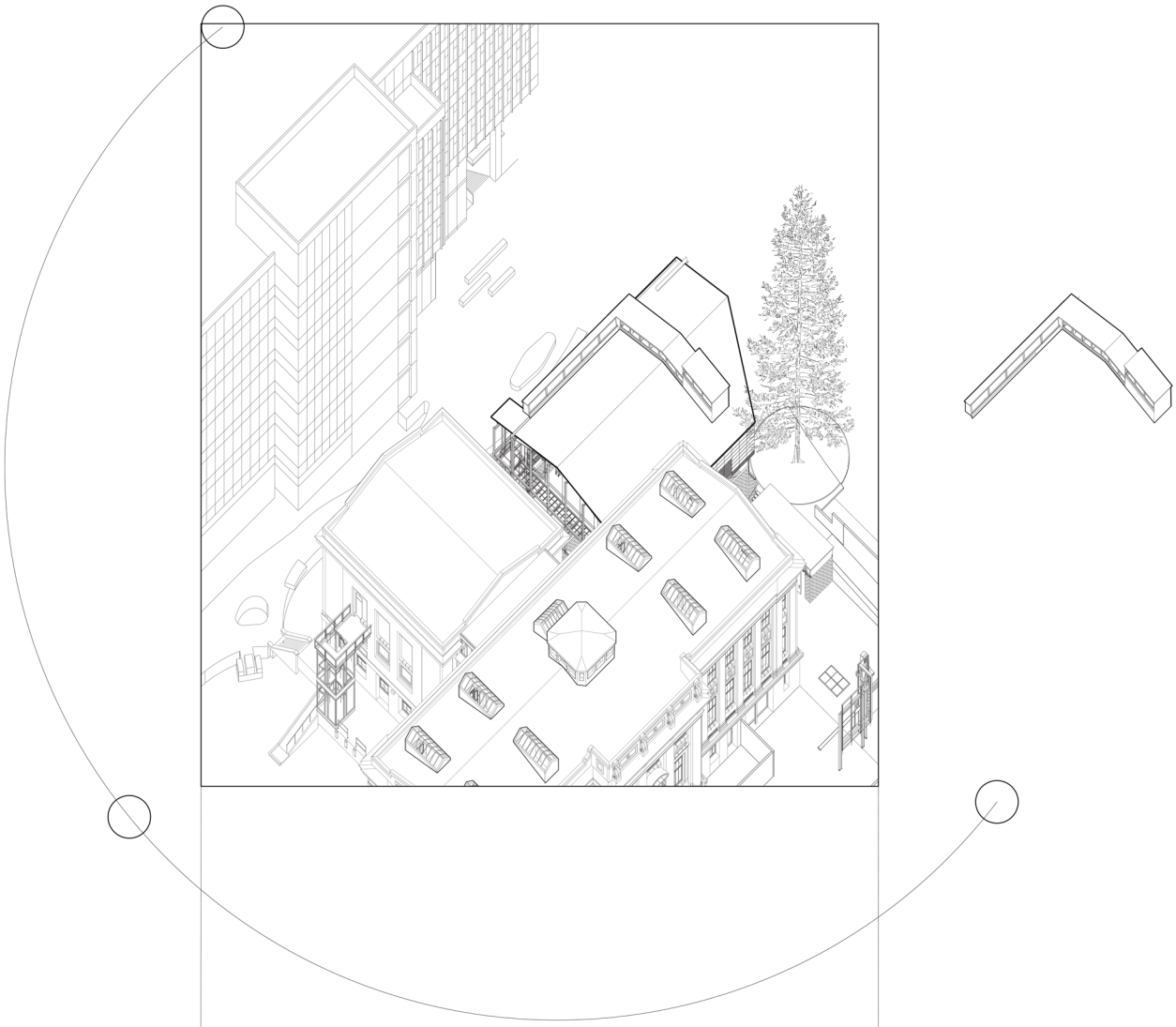
fig. 8 b

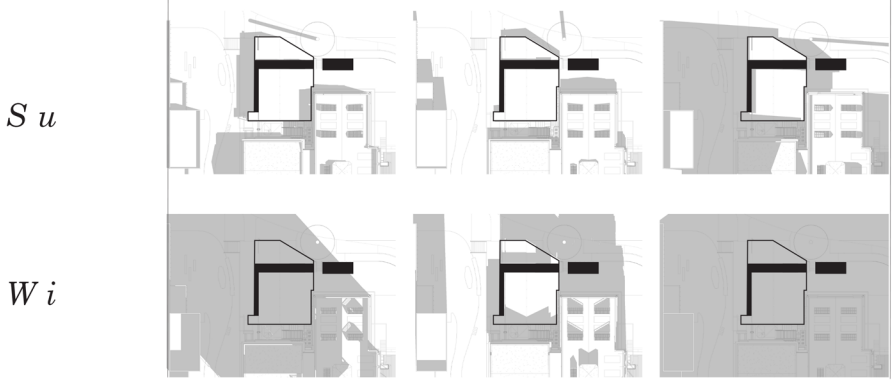
9

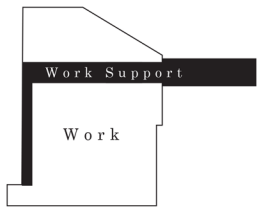
THE CHARACTER OF LIGHT

Project Application

A skylight which follows the sun,
providing a warm glow to the
spaces that support the work within.

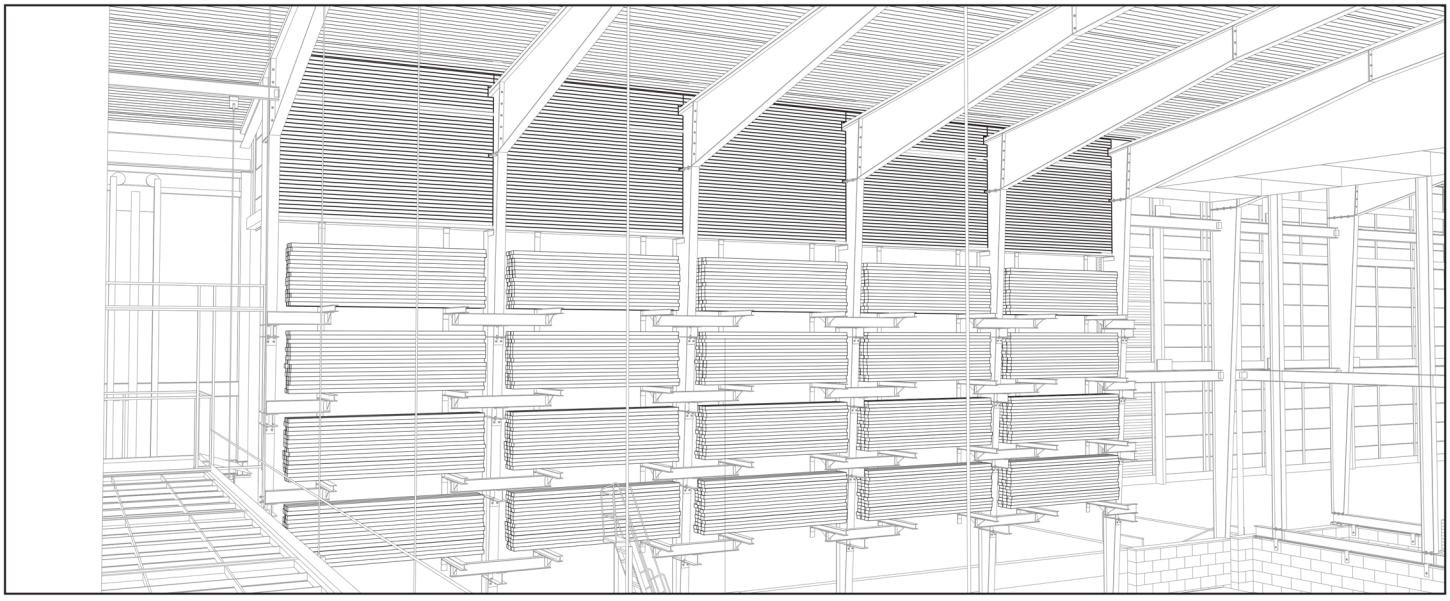






9

THE CHARACTER OF LIGHT



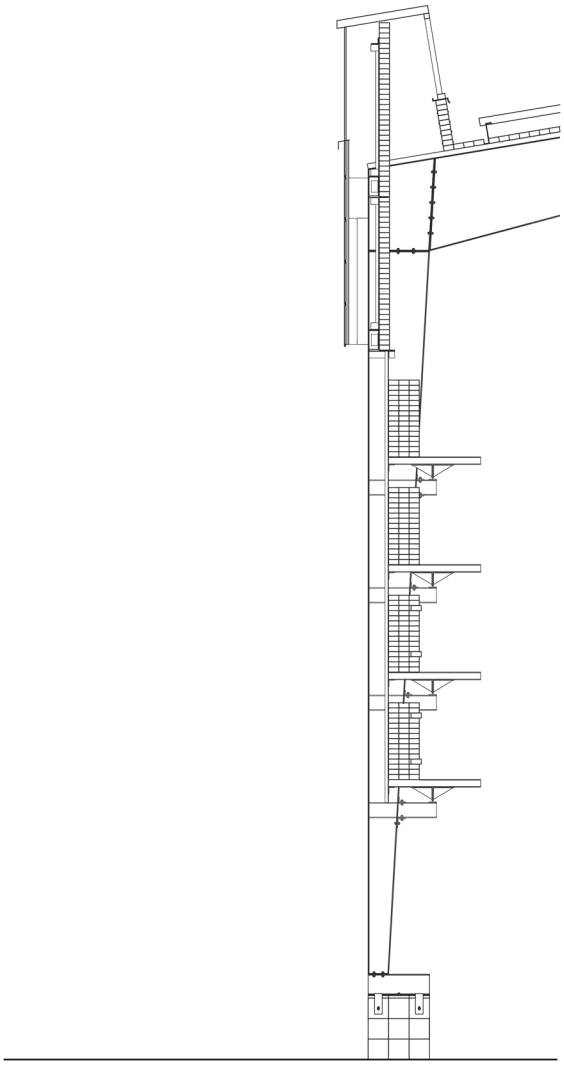
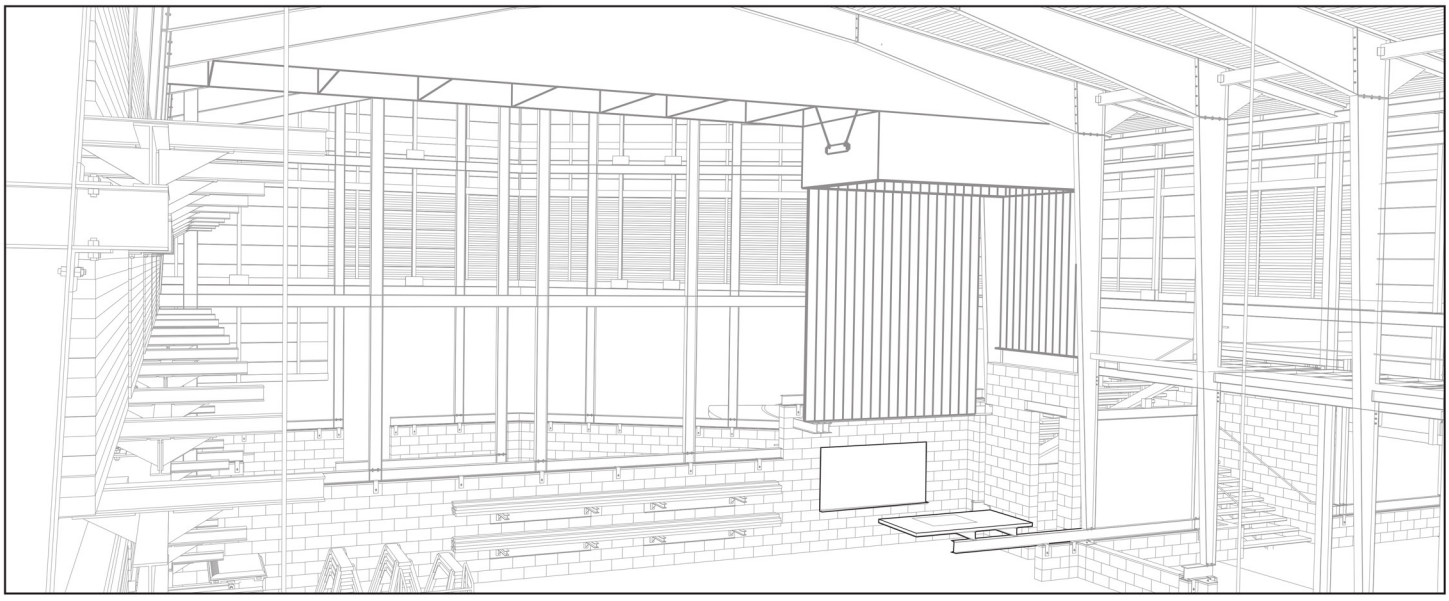


fig. 9 a



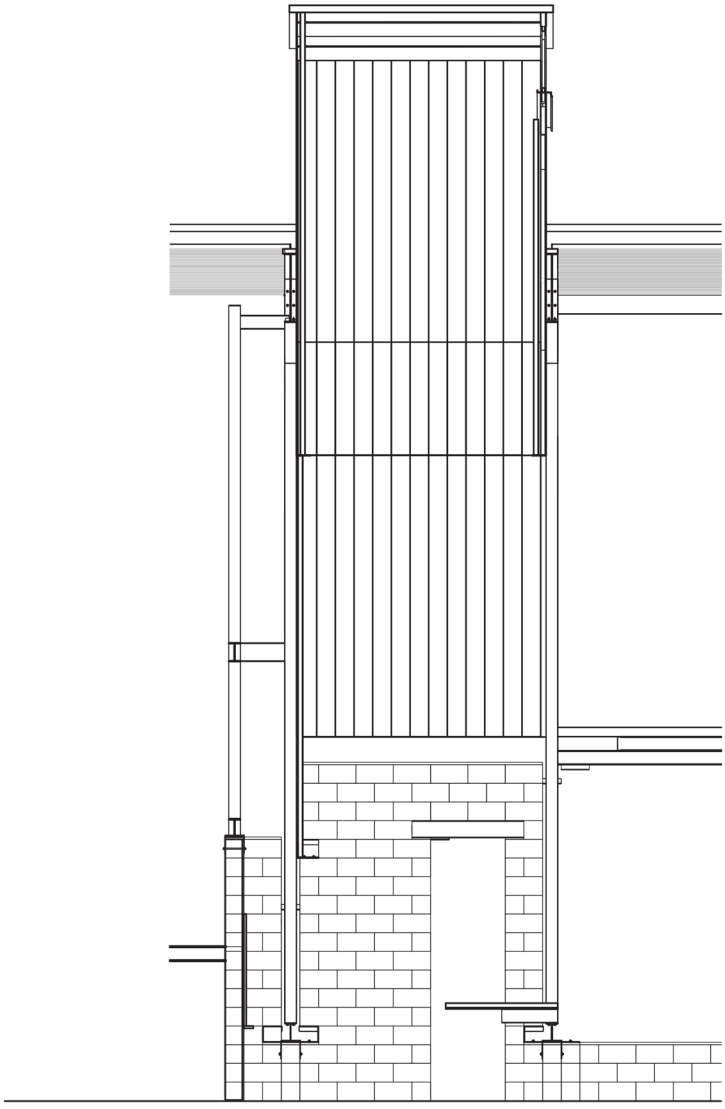


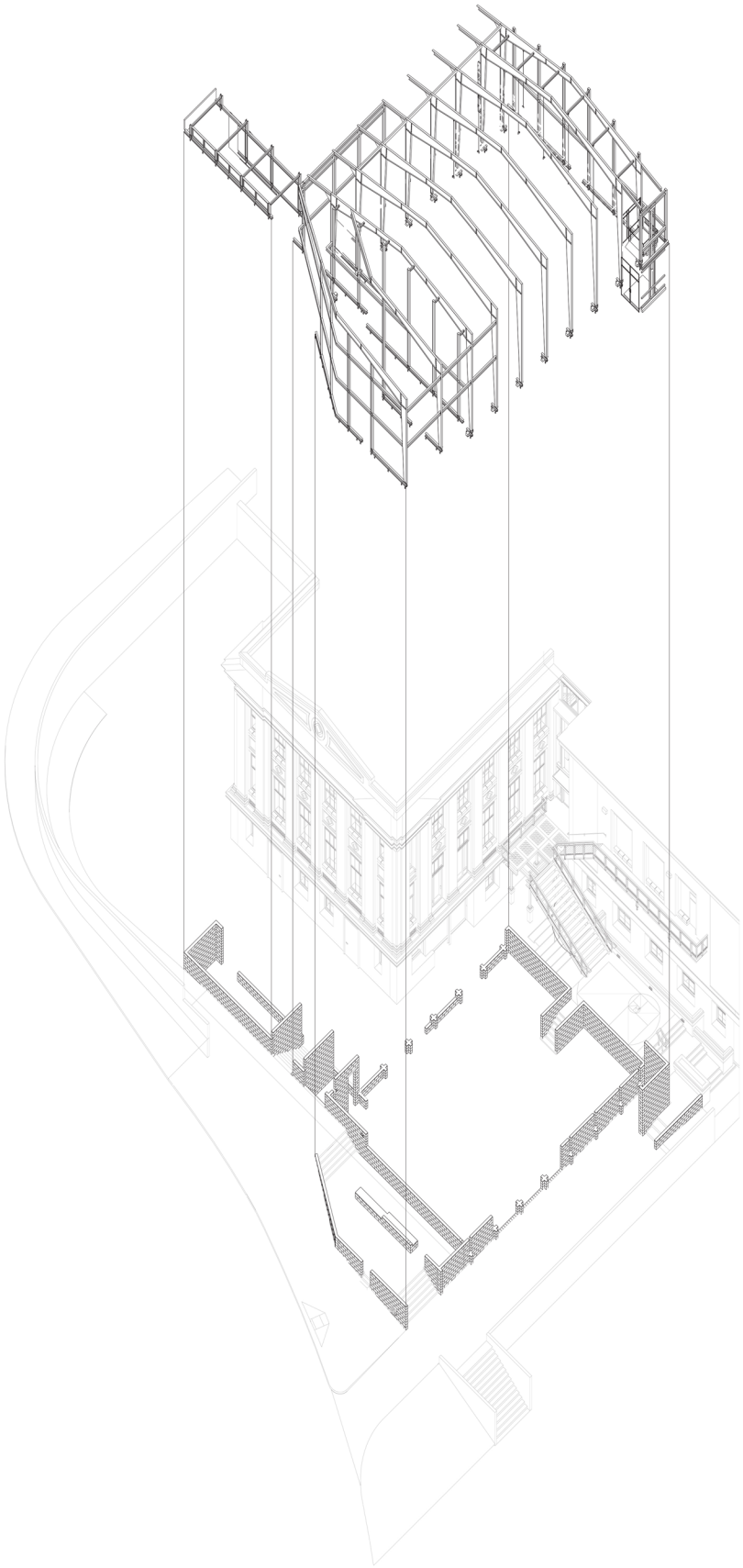
fig. 9 b

1 0

THE PERCEPTION OF WEIGHT

Project Application

To percieve the forces,
watch how gently the exposed steel frame
rests upon the walled mass that pushes the earth.



1 0

THE PERCEPTION OF WEIGHT

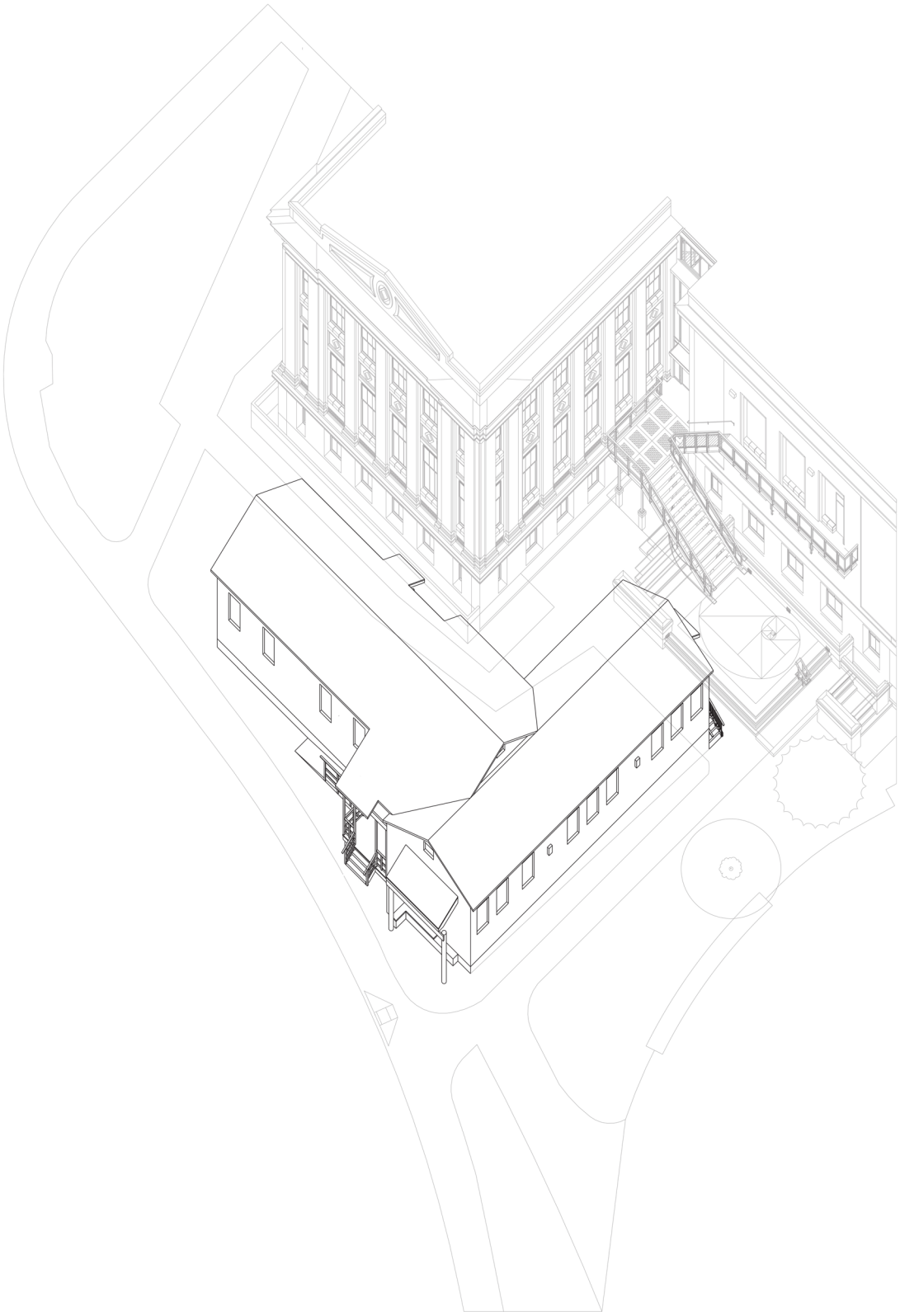
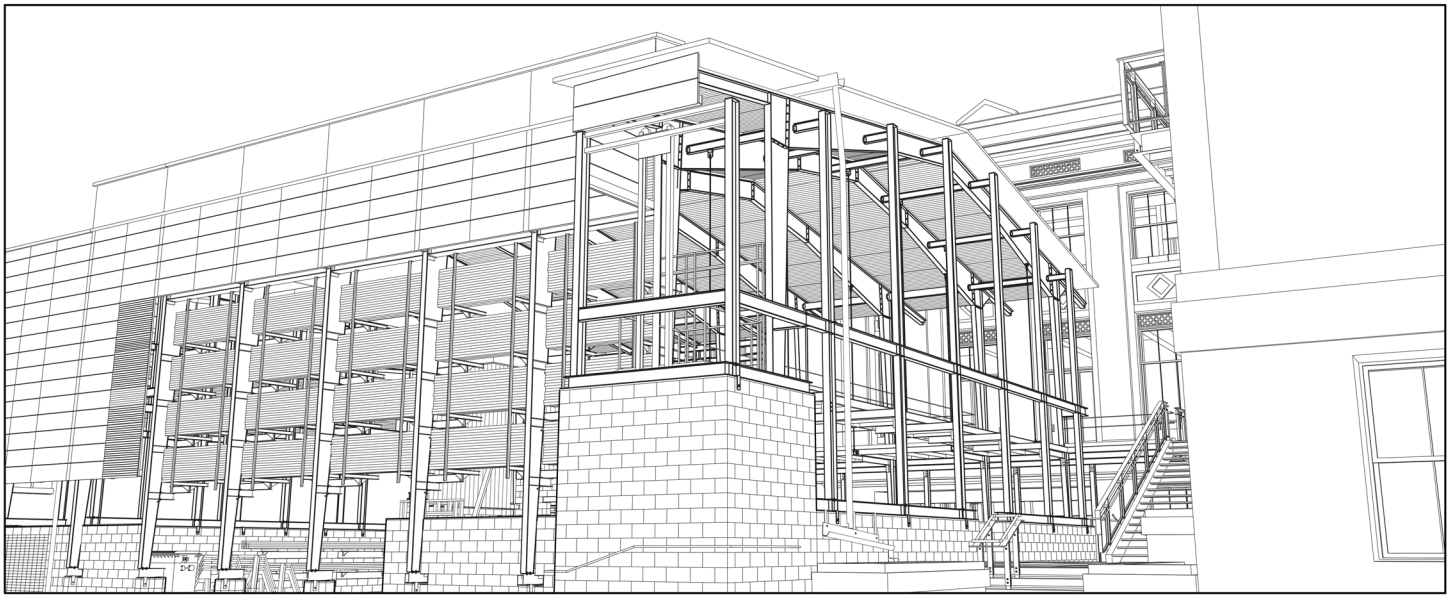


fig. 10a



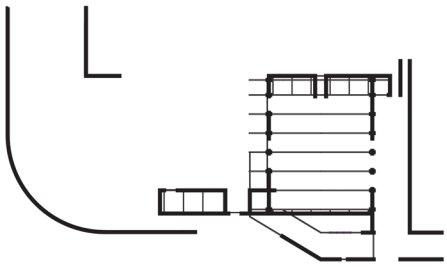


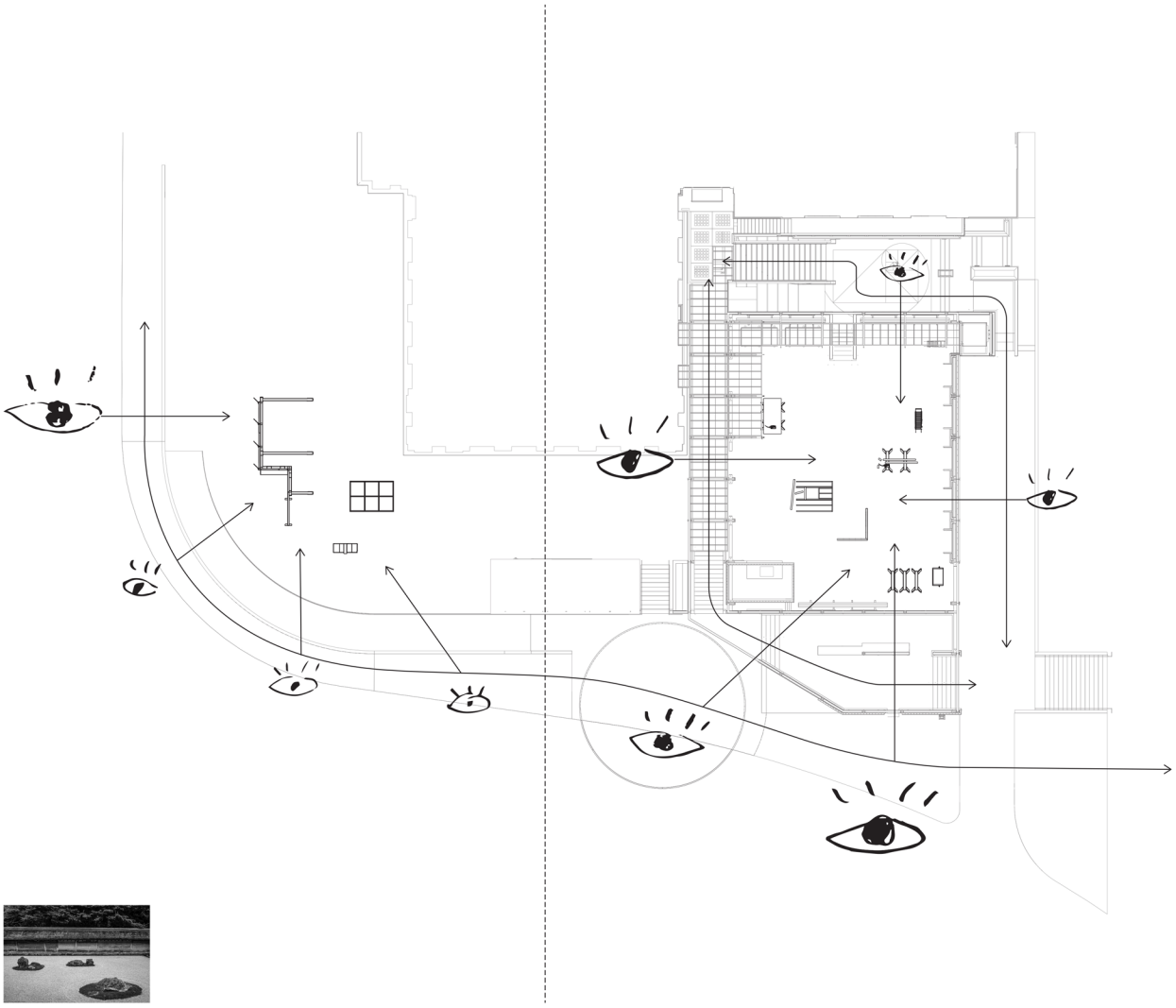
fig. 10b

1 1

THE SUBTLETY OF PROXIMITY & DISTANCE

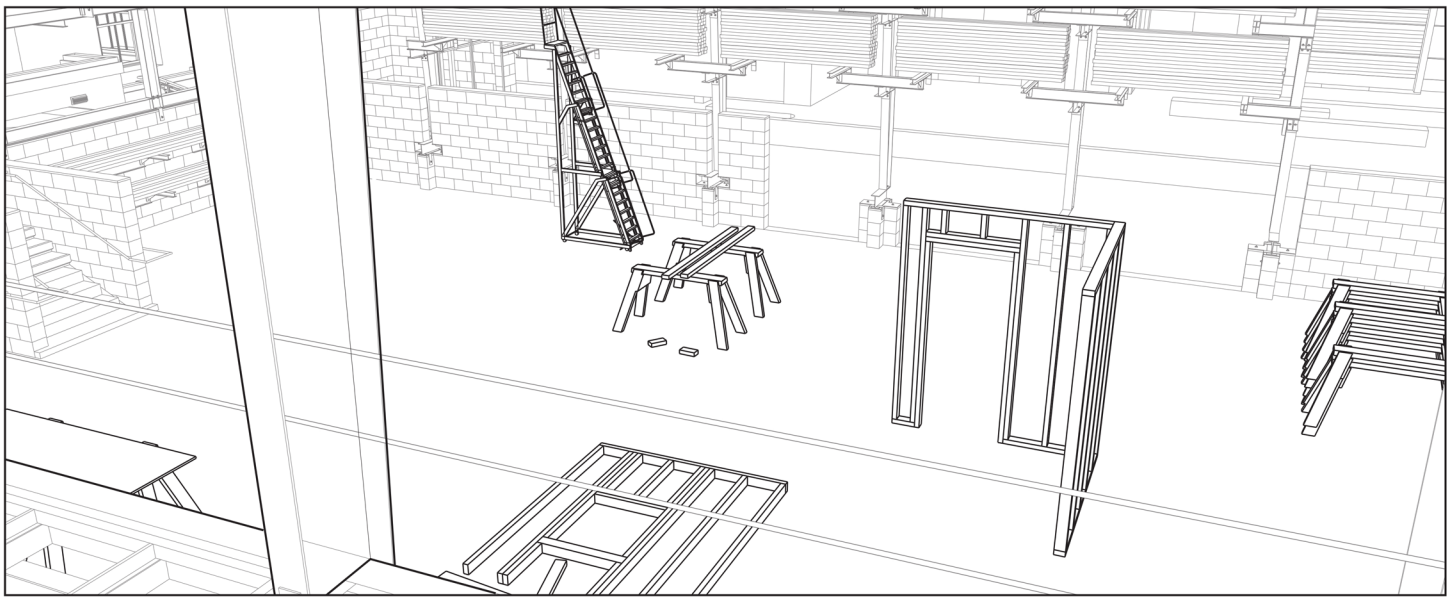
Project Application

The body is moving through space
but the eye is anchored,
a subtle dialogue between body and building.



11

THE SUBTLETY OF PROXIMITY & DISTANCE



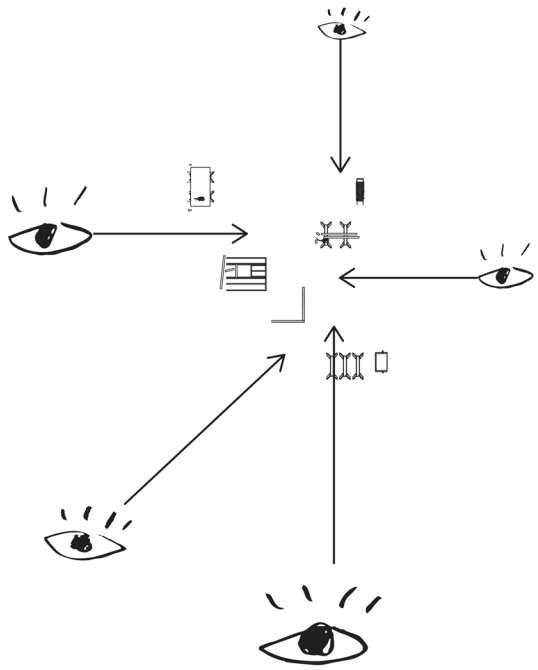
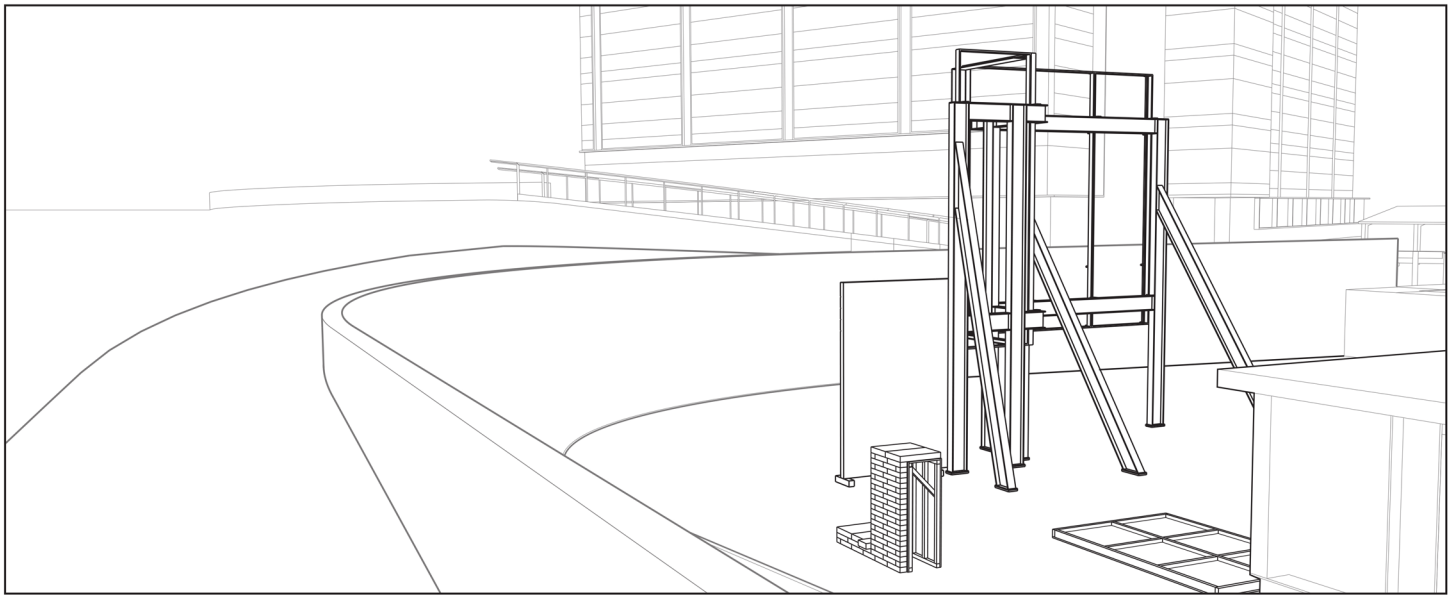


fig. 11a



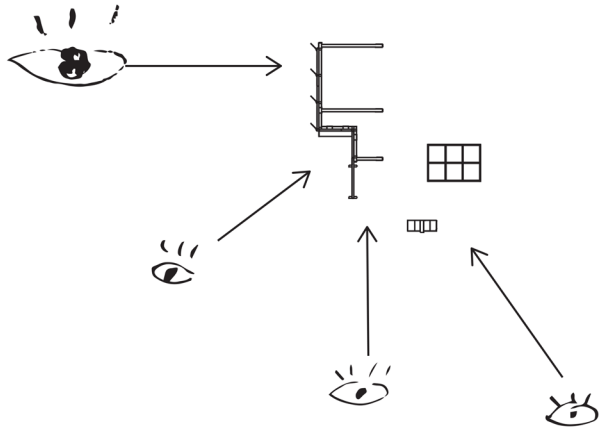


fig. 11b

The Final Design

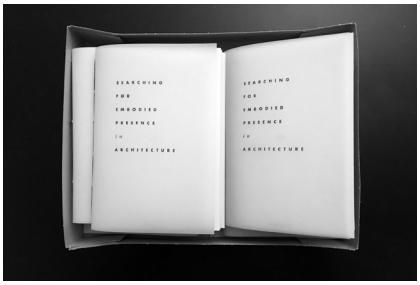
III. Thesis Presentation Photos

Photos by Marlon Cruz, Kate Simonen, and Guanzhou Ji.









Conclusion

Conclusion

I. Lessons Learned

Although I have described a set of principles that will help create a sense of presence in architecture, one important lesson I have learned is that you cannot build presence in a formulaic manner. The principles described here can be used, but to know how many principles should be used, and in what combination, is not the way to approach a feeling of presence, as doing so in this manner would most likely lead to superficiality. Instead, it is important to utilize the principles only in conjunction with the necessities of the program or function of a building. It is in this conjunction that presence will be made more meaningful and thus felt more powerfully.

The final lesson I have learned is that writing, drawing, and theorizing can only do so much in architecture. Ultimately, the only way to test these principles is to put them into practice in order to see for myself, through my own built work, whether these principles are true. It is in real work that these principles will truly be tested and, more importantly, reevaluated. Thus, as I begin my next step in the architecture profession, I take with me these principles as a living document to be constantly revisited over a lifetime of work. And as a consequence, and rightfully so, the search for presence continues. Perhaps in the future if you ever walk into one of my buildings you will know whether or not I got close.

Conclusion

II. The Meaning of Presence

Upon the completion of this thesis, I reflect on the word "presence" one last time for the meaning of the word has undoubtedly changed for me since the beginning of this journey.

Where I once believed presence was simply creating a sense of awareness in space, I now believe it to be rooted in something much more. I look back at the principles I have written, and I find the common thread among them to be their vital relationship to the human experience, that the success of each principle relies heavily on how well it considers the human physically and psychologically.

In essence, presence in architecture isn't simply the act of creating awareness, but it is rather the act of creating awareness *with a level of empathy towards others*. This is where presence in architecture begins. It starts from the architect's level of care and respect for his fellow humans to the point that he becomes consciously aware, at every design phase, how his decisions will affect the people who use his spaces.

Ultimately, finding presence in architecture is an act of generosity that requires a constant level of intention and consciousness on the part of the architect, and he must have the passion to care for his fellow humans in order for that presence to exist. Thus, I end my thesis with one final image, with the architect whose work put me on this journey years ago :

Sigurd Lewerentz, architect of St. Petri,
deciding where to place a single brick,
an act of intention and generosity towards
his fellow man.

Image: Sigurd Lewerentz with Brick at Markuskyrkan. Circa 1960.
Swedenmark, John. Parish of Skarpnack, "Markuskyrkan" Chapel Brochure.
(Stockholm: Ulla Ortberg, 2010), p.2.