BRENT NELSON

STRUCTURED LIVING

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By:

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Primary Thesis Advisor

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ABSTRACT

Architecture and its infrastructure act as a mediating tool defining the world around us by structuring experience. This thesis will define the consequence of building and how designers structure experience by opening and obscuring creating physical, intellectual, and even political boundaries. The vehical of the study is an addition to the iconic North Dakota State Capitol Building in Bismarck, North Dakota. The addition includes interpretive space at the base of the current structure aswell as new entry condition and vertical circulation. The new architecture questions how one makes additions to existing pieces of architecture and studies how the manipulation of paths and frames impacts the perception of space. The study also questions the issue of site and how architecture acts as both an object looked at, often from far distances as well as looked through, sculpting views of the surrounding horizon.

Key Words:
Seeing
Structured Experience
Framing

PROBLEM STATEMENT

How does Architecture and its infrastructure act as a mediating tool defining the world around us by structuring experience?

STATEMENT OF INTENT

Typology: Interpretive Center

Theoretical Premise / Unifying Idea:

Claim:
Intentions aside architecture and its infrastructure act as a lens opening and obscuring our environment sculpting our world-view.

Actor: architecture and its infrastructure
Action: sculpting
Object: our world view
Manner of Action:
Opening and obscuring

Premises
Our world view is an aggregate of where we have been that is sculpted by our memory and value of how we have been in those places.

As we navigate the environment the way we see and know the environment is manipulated by physical, intellectual, and even political boundaries.

Architecture and its infrastructure provide the means by which we are connected to and navigate our environment.

By opening and obscuring architecture frames our world-view providing orientation and establishing a hierarchy of understanding.

Unifying Idea
This thesis will explore the consequence of building and how designers can structure experience in ways that provide clear understanding of the environment in which we are part.

Project Justification:
As sculptors of experience design professionals bear the responsibility of connecting the public to their environment in a way that is safe, clear, ethical, and revealing.

PROPOSAL

NARRATIVE
USER / CLIENT DESCRIPTION
MAJOR PROJECT ELEMENTS
SITE INFORMATION - REGION
SITE INFORMATION - City
SITE INFORMATION - Site
PROJECT EMPHASIS
PREVIOUS STUDIO EXPERIENCE

Architecture and its infrastructure act as a mediating tool defining the world around us by structuring experience. Every wall we construct creates a frame opening and obscuring aspects of our surrounding by creating physical, intellectual, and even political boundaries.

I became interested in this thinking while traveling. A period in my life involving an intense observation of our physical existence and extensive use of varying navigational infrastructures. There was a particular moment in Switzerland that had a tremendous impact on how I see seeing that will impact my thesis and my future as a designer. I often find myself replaying the event in my head while eating diner or listening to music.

I weightlessly careen through the Swiss Alps the train gently rocking me it its arms humming a lullaby of gears and steel. I fight the temptation of slumber and boyishly peer across the landscape, a landscape on the verge of spring. Each blink I am weary of missing the moment when buds explode to leaves.

Without announcement the train left the valley piercing the mountains rocky facade speeding not on the landscape but through it. The space is a void free of floor and wall, only darkness. It gives no trace of the setting sun burning the sky to the west. No indication of the millions of tons of stone that idly sleep overhead. No hint of the vast vistas that lay on the top of the mountain, only darkness.

Ten breaths in the tunnel and the mountain disgorged the train surrendering it to the village that now lay a 4 second fall down the cliff. I see the road into the village dancing with the stream at the bottom of the valley. I wonder if the boys playing soccer had ever been on this train line and seen the village in the way I see it. The frame of the window. A study of every rooftop. The quick change in perspective as we fly around its perimeter, the slow encroachment of the western mountains shadow. I wonder if they see my train in ways that I cannot. Quickly disappearing and reappearing from behind the homes and trees, the rhythm of dark and glowing windows, the echo of the engines off the mountains, the way the bare branches of the trees and sun create zebra like lines on the trains side. A plane flies overhead offering a third perspective. A web of valleys brought forth by the glow of the villages that caste their beds. Green to the south and brown to the North. A gradient of a migrating season. The last vantage of the sun before it sails behind the horizon.

We all studied the same objects at the same moment but knew each in very different ways each very specific to the way the infrastructure allowed knowing. My knowing of the village was structured by the train and forever sculpted my memory of how it sits in that deep Alpine

Valley.

This experience made me aware of the extent that design has on our access to specific forms of knowledge. Such an experience makes me think back to other related experiences I have had in my youth. One spot sticks out above all the rest and that is the North Dakota State Capital Building. The 'Skyscraper of the Prairie', a moment of urbanity in a sea of grass, a tower of steel and stone confidently rising out the prairie overseeing its humble domain.

The Capital is held as an icon and hero in my hometown of Bismarck, North Dakota. A symbol of the peoples proud demeanor, simple lives, and unrelenting hard work. The building is more than a stack of offices it is a statue.

As a young boy I would gaze at the seemingly great height of the tower and often climbed its stairs to see the city. As I climbed the walls of the houses and the filter the tree's canopy melted away. I was no longer a product of the streets limits, I instead became the king of my kingdom. The houses to the south were swallowed by the thick cottonwood forest of the Missouri. Cathedral of Holy Spirit emerged out of the forest, a forest not created by river but by man. An island surrounded by the rolling grasses to the west and the fields of corn and sunflower to the east. It could all be seen. It was from that spot that I understood how I existed on this world

While the capital still offers the stunning view to the next generation of youth the building is paralysed by political regulation and public perception preventing the building from being seen in its true form. Due to safety concerns brought forth by the events of September 11, 2001 the front doors of the capital have been permanently locked allowing access only through secondary means.

An addition to the capital's mall, entry way, and navigation network will act as the testing grounds of how new architecture can mediate a reinterpretation of place and sculpt understanding of our environment.

USER / CLIENT DESCRIPTION

The proposed facility will be a new entry hall to the North Dakota State capital. The primary owner will be the government and citizens of the state of North Dakota.

The facility will serve an array of users accessing the capital for varying reasons. Every year over 15,000 visitors tour the state capital in either guided or self guided tours. (R.K. Berg, personal communication, October13, 2009) Politicians serving in the state legislature would also be primary users. State legislation occurs biannually from the beginning of January to beginning of May every odd year. The state legislature is comprised of 47 senators and 94 representatives. (North Dakota Legislative Branch, 2009) The building holds 1,712 full time state employees including the state governor and other keys state officials and swells to 1,967 durring legislative session. (R.K. Berg, personal communication, October13, 2009) All will use the facility on a regular basis. Another important user is those that demonstrate at the front door ensuring their voice is heard by politicians.

The Farrago of users is limited to nobody. As a public facility it will encounter the young, old, and disabled. Proper accessibility is a must for the diverse mix of users.

At present all the users parking needs are accounted for at various lots around the campus.

MAJOR PROJECT ELEMENTS

Entrance Hall

The Entrance hall will be the backbone of the design. It will be a structure that adequately transitions visitors from the outside to inside in a way that is safe, clear, accessible, and revealing. The hall will be host to various public events including exhibitions, celebrations, speeches, and general lounging.

Security

Security is the reason the existing entry way has been rendered unusable. Modern security measures will be implemented to ensure the safety of the staff and visitors in the capital.

Paths and Circulation

Interior and exterior circulation will be reexamined. Road and walkways approaching the building will be restructured to test design ideas.

Points of Observation

The observation level will be subject to alteration and expansion. Other points of observation will be established to inform users on various aspects of the building and surroundings.

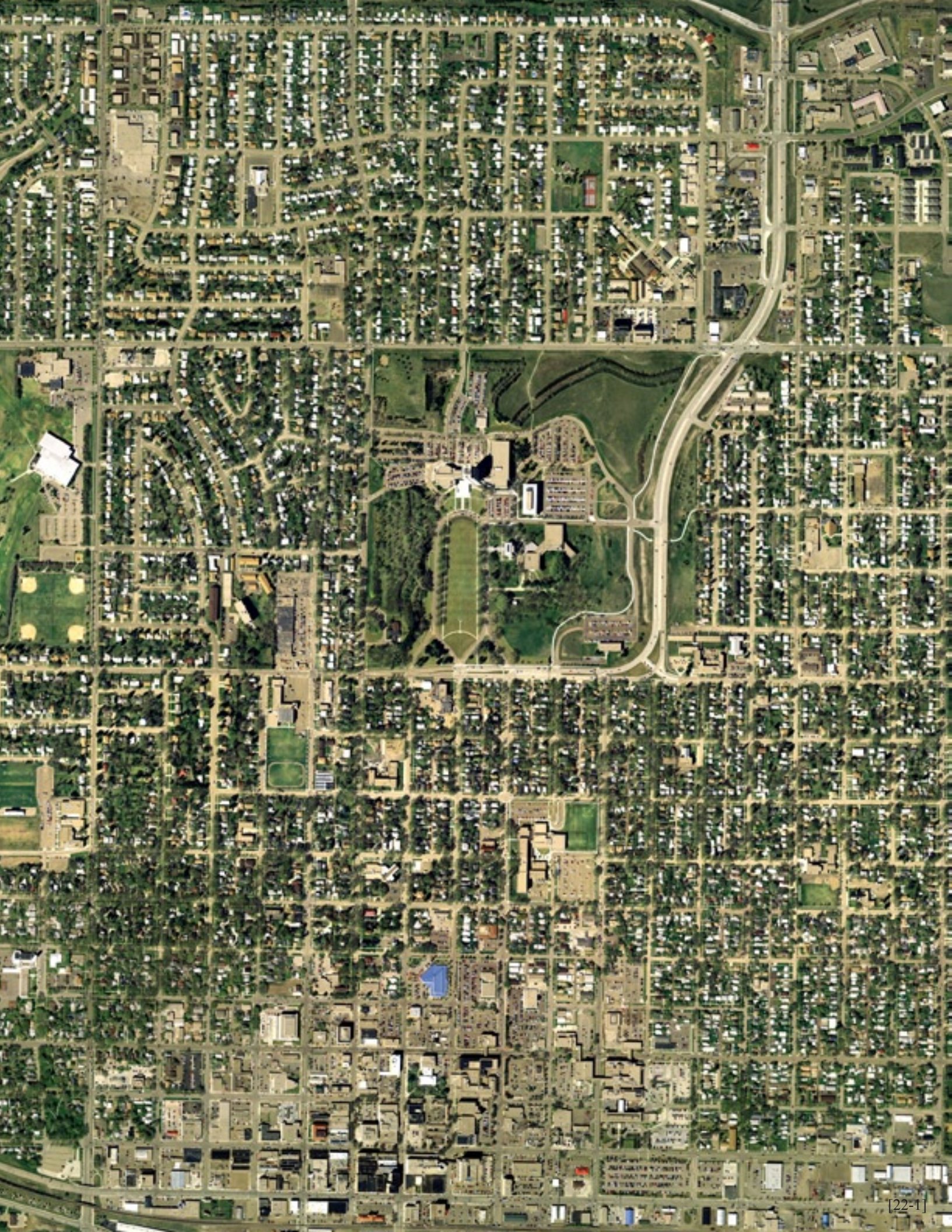

Regina, Saskatchewan
Winnipeg, Manitoba
Fargo, ND
Bismarck, ND
Billings, MT
Minneapolis, MN
Rapid City, SD
Omaha, NE
Denver, CO

SITE INFORMATION - REGION

The North Dakota State Capital resides in the city of Bismarck. Bismarck is cradled in the bluffs of the Missouri River in the heart of the American Great Plains. American novelist, John Steinbeck once described Bismarck stating, "Here is where the map should fold. Here is the boundary between East and West." (Steinbeck, 1961) Bismarck sits about the halfway point between the Great Lakes and Rocky Mountains with a marked difference between landscape and plant life when looking East or West.

The area is rich in history boasting many great American heros including Sacagawea, Sitting Bull, and General Custer. (SHG Resources, 2009) A proud Native American culture resides in the area as reflected in the many art galleries and pow-wow ceremonies held throughout the region.

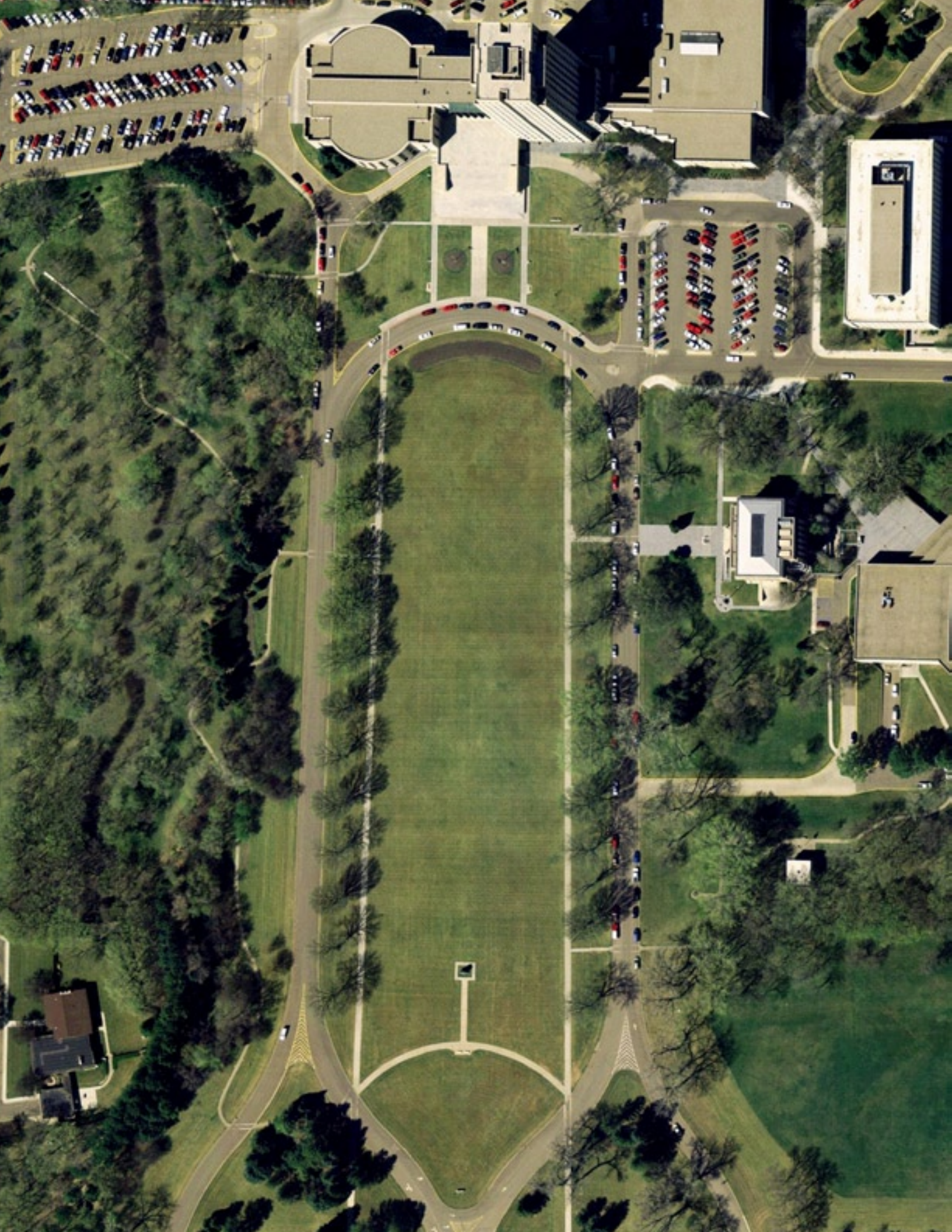
While agriculture has been the sculptor of the areas economy and culture the energy industry has been moving the area forward for the past 40 years



SITE INFORMATION - CITY

The Capital buildings sits in the middle of the state capital grounds, an urban oasis in the heart of Bismarck. The grounds measure approximately 1/2 mile by 1/2 mile and is about 3/4 miles north of the central business district. Primarily residential neighborhoods enclose the grounds with 4th Street running along the Western Edge, State Street to the East, Divide Avenue to the North and Boulevard Avenue to the South. Other facilities in the vicinity include the State Heritage Museum, State DOT, Veterans Memorial, and the Governor's Mansion.

Bismarck has a metropolitan population of 104,000 people and a retail trade area of 200,00+ people. The city acts as hub of culture, economics, medicine, and government for south central North Dakota, North Central South Dakota, and Eastern Montana. (Bismarck-Mandan Development Association, 2009) The city is served by I-94 running east and west and Highway 83 running north and south. Regional air service goes to Minneapolis MN, Chicago IL, Denver CO, Salt Lake City UT, Las Vegas NV, and Phoenix AZ. (Bismarck Airport, 2009)



SITE INFORMATION - Site

The State Capital building has a height of 241 feet 8 inches (Real ND, 2009) and sits at the North end of the Capital Mall. The Main entrance is just to the West of the office tower with a grand, granite stairway and large platform facing the South towards the mall and the prominent Huff Hills South of Bismarck. The tower sits in the middle of the facility with the legislative wing to the West and Judicial wing to the East. The structure is of steel and the sheathing of Indiana limestone. Other materials include glazing and brass.

This site is interesting in its vast variety of users and its position as an iconic piece of architecture that embodies the identity of a people. Its prominences in the public eye and its needs for a more clear entrance makes the site an ideal study of navigational infrastructure and physical and mental frames.

PROJECT EMPHASIS

The vehicle of the study will be an addition onto the North Dakota State Capital. The goal is to study how architecture can act as a tool to reveal qualities of an existing place by structuring experience. The focus will be to open and obscure aspects of the existing structure that are presently overlooked or unseeable; to sculpt understanding.

PLAN FOR PROCEEDING

Definition of Research Direction

The design process will involve the collecting of a great amount of qualitative and quantitative information. Such investigation will include, the theoretical premise / unifying idea, site analysis, historical context, and programmatic requirements.

Design Methodology

A complex study of architectural theory requires a variety of research methods to make the results credible and meaningful. A mixed quantitative/qualitative method with a concurrent /transformative stratagy will be implemented to compile and analyze information about the site, user, and architectural precedence . Case studies of similar typologies and relevance to my project will be evaluated to help shed light on project possibilities and to avoid past follies.
An intensive use of digital modeling will be utilized to organize data, pose questions, and visualise solutions.

The information acquired during the study will be presented in both text and graphical formats.

Documentation of Design Process

The archival of the design process will be a key to a smooth and successful design process. A general design sketchbook will by used for general note taking and sketching. Each week all the sketches, notes, and models will be digitized and organized in a file management system for easy access in later dates. A back-up hard drive will be used to protect information from being lost due to disk corruption. Also physical disks will be burned each week to further the prevention of information loss. The final presentation will take form of archival printed boards measuring at 24"x36" and physical model that is presentable as a projected presentation. A final, bound book will be produced that encompasses all phases of the design and research process.

PREVIOUS STUDIO EXPERIENCE

Second Year

Fall Semester 2005 - Vince Hatlen
- Moose Lodge Remodel - Fargo ND
- Teahouse - Moorhead MN
- Temporarily Blind Facility - Moorhead MN

Spring Semester 2006 - Mark Barnhouse
- Forest Home and Retreat - Detroit Lakes MN
- West Fargo Public Library - West Fargo ND
- C.I.D.I Research Facility - Fargo ND

Third Year

Fall Semester 2006 - Mohammed Diab
- Eco Home/Offices - Fargo ND
- Red River Art Center - Fargo ND
- Volvo Auto Showroom - Fargo ND

Spring Semester 2007 - Mike Christenson
- Fargo Skywalk Addition - Fargo ND

Fourth Year

Fall Semester 2007 - Regin Schwaen
- Downtown Winnipeg Masterplan - Winnipeg Canada

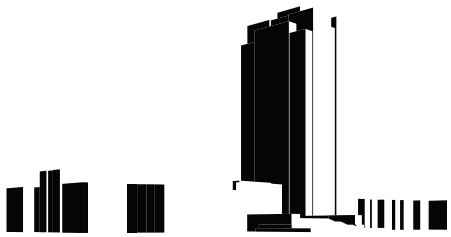
Spring Semester 2008 - Bakr Mourad Aly Ahmed
- San Francisco Highrise - San Francisco CA
- Marvin Windows Design Competition - Morton County ND

Fifth Year

Fall 2009 - Milton Yeargans
- Town & Gown Fargo - Fargo ND

PROGRAM

RESEARCH PERTAINING TO THE THEORETICAL PREMISE
CASE STUDY - REICHSTAG
CASE STUDY - LOUVRE
CASE STUDY - LÆRDALSTUNNELEN
CASE STUDY - SUMMARY
UNDERSTANDING THE SITE
SITE INFORMATION - City
SITE INFORMATION - Site
HISTORIC CONTEXT
PROGRAM
PROGRAM APPENDIX
SCHEDULE



AN INTERLUDE TO THE RESEARCH PERTAINING THE THEORETICAL PREMISE: A collection of unresolved inquiries

How does Architecture and its infrastructure act as a mediating tool defining the world around us by structuring experience? A question that is in itself difficult to navigate. The syntax does however open many smaller questions that may help coming to terms with what this statement is really inquiring.

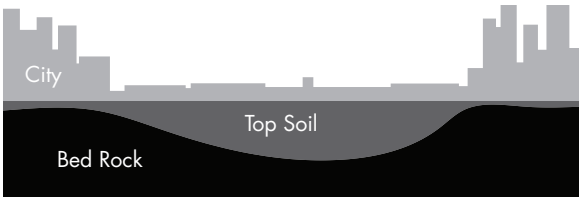
'Architecture and its infrastructure'. How does one define what entails infrastructure and in what way is it and architecture somehow intertwined to make the physical and mental makeup that we use to navigate our environment? By what means does infrastructure allow for architecture and what point does architecture fall into the realm of infrastructure. One can not answer such questions narrowly. A broad view must be explored to come to terms of what infrastructure is and how it fit into the scope of the original question at hand.

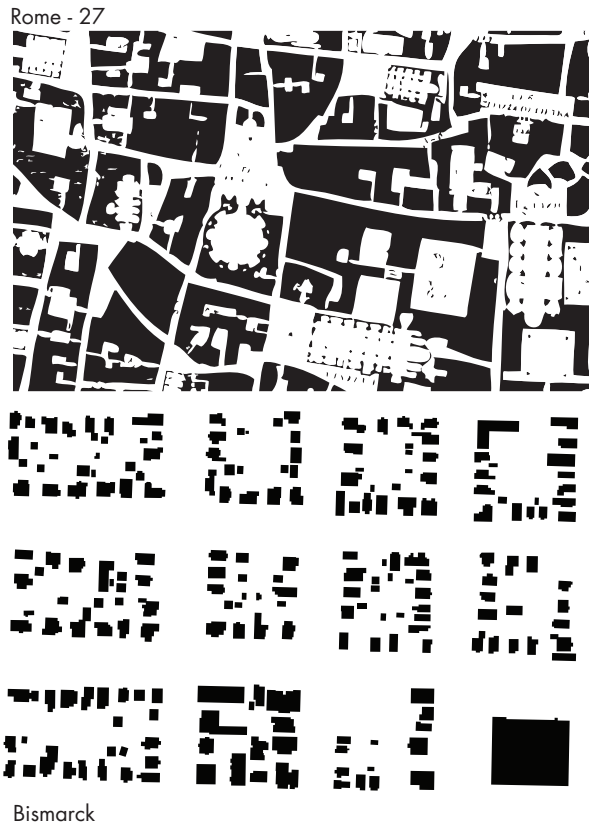
Ramification of the Physical Environment and Issues of Approach

The most immediate and easily understood form of infrastructure to discuss is that of a physical infrastructure. This discussion places architecture within a physical realm being acted upon by both man-made infrastructure and that of natural geography.

Geological properties often shape the way we shape our environment. An interesting case is that of the island of Manhattan. Thousands of years ago glaciers scraped the Island of Manhattan nearly to the bedrock providing an natural foundation lending itself to the possibilities of the development of high rise architecture. The downtown and uptown high rise districts of Manhattan developed in direct correlation of the geology. What these two districts share is a very shallow bedrock that easily supports the magnificent loads presented by high rise construction. The lower neighborhoods in between is a resultant of thick top soil making high rises more costly for construction. What is resulted is a manifestation of the geology, a mapping of the lands geological infrastructure. (Marshall, 2006)

While geographical formations often act as a sculptor of our cities politically designed systems also play a major role in the organization of the modern city. Cities sit on top of thousands of miles of various utilities





moving gas, electricity, water, waster, etc. in and out of structures to be accessed by people. These often times politically designed systems shape the way in which our cities grow affecting the kind of spaces created. The modern city is not the self-operating organism as were many cities of the past. Modern planning primarily concerns itself with the challenge of movement whether it is how many people can move through a fire exit to how many cars can move down the freeway, to how much water can move through the pipes. To establish these kinds of calculations the need to organize the landscape into parcels to aid in the planned distribution of public services. The product of such calculation result it places that we run into daily such as roads, freeways, parking lots, etc. But the resultant goes further in dictating how buildings relate and attach to the infrastructure enclosing our surroundings into seemingly organized but often unpredictable patterns. (Marshall, 2006)

The city on a grid, such as Bismarck, has proven to be an easily predictable and easy to grow but still lacks mental frames in itself to make a city legible or navigable.

Infrastructure as Framing

But what makes a city navigable? What is the consequence of the highrise distrcits of New York?

It is at these points in the city from which the highest vantages may be inhabited while it also defines itself by its visibility from neighborhoods miles away. American urban theorist Kevin Lynch would describe the visibility of important nodes as part of the cities legibility. The legibility of the city is "the ease with which its parts can be recognized and can be organized into coherent patterns." (Lynch,1960) Today we have many means of find our way through the city in ways of maps and street signs but they in themselves do not fulfil the emotional needs of orientation nor do they act as visible reference frames to connect and understand the layout of the environment.

Reference frames is not limited to a single point of reference, though often does as expressed later, but some form of continuity between the pieces of the network. Ground textures, facade treatments, building size, and other patterns all provide grounding for legibility and memory. (Werner, 2004) But from where do these pattern develop? The city is often thought of as a democratic collection of independently operating entities.

This is true but does not take into account the visual and spacial inter connectivity between such entities.

Architecture takes on two sides, the interior and exterior. Though such conclusions are overly simplified and hardly take an education in design to establish, the difference is in how the two function in seeing and is essential to the understanding of how architecture acts as infrastructure. The idea was presented as being a difference between interior and exterior or private and public but maybe more useful in describing the difference as being the seeable and unseeable.

To say public or exterior is only to imply that it is capable of being seen from a public vantage but it not yet realized as public until the proper infrastructure is established to allow seeing. The Reichstag in central Berlin shows how architecture can act as a frame revealing the city making the otherwise unseen into a public domain. The glass cupola rises high above the threshold of the city simultaneously allowing views to roofs of neighboring buildings, distant districts, and into the Parliamentary Chamber above which it sits. From this point relationships of components within the city can be easily established. While a building like Reichstag is valuable in what it allows us to see to it also has value what where you can see it from.

Large, modern cities often rely on the public viewing of the city center's skyscrapers as a means of navigating to the city. Education in architecture often stresses the experience of the user of the building but fails in really establishing the user and how the building is being used. In the case of a skyscraper there are at least two kinds of users: Those that use the building directly, inhabiting within its structure and those that use it in a less direct way.

Much in the same way Devil's Tower guided local tribes across the great plains the Hancock Tower in Boston acts as a navigational tool to the citizens and visitors to the area. Looking back to how we focus our definition user, Great American Architect Meis Van der Rohe heavily investigated the way in which we move from public spaces into private interior spaces. A reoccurring theme of plinth, a highly permeable transition between the two realms was applied to help connect the people of the street to the buildings. While such investigations are relevant to the life as a structure inhabitants in fails at looking at how the building is used by its most numerous users, those that only see the building from afar.

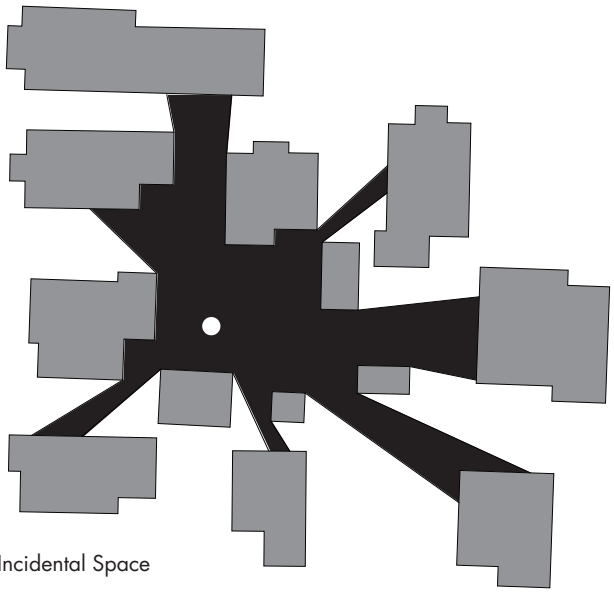
In the case of the Hancock

Tower thousands of toursist use it as a target point to get downtown but never actually visit the base. The Hancock Tower is valuable to the city of Boston not just as a center of commerce but in that it makes the city legible. (Lynch, 1960)

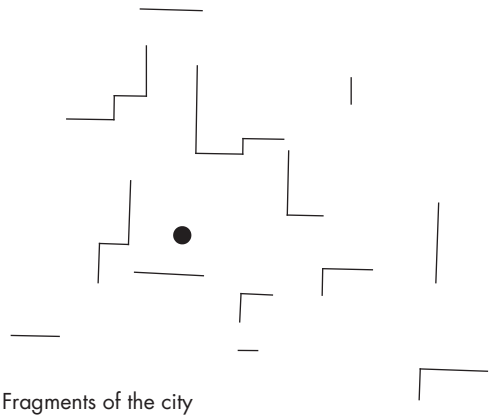
The City as Architecture, Architecture as the City, and Concepts of Incidental Relationships

It has been described how cities and its architecture have been informed by physical regulation but what is the ramification of such development and what role does individual architecture play as a piece in the system that is the city?

Aldo Rossi perhaps provides a good starting point to help relate what architecture is to the city. In an essay explaining the relationship between the city and the architecture that comprises it he stated, "the city is considered as a spatial structure, an artifact, a work of architecture which grows in time'. (Rossi, 1984) The city as an artifact implies oneness of a city, a system made up of layers of history and development but at any one moment is complete. Architecture cannot be viewed in a vacuum as we are in contestant interaction with other moments of architecture whether we are looking to a particular building from a place or seeing a particular place from the building. Often times architecture is treated as something different or separate from the city but that is to deny much of its existence. When architecture is created it has inevitable relationship to other



Incidental Space



Fragments of the city

"artifacts" in the system. (Rossi, 1984) The consequence of such relationships results in a mass of incidental space within the city. It is easiest to describe incidental space with the use of isovist diagrams mapping the extent of our site from a particular place. (Batty, 2000)

What is found is that our vision is not limited to the walls of an individual piece of architecture nor is it capable of perceiving a large amount of the architecture from any one point. Rather, our perceptive space is a conglomeration of many fragments of architecture all bound together by the confines of our ability to see.

So if the city is but one giant "urban artifact" (Rossi, 1984) then how does one negotiate amongst its pieces to create new architecture? How does the city become a platform for growth and reinterpretation?

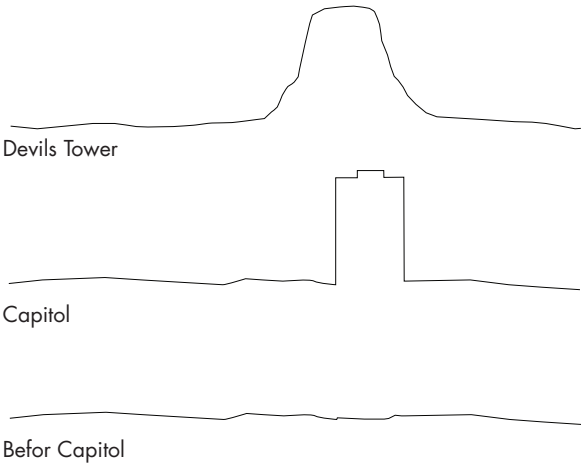
Mythopoetics and Mental Infrastructures

Being a high profile structure the North Dakota State Capitol finds itself topic of many conversations for travelers and locals alike. The reaction is usually of surprise and often times lacking in enthusiasm. Though it certainly is not a universal outlook the North Dakota State Capitol is often compared to common commercial structures typical of those that may be found in downtown Chicago. A surely unsuitable 'style' for a state capitol.

The argument is steeped in fact. The North Dakota State Capitol was designed by Holibard and Root, prominent pair of Chicago architects with a vast resume of commercial construction. The details were similar to that of other projects they had designed and in the final actually less decorated than many of there other buildings. While this is all true it does not expose truth.

For thousands of years people relied on myth as a primary form of knowledge to help understand how they themselves fit into their surroundings. (Heidegger, M.,1977)

It does not take long to find analogies that suggest the life of the capitol building to that of many



local Native American Myth. The capitol building holds many physical characteristics of the butte land forms that litter the West River (West of the Missouri River) landscape. Devils Tower of Northeast Wyoming , like the capitol, rises high above the Wyoming plains making itself visible for nearly 100 miles in each direction. Its power is its stone walls juxtaposition to the softly undulating hills that engulf it. The pillar of stone was significant to the tribes as a way finding devise while also holding great spiritual significances. Myth describes how the land from stood up lifting a group of hunters away from the harm of a ravenous, giant bear. The bear, desperate for a meal clawed at the giant rock scaring its faces. The myth tells a story of the landform describing how it came to be, not through understanding ancient volcanic activity, but through processes that they understand through their own body.

Jorn Utzon, famed architect of the Sydney Opera House, shared an appreciation for how such momentous objects opens a world to people. While traveling the ancient Mayan ruins of Central America he was struck by the power of the great pyramids and how they acted as a tool to help people understand how they fit in the world. He explained the phenomena stating "By introducing the platform with its level at the same height as the jungle top, these people had suddenly obtained a new dimension of life, worthy of their devotion to their Gods. On these high platforms–many of them as long as 100 metres–they built their temples. They had from here the sky, the clouds and the breeze, and suddenly the jungle roof had been converted into a great open plain. By this architectural trick they had completely changed the landscape and supplied their visual life with a greatness corresponding to the greatness of their Gods." (Utzon,1962) What Utzon described is a true opening an understanding of the world through the architecture.

Though the past century has seen an increasing reliance on pure science to understand our surroundings some of the deep mythopoetic emotions resonate within people. Kevin Lych in Image of the City described the importance of such prominent points in a more modern context. Landmarks, as he refers to them, are key in the navigability of a city providing both orientation to people while also making a place memorable. (Lynch, 1960) Though not always that case the North Dakota State Capitol is memorable to the city because of its dramatic vertical juxtaposition to the otherwise consistent horizon. Surly such a structure would

not have the same impressions if it were another building in downtown Chicago as the critics have suggested. The structure is not significant only in its formal characteristics, 240 feet tall, limestone facade, art deco detailing, but because of how it sits on the site or in Heideggerian terms creates a 'location'. (Heidegger, M.,1977)

To create of location is to gather or assemble. Humanity comes into bearing with their surroundings, how we dwell, through what Heidegger explains as the 'fourfold': the earth, sky, divinities, and mortals. We dwell through gathering the fourfold in essence by building.

In terms of the North Dakota State Capitol it establishes a location in a way that is different from that of other contexts. It gathers they ground and sky in how it penetrates the horizon and caste shadow from the sun of the sky onto the ground. It gathers the materials of the earth and projects them high bring the space and all sides of it out of idle and giving direction and orientation. It is not rock as rock that makes Devils Tower spiritual. It is the gathering of the world and how it connects and orients our body within space. (Heidegger, M.,1977)

The Other Lives of Architecture: Media as Infrastructure

It was suggested before that a new realm of Architecture has developed over the past 150 years with the growth of mass media. Beatrix Colomina, Assistant Professor in the Department of Architecture at Princeton University engrossed with thsi issue exploring exactly what it means to be a piece of modern architecture in the Twenty First Century. (Colomina, 1996)

"Modern architecture only becomes modern with its engagement with the media." (Colomina, 1996)
An intriguing outlook when acts of modern architecture is typically described as Avant-Guard or counter culture. Architecture and art is finding itself engaged in a new site with the growth of photo document ion and reliance on mass media for information. This is the first time in history when our primary way of learning about architecture is through printed media from newspapers, periodical, cinema, et cetera and not direct experience. The result is not a comparison of what way of knowing architecture is more relevant in current culture only that it is different. It brings back into question between aspects of private or public and what is seeable or unseeable. The popularization of photography and the limitless access people have to media

with internet publication is reshaping between public and private space.

Colombina, like Rossi, discusses the importance of time and history to understanding the existence of architecture. But in what way does the physical composition of the city speak differently than that of the media archive? When one Google searches 'North Dakota State Capitol' one encounters throngs of documents depicting the structure most all from the same spot. Does this suggest an new importance of photographability in architecture. Le Corbusier suggested that the "the true museum is one that contains everything." (Colomina, 1996) of course to physically contain "everything" would be the world itself. Colimina suggests that to contain everything is to create an architecture that can explain something about contemporary society to future generations. (Colomina, 1996)

Media unlike architecture has a certain archival property that makes it different from how the city archives history. (Colomina, 1996) Looking through the throngs of capitol photographs one finds images from throughout history, even prehistory of the capitol. Since its completion in 1934 the capitol building has seen many changes and a major addition but its original condition is forever captured by the photos and drawings of the original facility. These drawing found throughout history have a way to be separated and re layered in ways the physical architecture can not. But if a site of architecture moves into the realm of mass media how can other documents such as unbuilt plans be used along side photo documentation to help inform new architecture?

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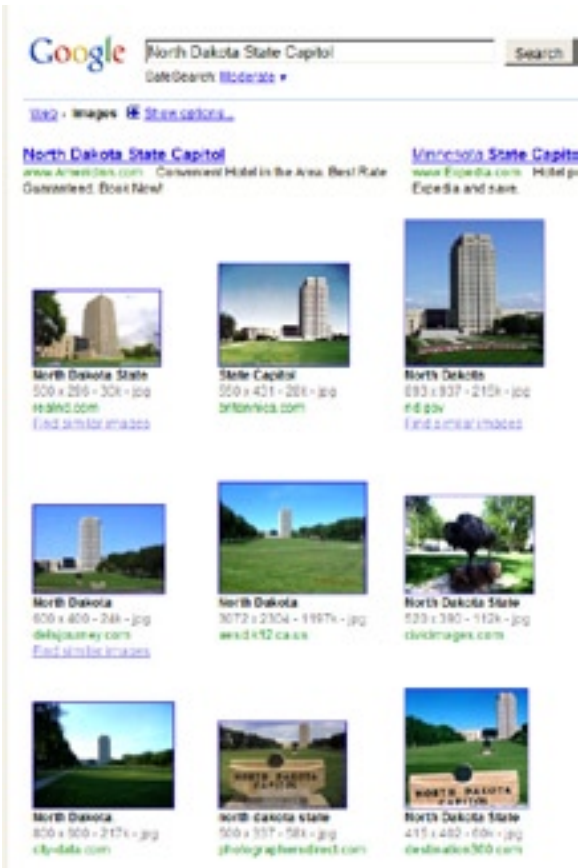

To ask a question such as 'How does Architecture and its infrastructure act as a mediating tool defining the world around us by structuring experience?' comes with many smaller questions concerning the syntax. The real question is how does one define what constitutes as infrastructure?

Infrastructure comes in many forms one of the obvious being in the form of the physical Infrastructure. Cities naturally adhere to the landscapes topography, soil types, and climate. But politics also pose their own physical limitations imposing regulations of property ownership and an intricate system of transportations systems moving people, electricity, water, gas, and waste. (Marshall, 2006)

Such development due to physical restrictions has its own ramifications. Cities act as frames helping people gain orientation to their surroundings and communicating form and order that helps people navigate their environment. Kevin Lynch describes this ability to be navigated legibility. Many features add to the cities legibility including landmarks, nodes, edges, and paths. (Lynch, 1960)

Architecture is often seen as something different from the city as whole as if thought of as being in a vacuum. The study of isovist drawings show us that such separation is not

possible and that architecture is but a part of a fluid "urban artifact". Only fragments of a building are every visible at a particular moment and always in direct spacial connection with other artifacts within the city. These spacial relationships form what can be described as incidental space: that is unplanned space formed as a consequence of building within a defined system. (Rossi, 1984)

But there is still other ways of understanding our relationship our surroundings. Ancient peoples relied on Mythopoetics to come to terms with the landforms and other natural phenomenon they had witnessed. This form of knowledge is always explained through events that can be understood through the body in forms of metaphor. (Heidegger, M.,1977)

Beatriz Colomina describes a new kind of site that is finding an increasingly high relevance to our culture. Architecture and art for the first time in history is understood and studied most often through forms of mass media rather than direct experience. This is not to say that direct experience is some how inferior to media nor vise versa. Simply that it is a new and different way of understand the buildings in which we work and live. (Colomina, 1996)


DEM DEUTSCHEN VOLKE

CASE STUDY - REICHSTAG

Project: Reichstag National Assembly

Designer: Sir Norman Foster

Client: Germany National Government

Function : Government

Location: Berlin, Germany

Year Completed: 1996

The Reichstag (Imperial Diet) has a place in modern history unlike many other places on earth. Since its construction in 1884 the Reichstag has been in the center domestic and international conflict including Two World Wars and the Cold War. (Schultz,2000) In that time the structure has fought symbols of imperial oppression, national socialist injustice, racial conflict, and division. After 112 years of tumultuous history the Reichstag with an addition by Norman Foster has immerged as a symbol of governmental transparency and has become an integral part in building the German national pride. Today the Reichstag has become

the backdrop for many of the largest public gatherings in Berlin and all of Germany including concerts, festivals, and public protest.

The lead designer, Norman Foster, explained the design concept as being "rooted in four interconnected issues. The significance of the brundestag as one of the worlds great democratic forums, a determination to make parliament more accessible to the public, a passionate commitment to producing an exemplary low-energy, environmentally friendly building, and to respect for history as a force that shapes buildings as well as the life of nations." (Schultz,2000) When Norman Foster refers to the buildings history it is no small statement. Despite its relatively young age the Reichstag is steeped in a deep and often cruel history.

In 1933 just Forty-Nine years after its construction the entire structure was engulfed by flame gutting the interior leaving only the shell while also making Germany fragile to the rise of the Nazi Party. Twelve years later the Reichstag had its second blow when the city was bombarded by Soviet missiles. The building was again devoured by flame leaving the iconic dome as a collapsing skeleton. The site stood in decimation for another Fifteen years before steps were taken to revitalize the shambles but was never utilized as a center of government until the fall of the Berlin Wall. (Schultz,2000)

Only days after the fall of the wall the Reichstag became the symbolic staging grounds for the reunification of Germany. A competition was established to give a new vision to the Reichstag and after years of deliberation Norman Foster was on stage to establish the course of the young nations political image.

What Foster created was a literal and figurative beacon and a reexamination of how people approach, navigate, and interact with the governmental center. One of Foster's initial impressions of the structure was its sever stratification, compartmentalization, and lack of natural light in its chambers. His solution was to "gouge" (Schultz,2000) through the floor plates allowing both views and natural light to flood deep into the heart of the structure. The floor fenestrations are capped by glass domed designed as beacon of light for the city, a public observation platform, and a viewing grounds of German policy making. The layout is cleverly organized dividing the building into private and public areas while maintaining visual connection between the two.

Upon entering the facility the public is invited up the elevator to the top of the cupola. From there the path leads the visitor up a spiral ramp giving a constantly shifting panoramic view over the top of the surrounding buildings allowing the visitors to see the horizon in

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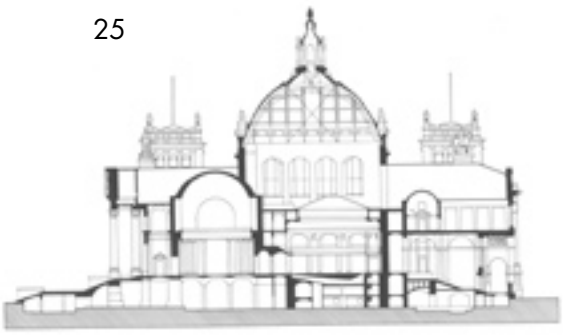
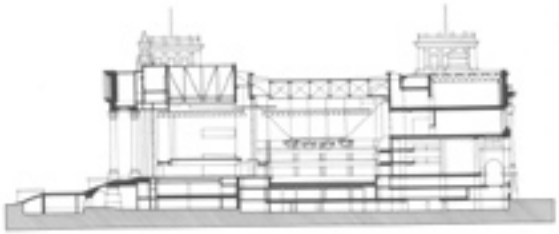
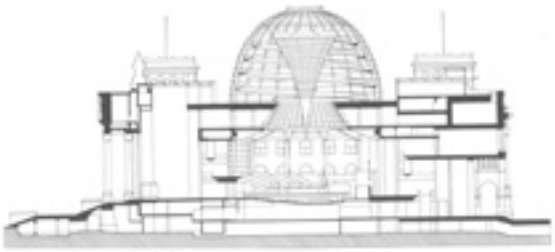


1894



1971



1999

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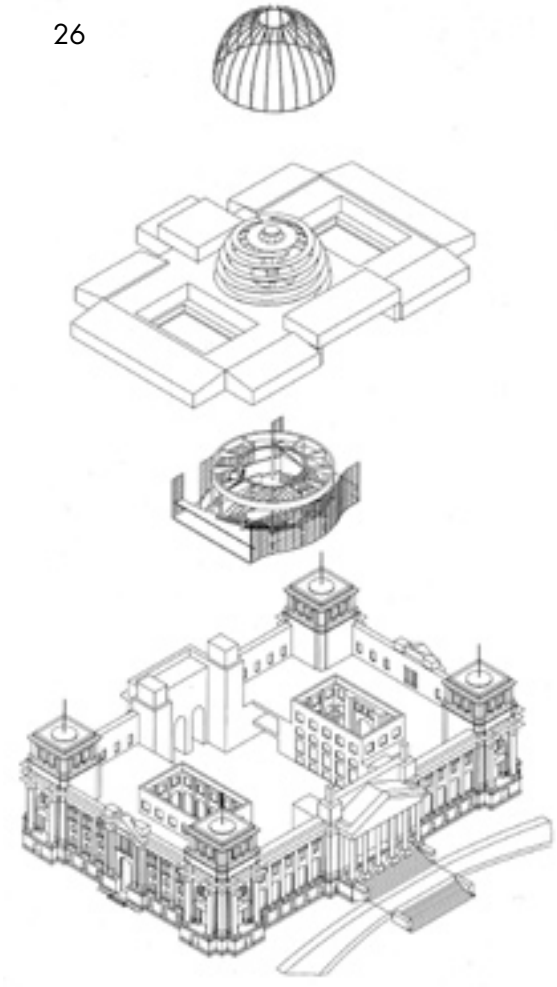
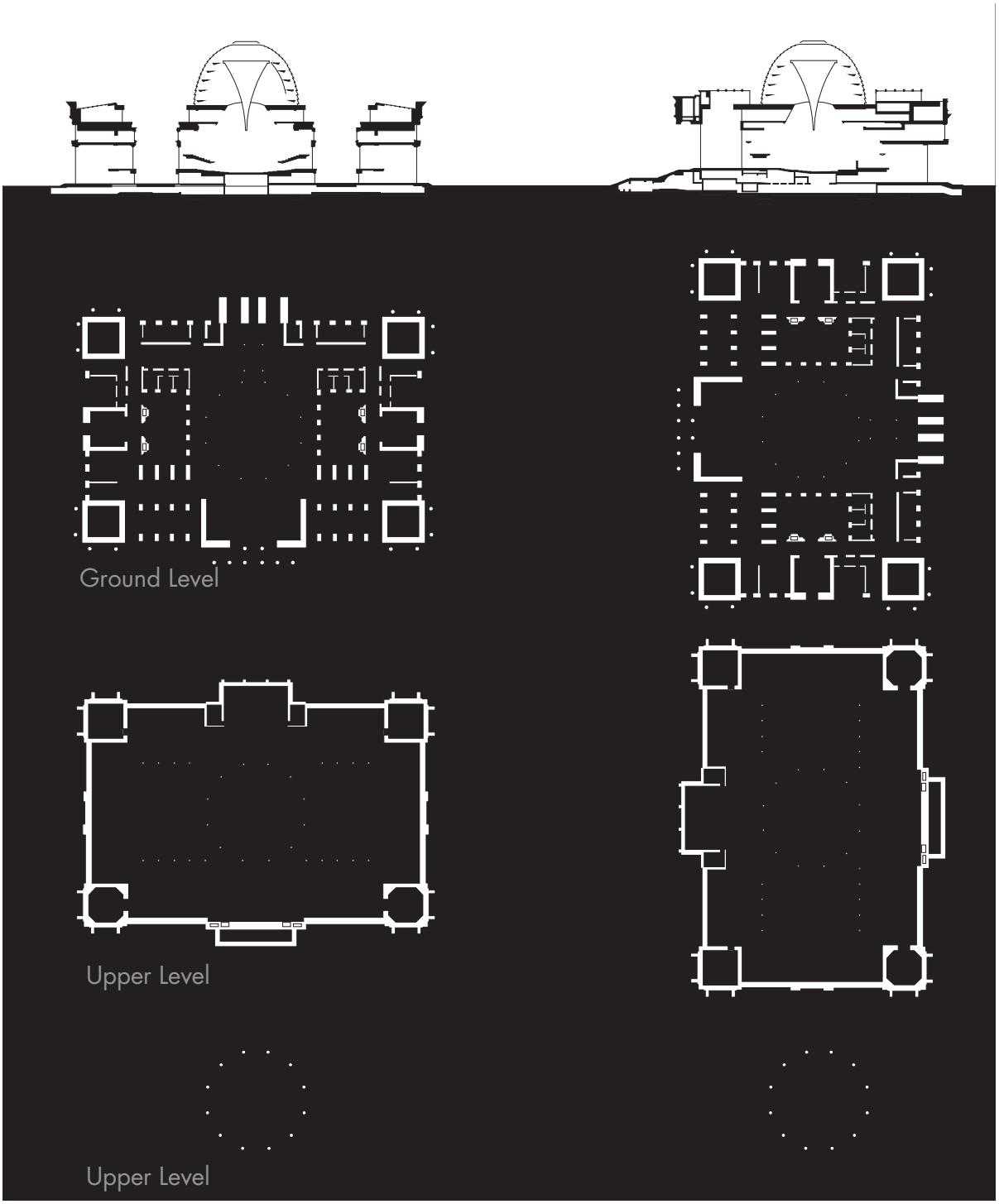


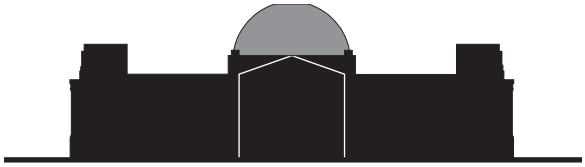
all directions. The walkway offers both views of the Reichstag's domain it also provides a birds eye glimpse into the central parliament chamber.

The way Foster approached the facility as a place of governmental and public interaction has shifted how the world views public architecture. Its iconic dome has shifted the way architects and the public regard architectural additions and has become the classic case for how navigational infrastructure can change the identity of a building and a nation.

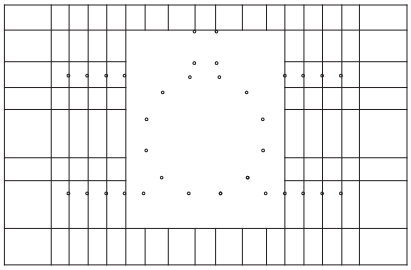
SECTION TO PLAN



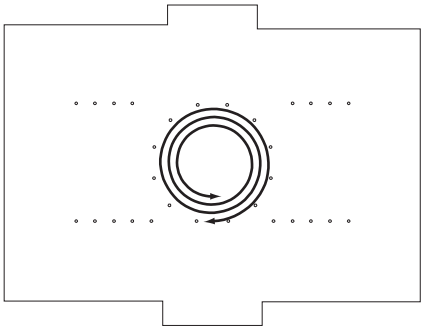
ANALYSIS



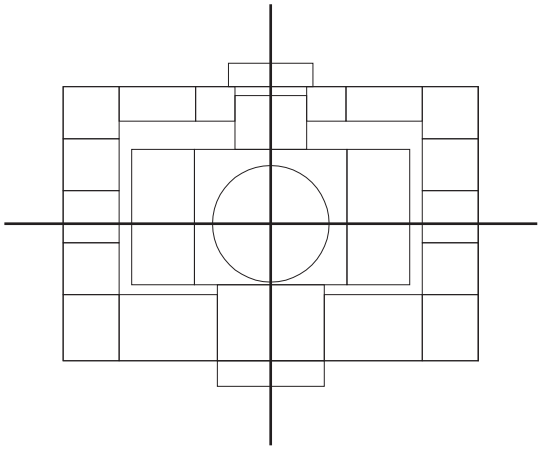
Massing



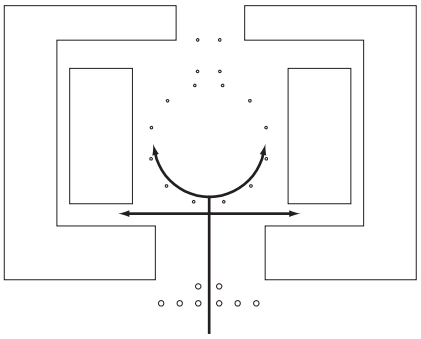
Structural Grid



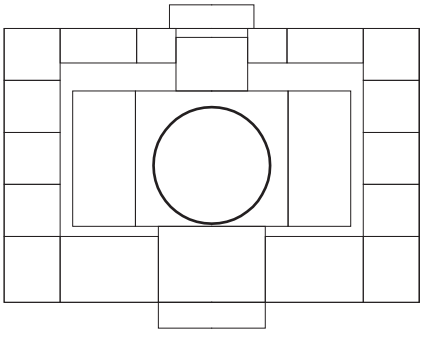
Circulation



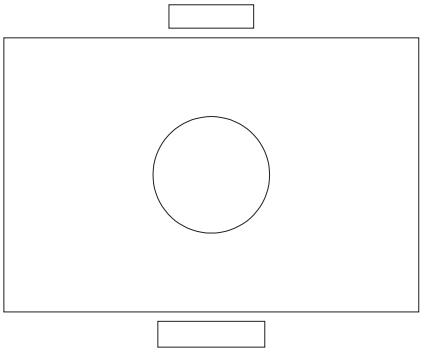
Symmetry & Balance



Circulation



Repetition to Unique



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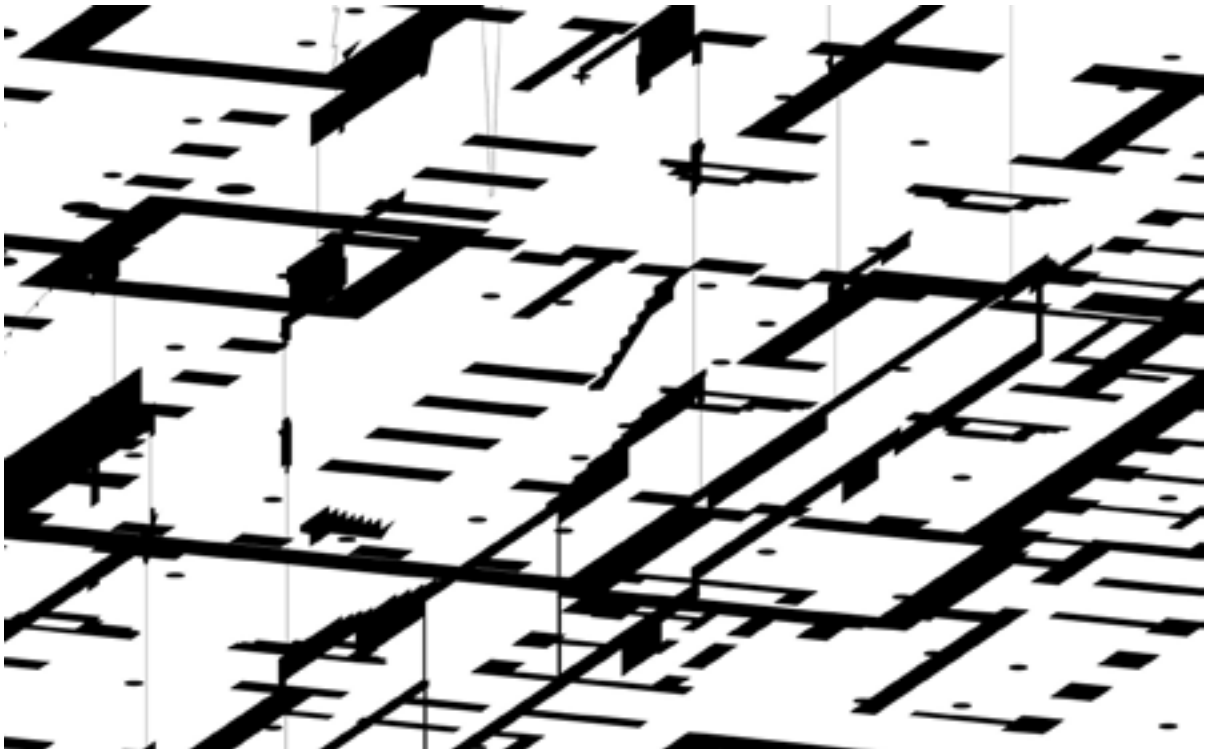
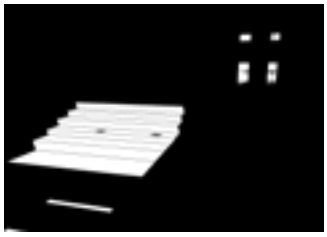
ELEVATIONS / PLANS TO PERSPECTIVE



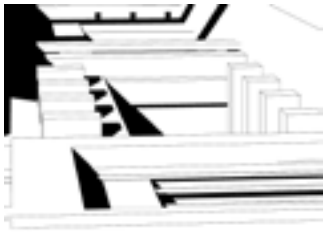
SNAPSHOTS





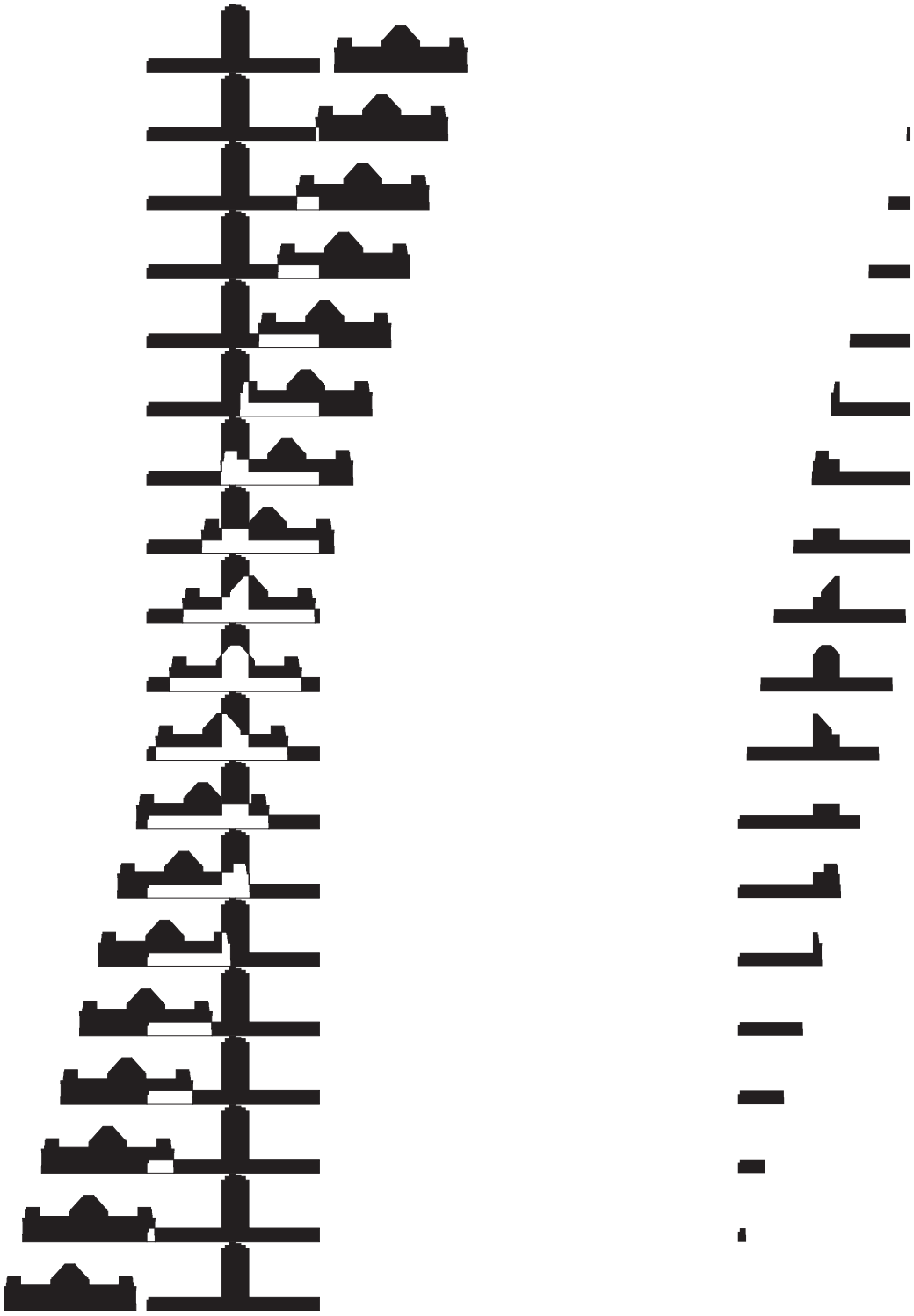




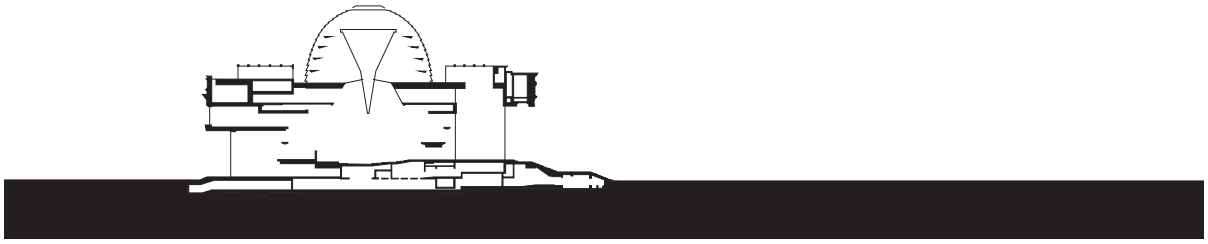



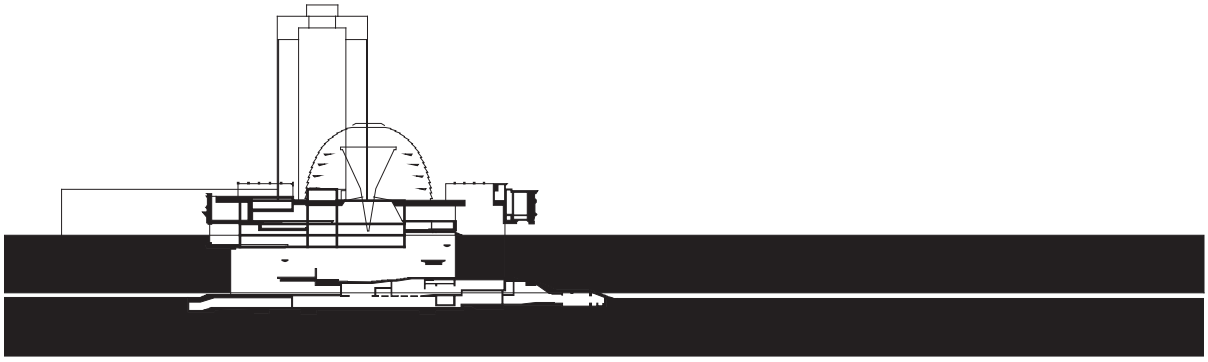



OVERLAPPING ELEVATIONS



SECTIONAL COMPARISON





CASE STUDY - MUSÉE DU LOUVRE ENTRY

Project: Musée du Louvre Entry

Designer: I.M. PEI

Client: Musée du Louvre

Function: Art Museum

Location: Paris, France

Year Completed: 1990

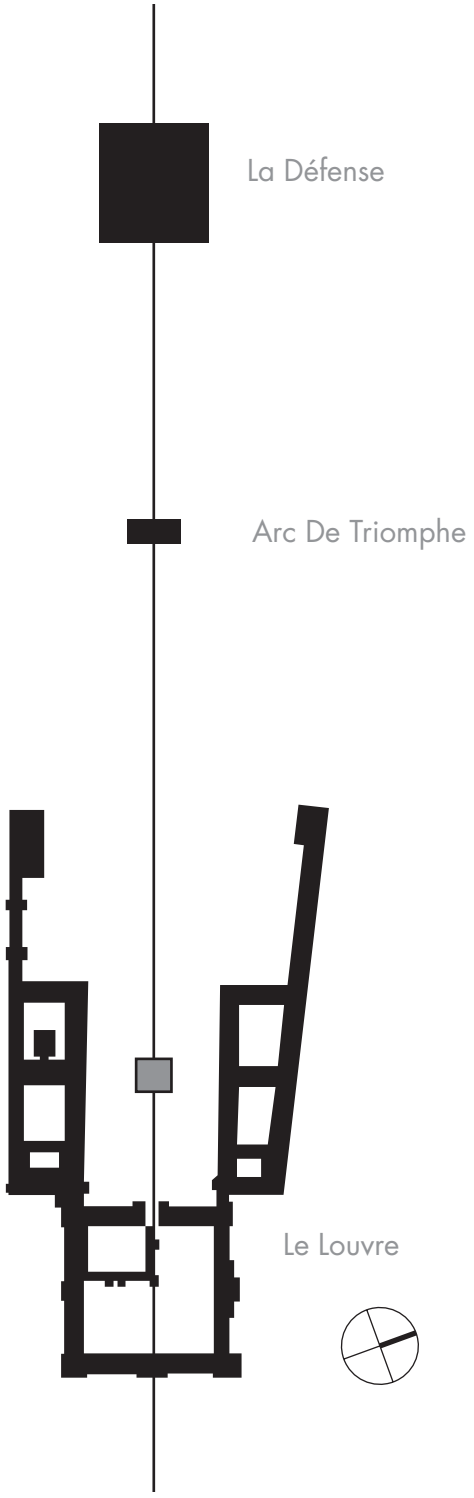
Like many great European structures the Louvre has taken on many lives once protecting the citizens of Paris to acting as a hub of political and royal activity, to now being the epicenter of art and historic artifacts. The complex began as a fortress commissioned by King Phillip II to protect the growing Paris's Western edge from the treat of an Anglo-Norman invasion. (Louvre, 2009) For Two-Hundred years the structure acted as a military outpost undergoing many alterations in parallel to changing technologies and military tactics. The facility slowly saw the countryside disappear as it became engulfed by the increasingly urbanized

city. (Louvre, 2009) In the 14th Century the utilization of the fort was reassessed and deemed ineffective in the protection of the city and retrofitted to become the new residence of King Charles V. The structure under went further alterations under King Francis I when the building was remodeled to take on a more contemporary French Renaissance style. Louis XIII and Louis XIV had even grander plans for the Louvre extending the Wings and Tuileries palaces. (Clark,1998)

Through the 16th and 17th Century the louvre became a repository of art collected by the monarchy from all over known world. Artist began to fill the enormous number of spaces and grew a reputation for being the French center of art. In 1793 the Museum Central des Arts opened to the public beginning with a small collection encompassing a single room. (Louvre, 2009)

The completion of the Versailles Palace and gardens greatly reduced the louvres appeal as a royal estate and the galleries quickly expanded to the rest of the complex. By 1882 the Louvre no longer acted as a seat of power and in a symbolic move from a center of government to a center of art the Tuileries was destroyed and the Modern Louvre was established.

Over 100 years went by before I.M. Pei was issued the responsibility of uniting the layers of history into one fluid whole. The project proved to be a great



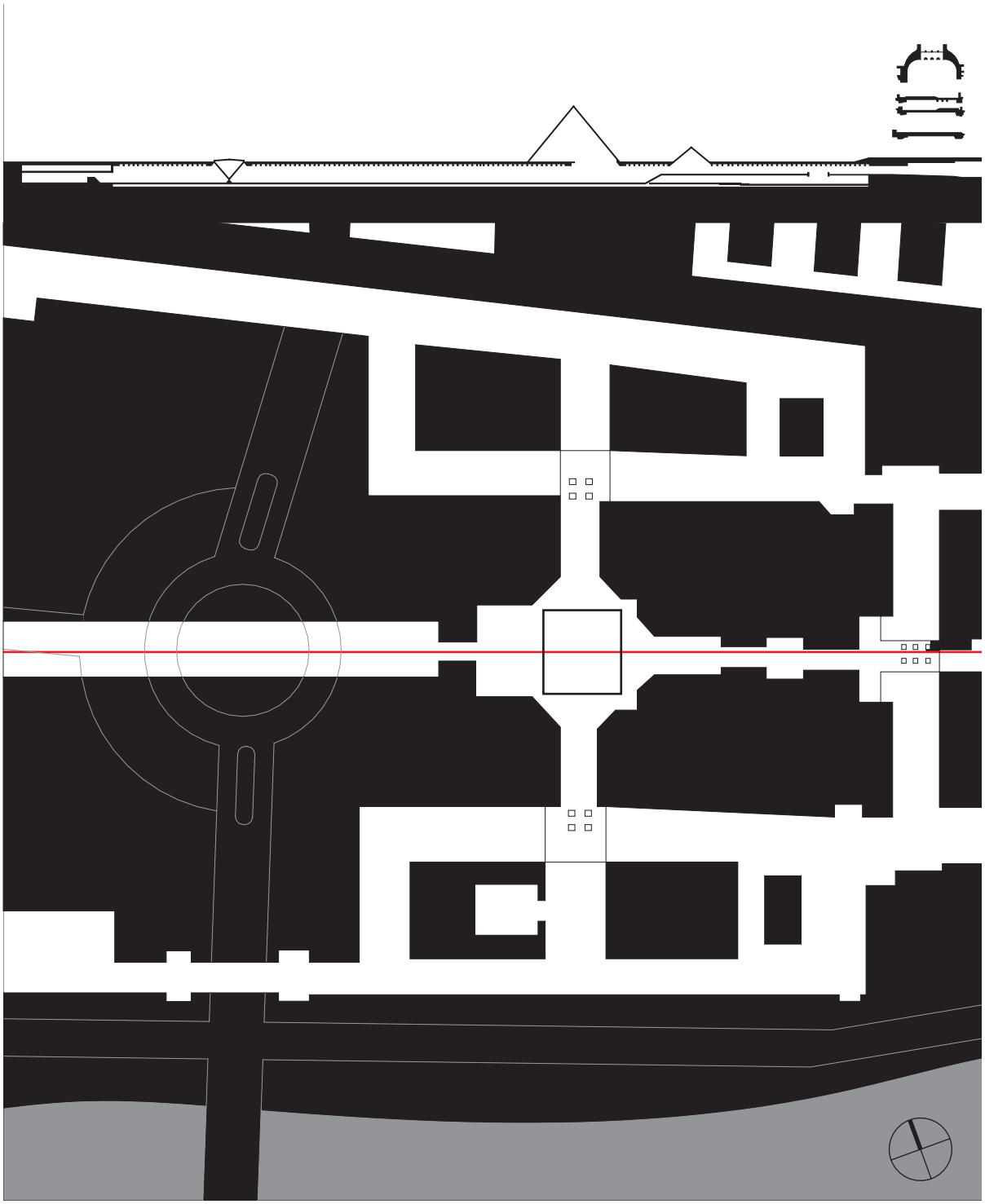
challenge with the extreme sensitivity of the public to the cultural and historic importance of the facility. The plaza holds a particular importance acting as the Western book end of the "axial march of triumphal objects" (Clark,1998) including the Arc de Triumphe and La Défense.

Pei understood the history of the architectural evolution of the Louvre was not rooted in being historic. Throughout its evolution architects applied the cutting edge in style and building technology keeping the building on the forefront of contemporary architecture. (Clark,1998) Pei too designed in this way setting the new entry condition, a study of light, structure, and geometry, confidently in the center of the plaza and aligned with the historic axis. The bold geometries become a natural entry point drawing visitors to the plazas center while also making Masonic references found throughout the grounds. The entry dives the visitors under the plaza into a sun drenched commons where they are situated in the intersection of a cross organization. From there the user is free to move to galleries in the North, South, and East, and to Les Tuileries West.

From the Lobby visitors climb back above ground level and into the number of galleries. A unique path created by the addition takes visitors through the midieval crypts displaying the original foundations dating back to the original structures.

While I.M. Pei did not restrict himself to historical cliches while designing of the Louvre entry way he did maintain the importance of craft, originality, and technology that has sculpted the building over 800 years. (Clark,1998) His navigational means made the facility easily navigable, engaging, and revealing making this a prime case of how opening and obscuring can change the way we understand an existing condition.

SECTION TO PLAN



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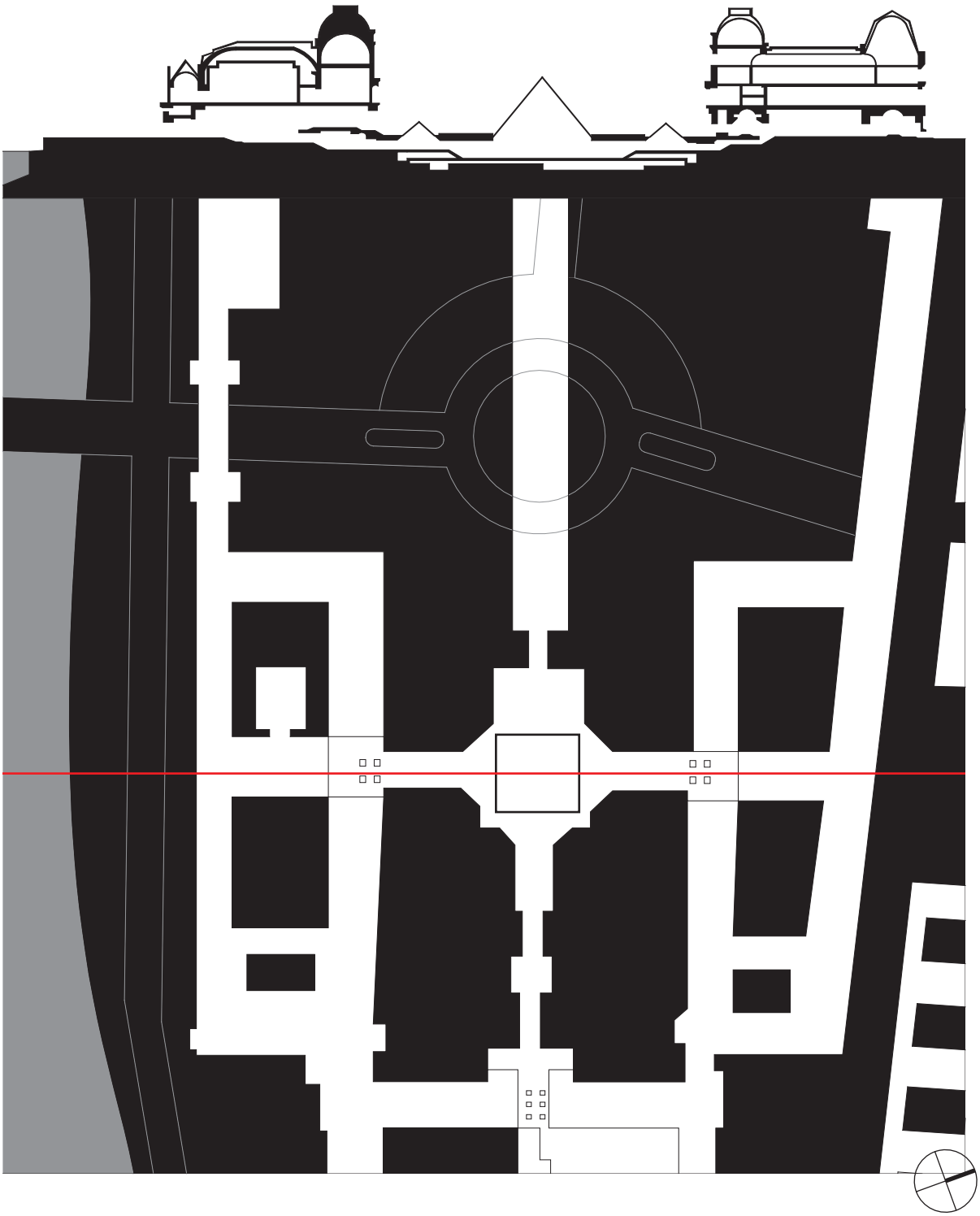
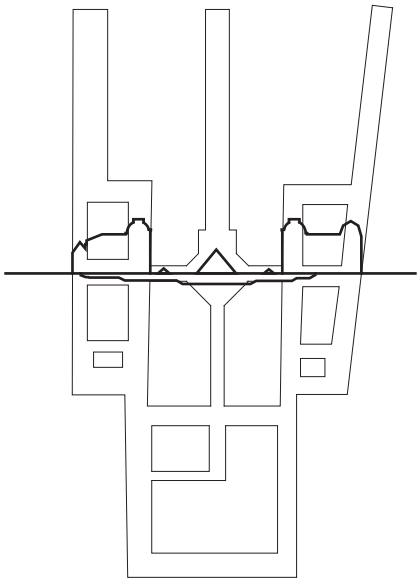
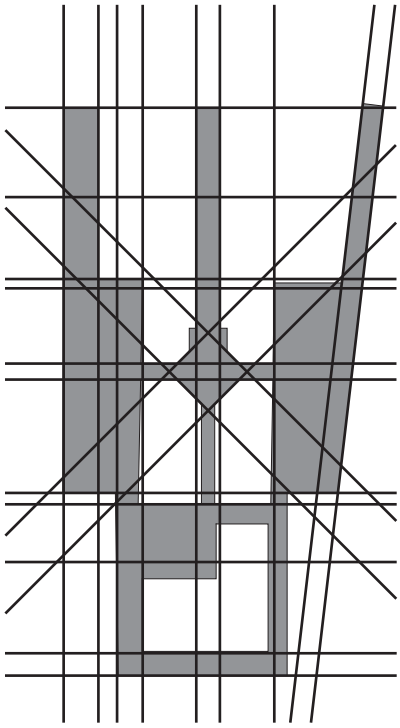


ANNALYSIS

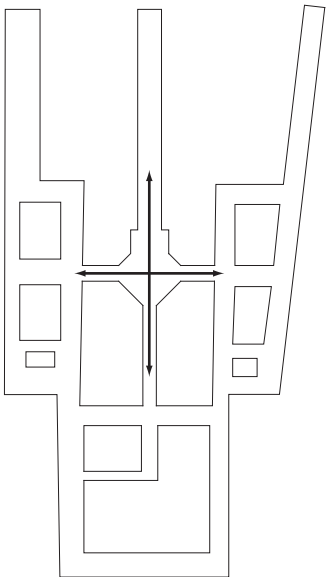
Massing



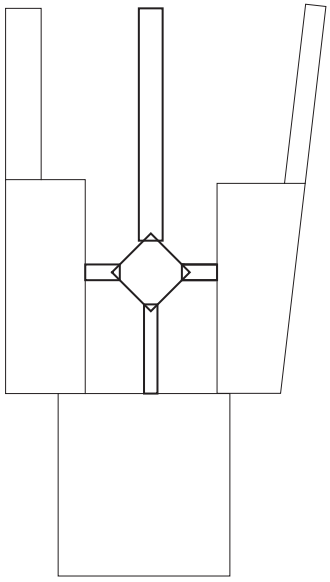
Section to Plan



Geometries



Navigation



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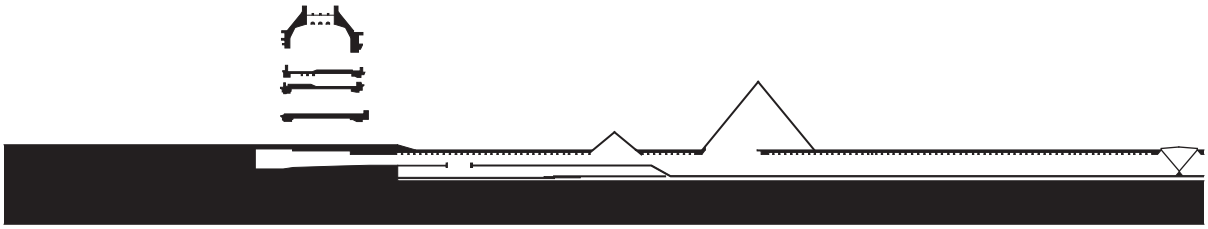
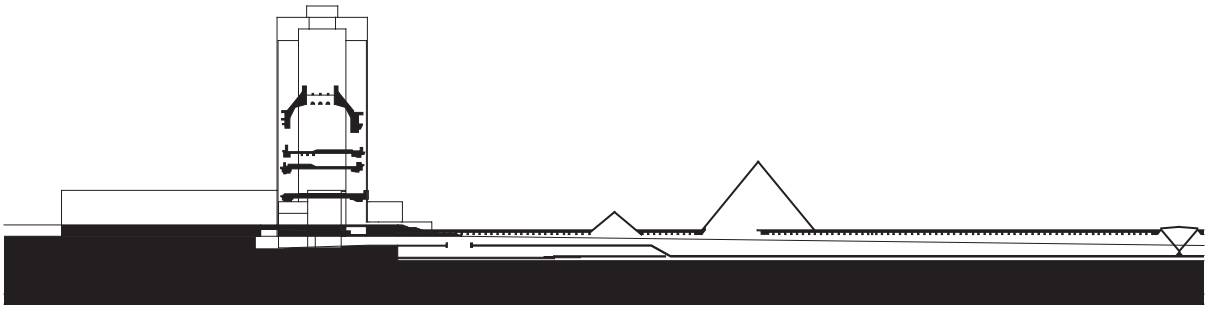
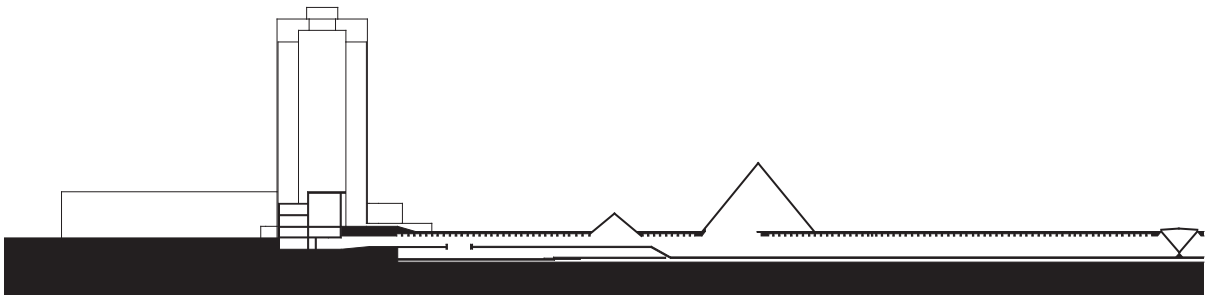
SECTIONAL COMPARISON







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CASE STUDY - LÆRDALSTUNNELEN

Project: Lærdalstunnelen

Designer: OTH Architects: Trude Hooykaas

Client: Norwegian Public Roads Administration

Function: Transportation

Location: Lærdal, Norway

Year Completed: 2000

Though not purely architectural in the traditional sense of the word the Lærdal tunnel is an interesting case of how the navigational infrastructure shapes the way we move through space and ultimately sculpts our understanding of the place. One hundred miles up the cavernous Norwegian fjords the village of Lærdal lays wedged between the waters of the Aurlandsfjord and a 4500' wall of stone. Historically the primary means of transportation in and out of the village was by way of boat. (Laerdal, 2009) The waters acted as a natural highway providing access to down fjord Bergen and direct connection to the Sea. Places not accessible by the fjord were nearly

impossible for intercity travel creating a region of isolated cultures no more than fifteen miles apart. In more recent times Lærdal has become a major stopping point for travelers taking Highway 16 between the two major cities of Norway, Oslo and Bergen. The road snakes its way up the steep cliffs directing views in both directions of the fjord. The city of Lærdal quickly melts away and the rooftops of the structure becomes nearly indiscernible from the rocky terrain. The defining walls are shed giving way to a infinite horizons.

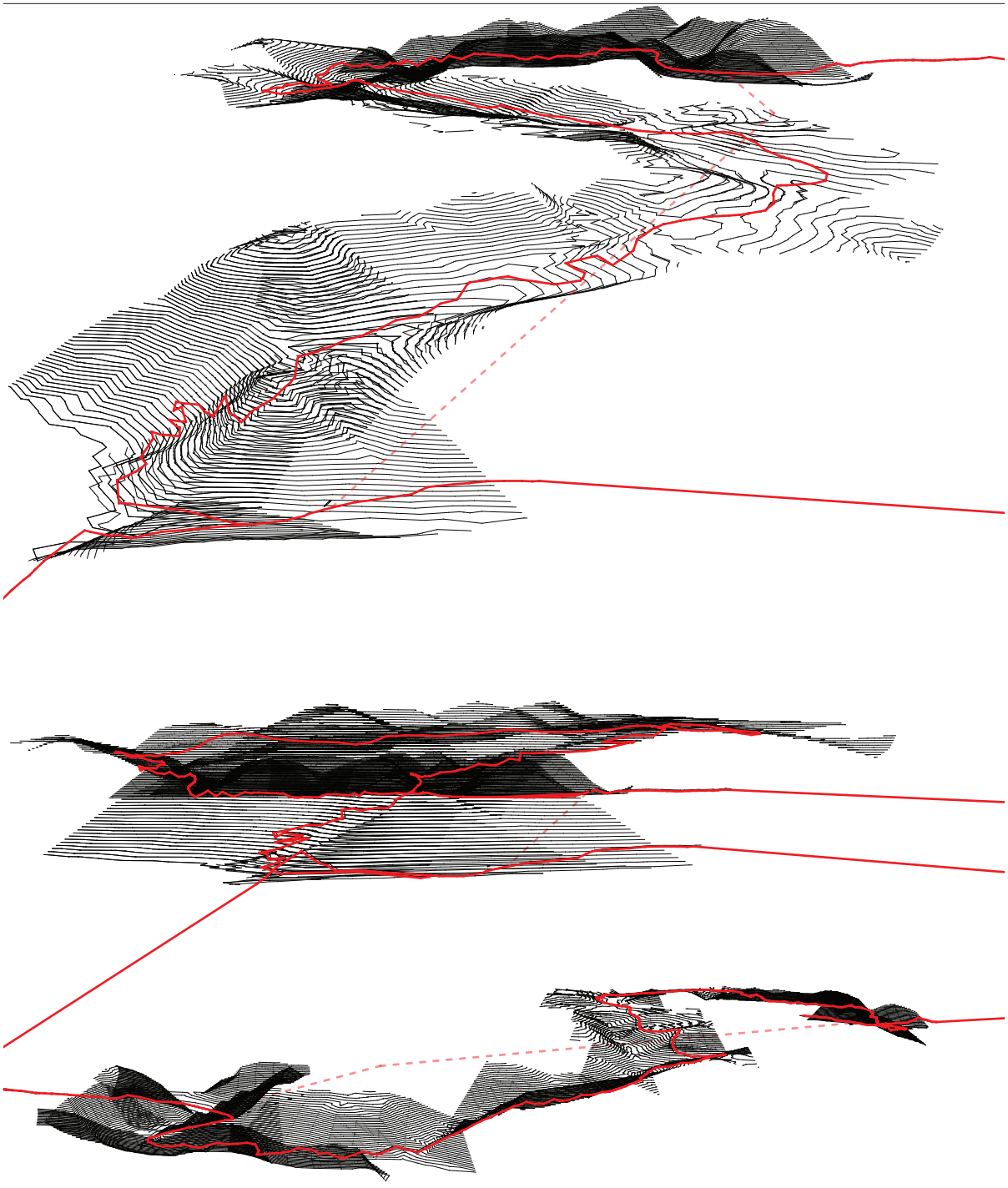
At the top of the climb is perched the Aurland Lookout, a bridge to no where designed to bring forth the depth of the valley by offering a place between the sky and the waters 4500' feet below. The program of the lookout is simply to make visible what would otherwise go unseen. It has opened new views allowing a new knowing of a seemingly familiar place. The structure also acts as a resting stop and opportunity to turn back befor heading on old Highway 16, the 'Snow Road'.

Hightway 16 provides one of the only opportunities to view the inhospitable highlands of the region. Blanketed by several feet of snow each winter the high altitudes remain virtually uninhabited and seen primarily only by those on the road. The narrow lanes caste themselves to the rugged terrain frequently rising and falling furthering the travelers awareness of the landscape. Views last only a few moments before the winding road reorients its passengers.

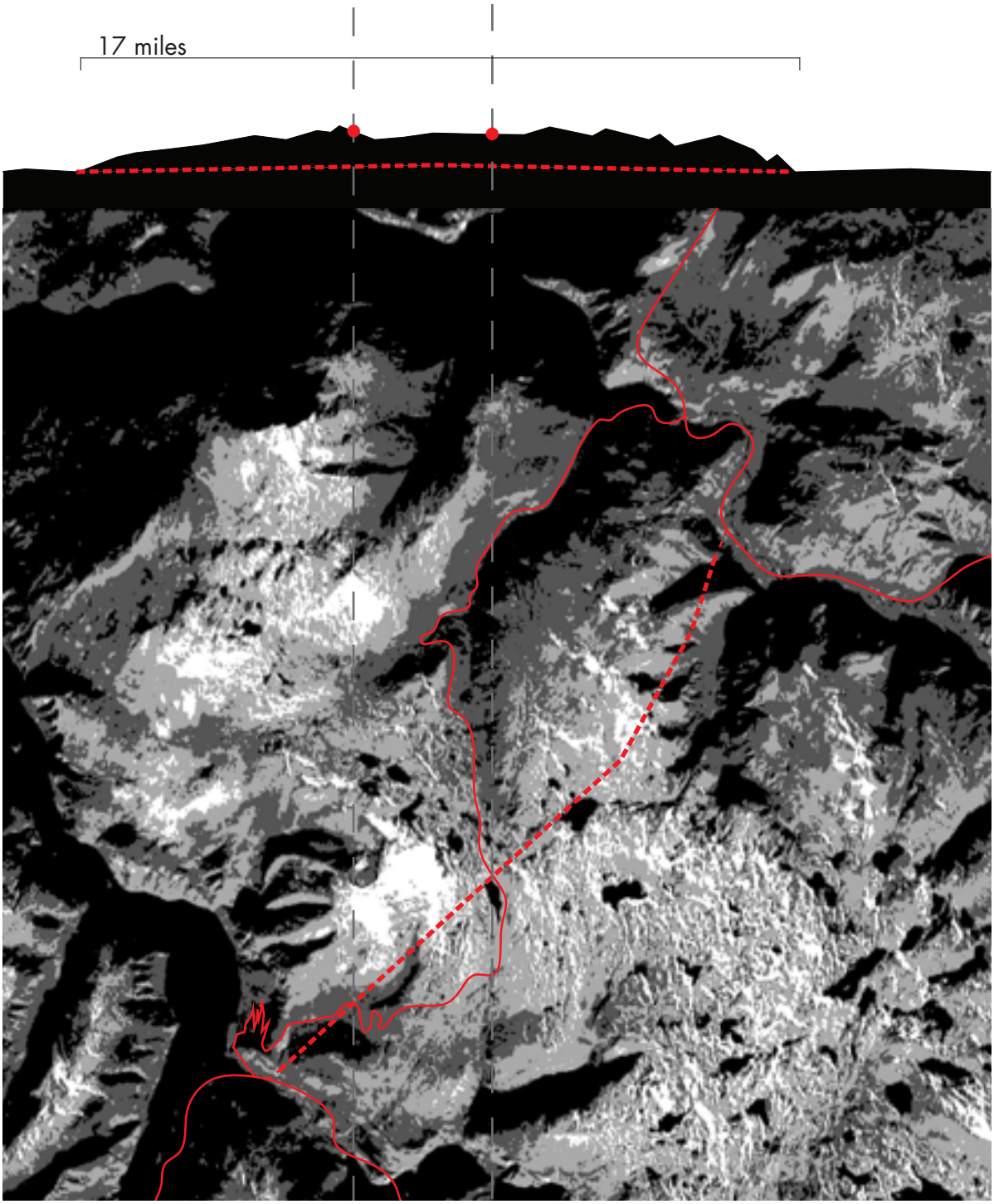
This experience is vastly different from that of what more modern infrastructures provide. In 2000 Lærdalstunnelen (The Laerdal Tunnel) hosted its first passengers cutting 15.2 miles through the mountain rather than floating on top. The tunnel was constructed to replace the 'Snow Road' for maintenance and safety issues. The tunnel offers another option of understanding the mountain. The squeezed space and endless perspective acknowledges the weight of the mountain and creating a great sense of compression. Vehicles barrel down the path at 100km/hr making the journey last only 15 minutes as compared to the hour on the Snow Road. The tunnel is a striking deviation from the organic roads above keeping to a true course and its unknowing of the snows and rains that hit its surface. To help break the hypnotic effects of the tunnel three blue-illuminated chambers spaced equally along the path were designed to allow drivers to pull off and rest or simply to admire the rugged rock walls and sheer engineering of the tunnel.

The tunnel at Lærdal defines how the paths we create funnel the public in ways that bring forth different attributes of what we are traveling through. This case further propels the questions of how infrastructure structures knowing.

SNOW ROAD vs TUNNEL



SECTION TO PLAN



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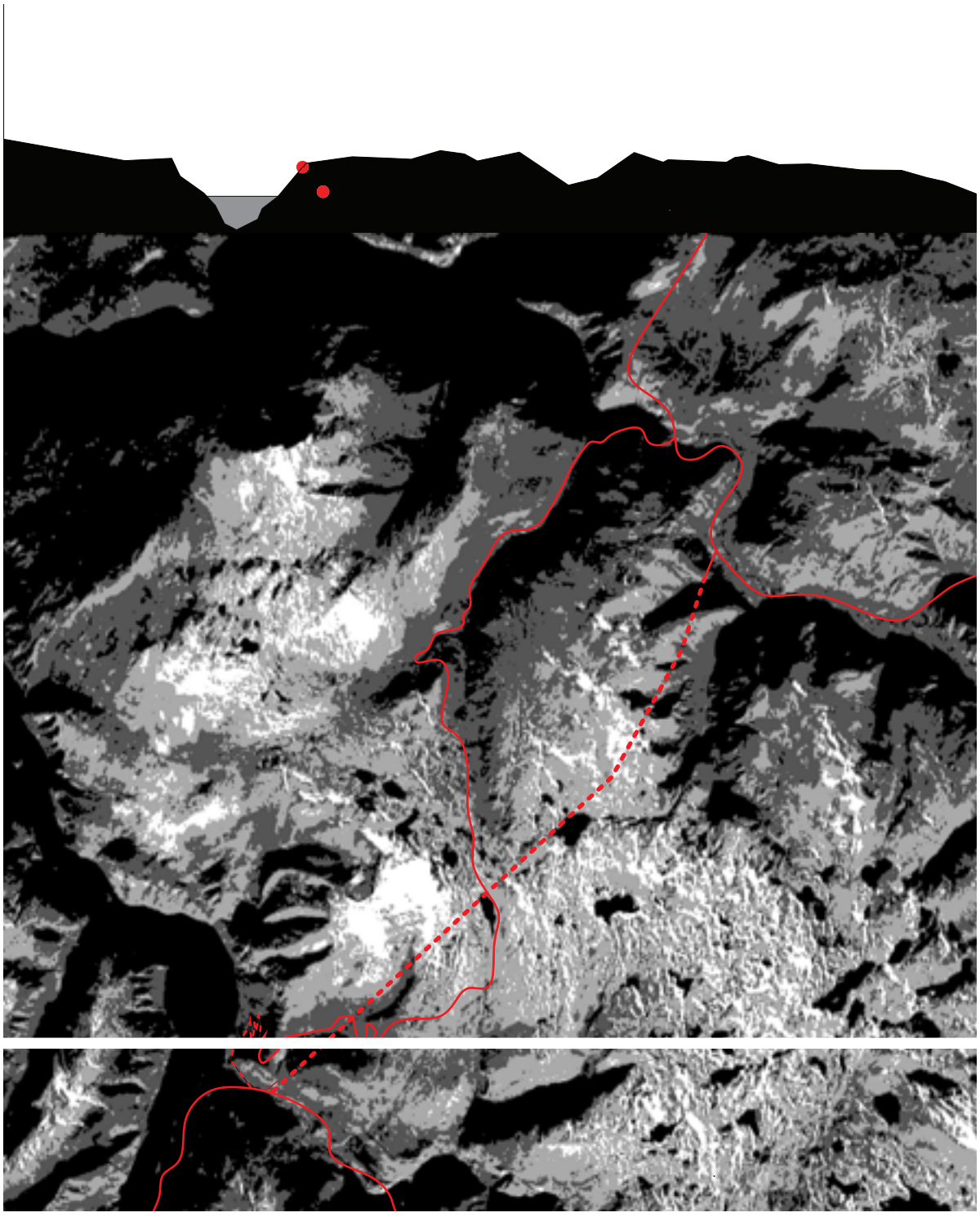
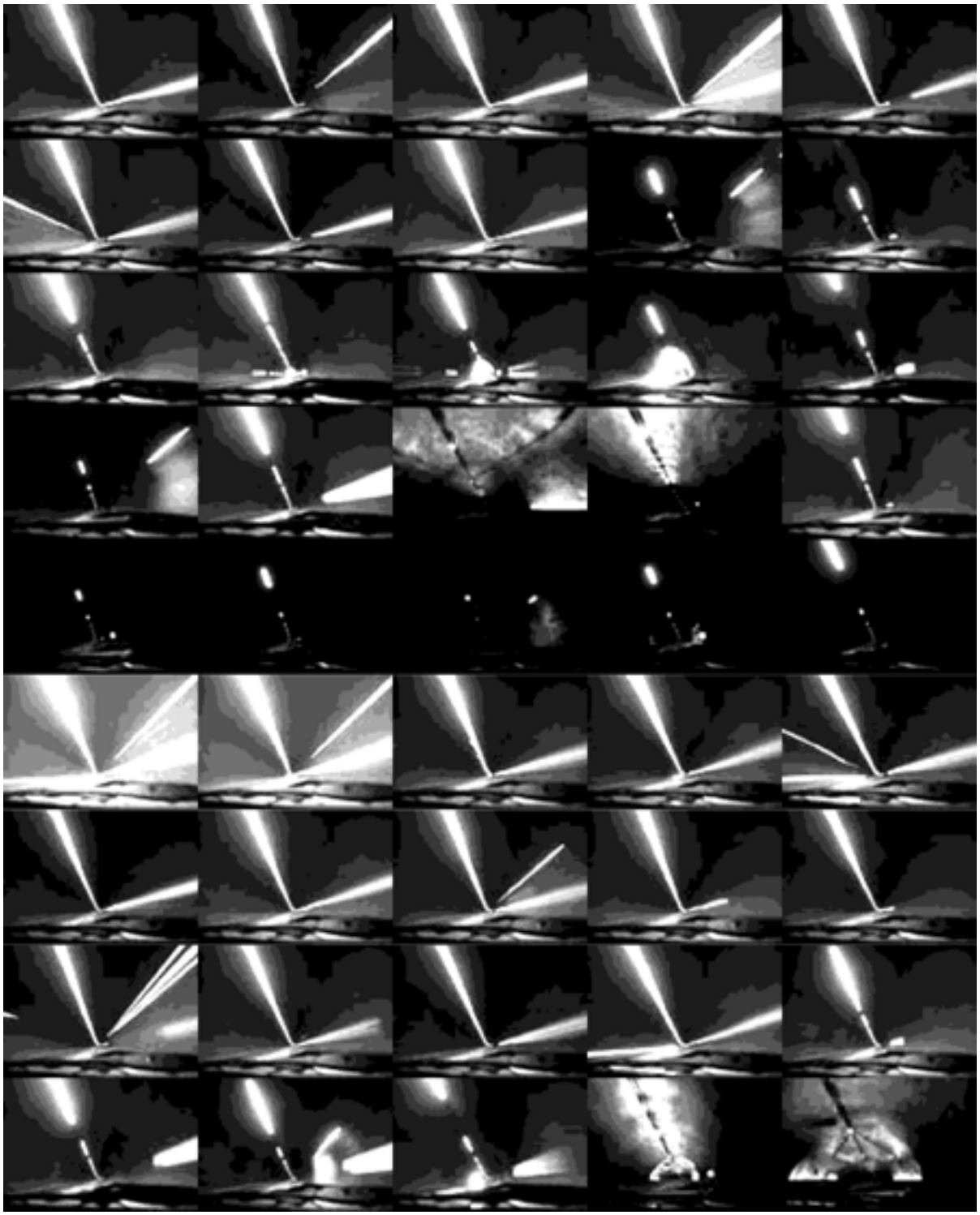
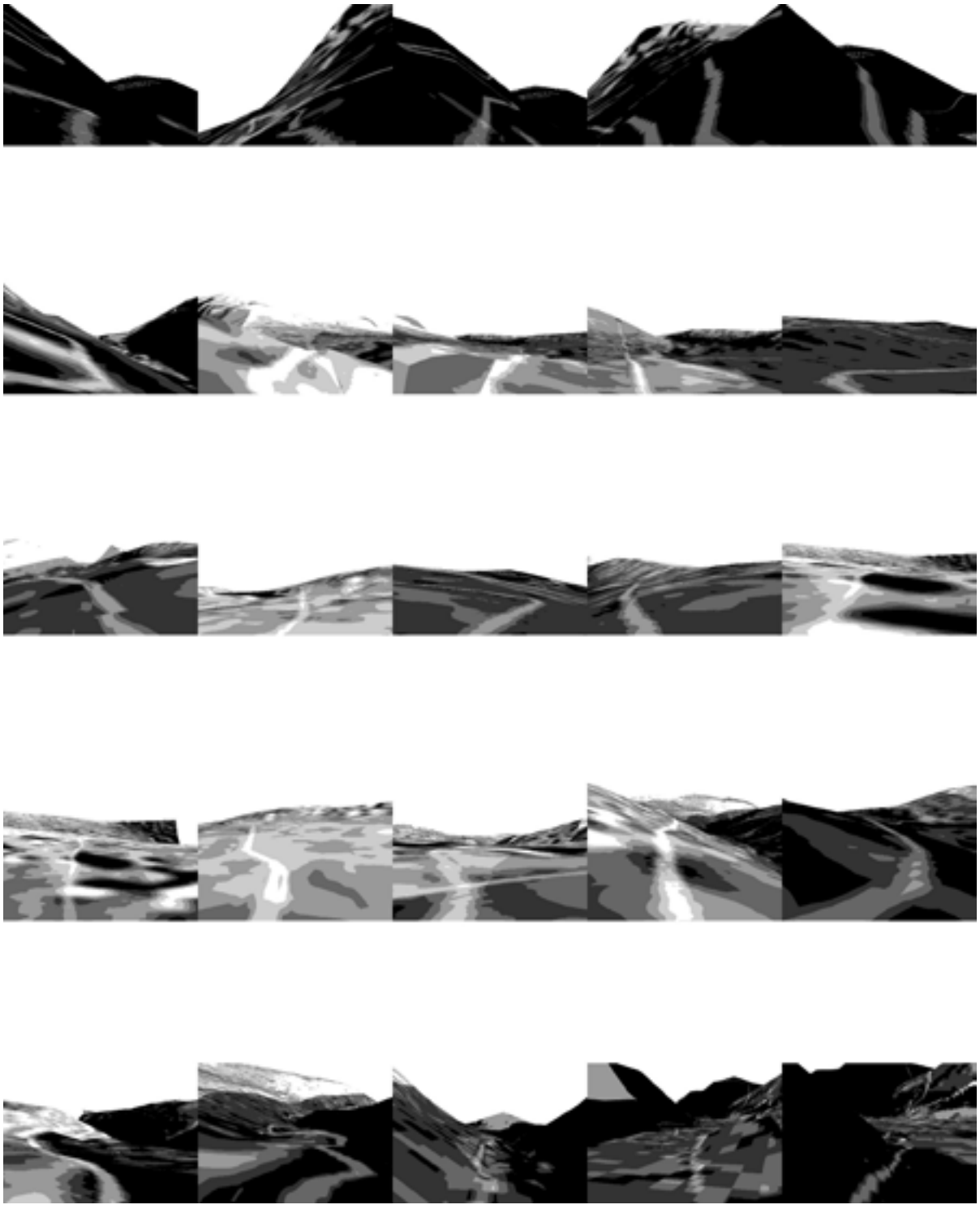


PASSAGE THROUGH TUNNEL



PASSAGE OVER THE MOUNTAINS



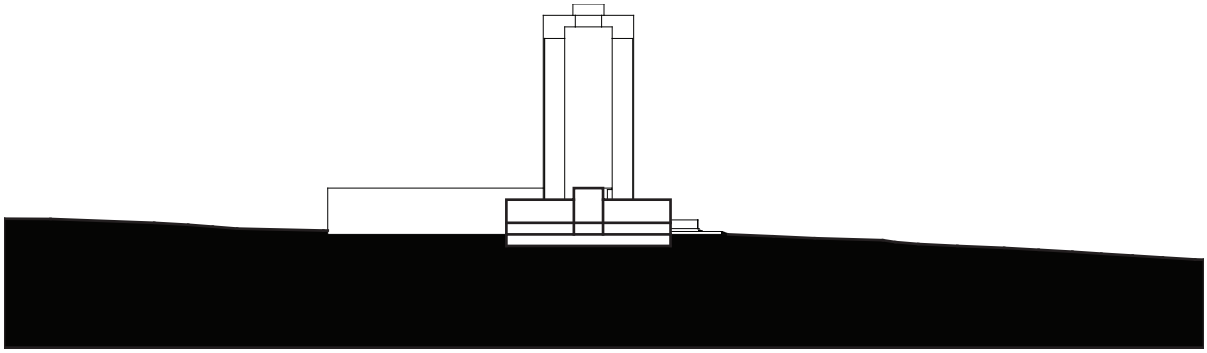
Fine architects and planners all over the world have explored what it means to reengage the city structure through modern additions to old infrastructures. The Reichstag of Berlin is a prime example of how architectural additions can help reinterpret a building and give it new meaning to the citizens of a nation. The modern dome redefines the neighborhood providing a point of reference while also providing revealing views of the surrounding neighborhood, the greater city, and the buildings itself. By "gouging" the once stratified, compartmentalized structure Norman Foster provided a new level of transparency of the government rejuvenating a peoples trust in a government with a troubled past. (Schultz, 2000)

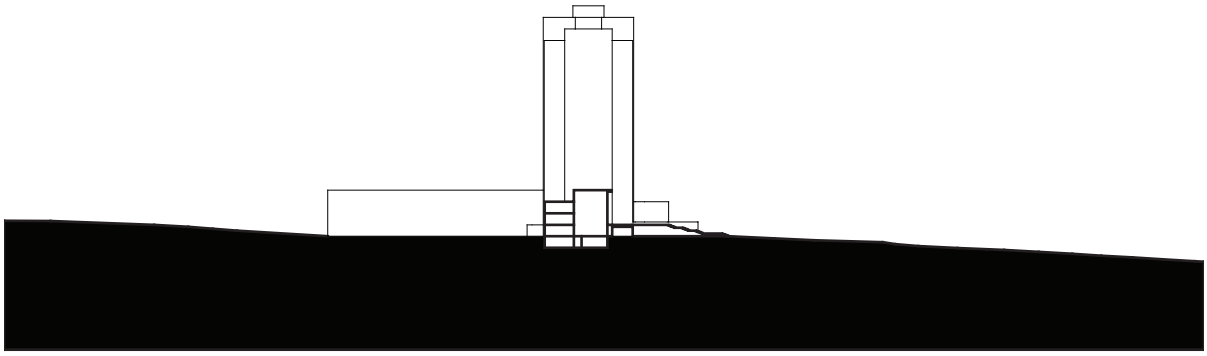
The new entry to the Le Grande Louvre has as similar effect on the structure in the heart of Paris. I.M. Pies strong use of geometries and fine craft of materials acts as a symbolic and physical transformation from the once military fort to the center of arts in France and all of the world. What this case confronted was how we add onto historic places. Pei's answer is to be as bold and cutting edge as the existing buildings once

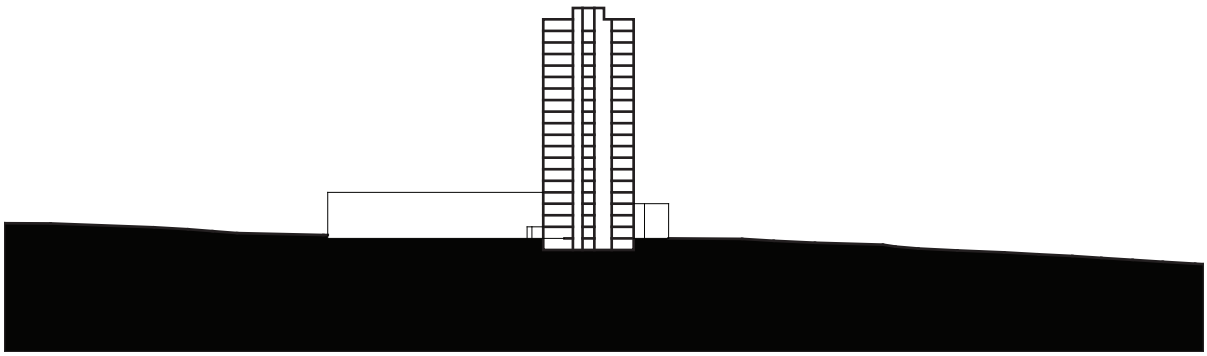
were. Today millions of people enter the Louvre through the glass pyramid and has become a beloved, but still controversial, addition to the Parisian cityscape. (Louvre, 2009)

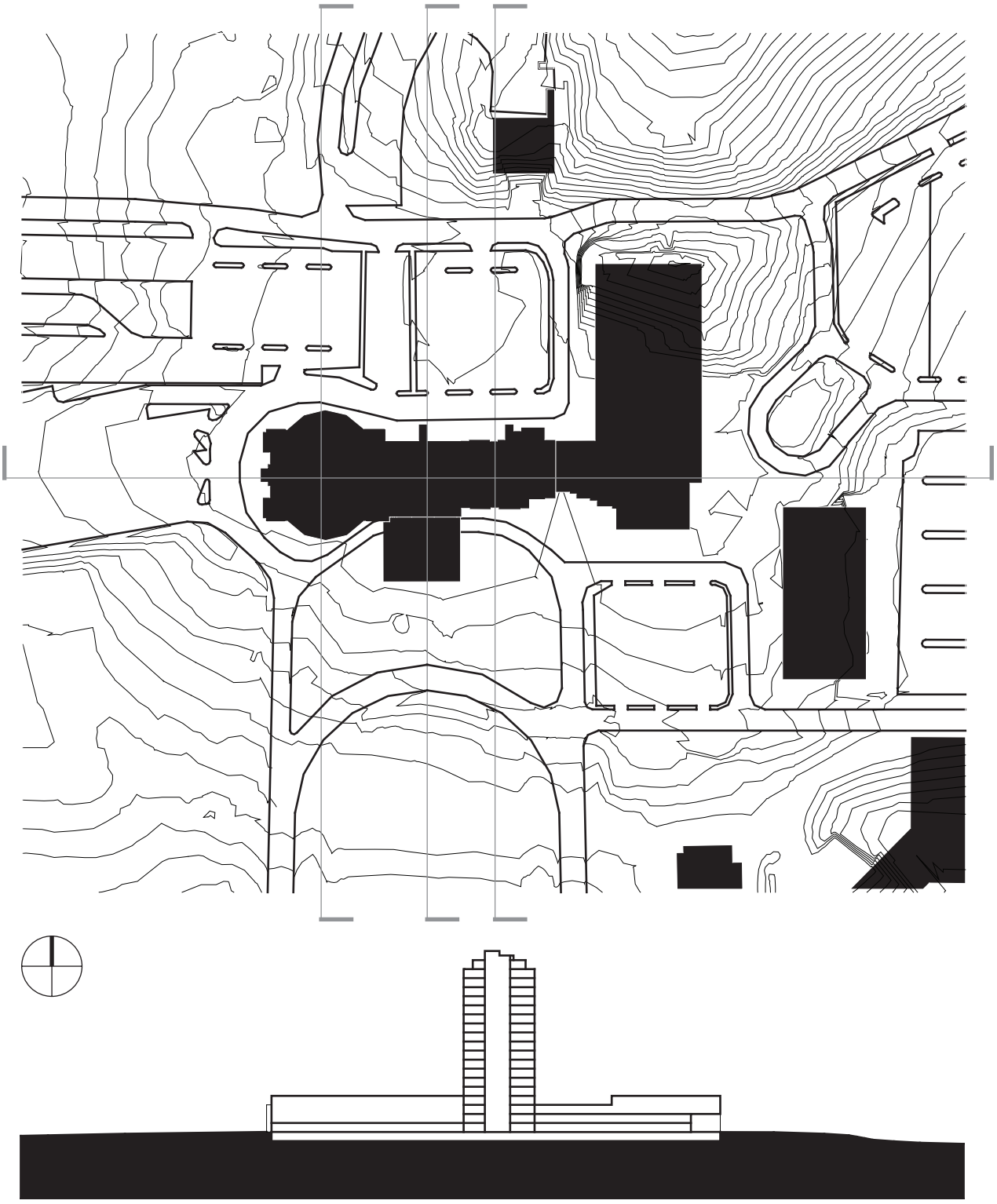
But Issues of movement, navigation, orientation, and memory are not limited to the specifically "architectural" The Laerdal Tunnel of central Norway illustrates how the infrastructure designers provides sculpts the way we move through and understand space. The once high road of Highway 16 was the only means of driving between the two major cities of Norway, Oslo and Bergen. The pass took travelers through the rugged and unforgiving Highlands overlooking the famous fjords. Casting itself to the landscape the road allows a near floating experience across the landscape winding and turning to the topography forcing views in all directions. This is in contrast to the near Laerdal Tunnel, a 15.4 mile long stretch running straight through the mountain making the weight of the mountain visible. A nearly hypnotic trip is broken by three blue lit chambers giving an expression of pulse as if being pumped through the veins of the mountain.

CAPITOL MALL SECTIONAL STUDY









of the 110,000 lives that live and or work in the area.

The region around Bismarck is characterized as having a continental climate. Sitting only 115 miles (by way of the bird) from the geographic center of North America the city is far removed from the stable climate offered by sea. The area experiences above average temperature in the height of summer commonly reaching 90d F and up. The winter sees a reversed trend falling far cooler than averaged when compared to the rest of America with average highs of just under 20d F in late January. The area, though heavily agricultural, is also semi arid averaging less than 19 inches of precipitation a year 3 of that in the form of snow. The only thing truly predicable about the area is its wind. Cold and dry North West winds bombard the area each Fall and Winter while summer and spring can expect moist south eastern winds.

The structure itself terminates the State Capitol Mall a vast, manicured field that plays host to many formal and informal gatherings from markets to protests to leisure sports. The formal entrance to the ground is approached from the south end. The mall measures 1,115' by 355' and is lined by a colonnade of matured American Elm trees. The space is walled by thick groves of trees to the West the State Library, Historic Archives, and Veterans Memorial to the East , The Capitol to the North, and century old neighborhoods to the South. The floors are of Kentucky Blue Grass with walk and car ways of concrete; a ceiling of blue skies.

While the Administrative Tower and Mall are most often captured by the media and commonly photographed by the public the capital grounds is comprised of many other elements and distinctly different places. One of those places is the Arboretum on the West side featuring Ten acres of domestic and imported trees found throughout the state. The Arboretum creates a vastly different sense of place from that of the Capitol Mall with its thick canopy, heavy shadows, and its apparent removal from an urban setting. Many people stroll under its roof to escape the sun during the hot summer months and is also a popular picnic destination.

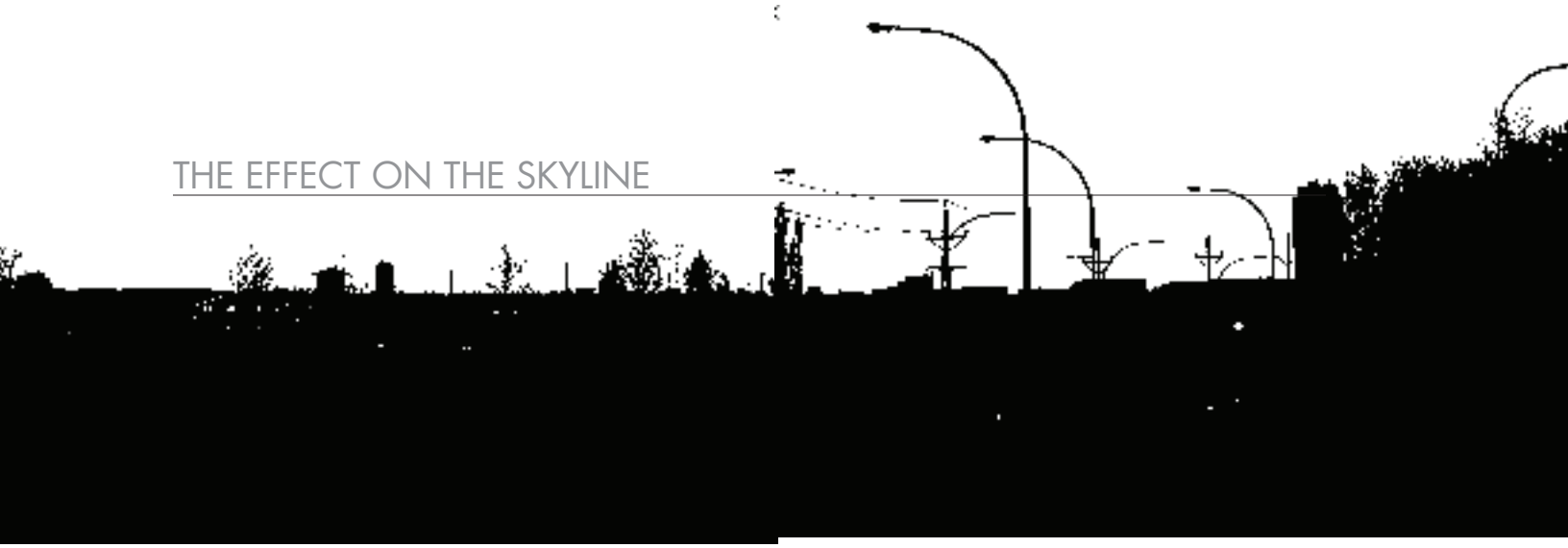
The North East corner on the face of a south facing hill of the grounds acts as a reserve of virgin prairie: prairie that has never seen cultivation. Its grasses are the same as have ever been on the site and receives water that only the sky provides. The space acts as a raw indicator of the

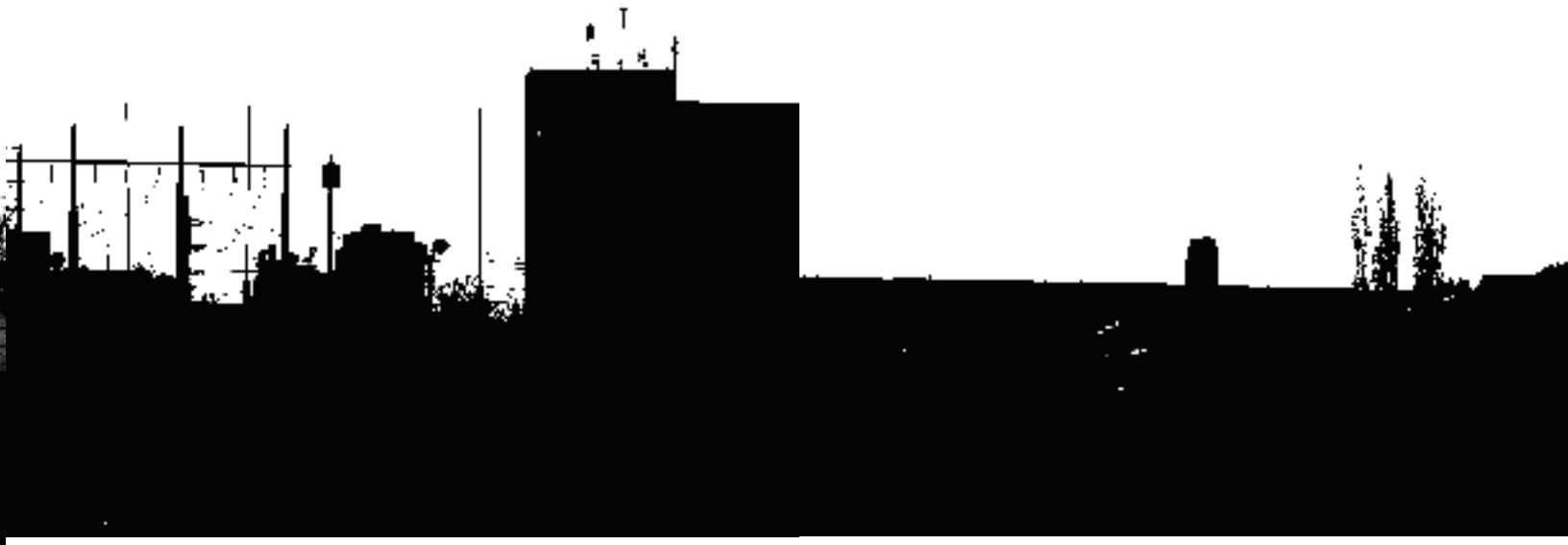
weather frequently going dormant and turning to a rich gold in the dry months. After each rain the grass quickly springs back to life becoming green and soft. Native grass do not live alone on the site. Wild Jack Rabbits, gofers, and even skunk are frequently seen roaming the grounds.

To the South of the virgin prairie and to the East of the Mall is another grove of old cottonwoods native to the site. Within the grove is an array of artifacts, statues, and memorials. It is here that the Veterans Memorial resides. A small open air structure offering the names of all the North Dakotans that have given their lives in international conflict dating back to World War I. The North Dakota Heritage Center acts as the northern barrier to the area and gives great panorama views from the lobby.

An interesting aspect of the North Dakota State Capitol is that its site extents far past its immediate surroundings and even transcends physical boundaries. As an symbol of the region many business have incorporated the iconic tower in logos and advertisements, The daily happenings are often captured by the media giving an entirely new realm of knowing the facility, and thousands of photographs from construction to present litter the internet presenting an often repetitive glimpse of the structure.

THE EFFECT ON THE SKYLINE





UNDERSTANDING THE SITE - The North Dakota State Capitol

Project: North Dakota State Capitol

Designer: Halbird & Root

Client: State and People of North Dakota

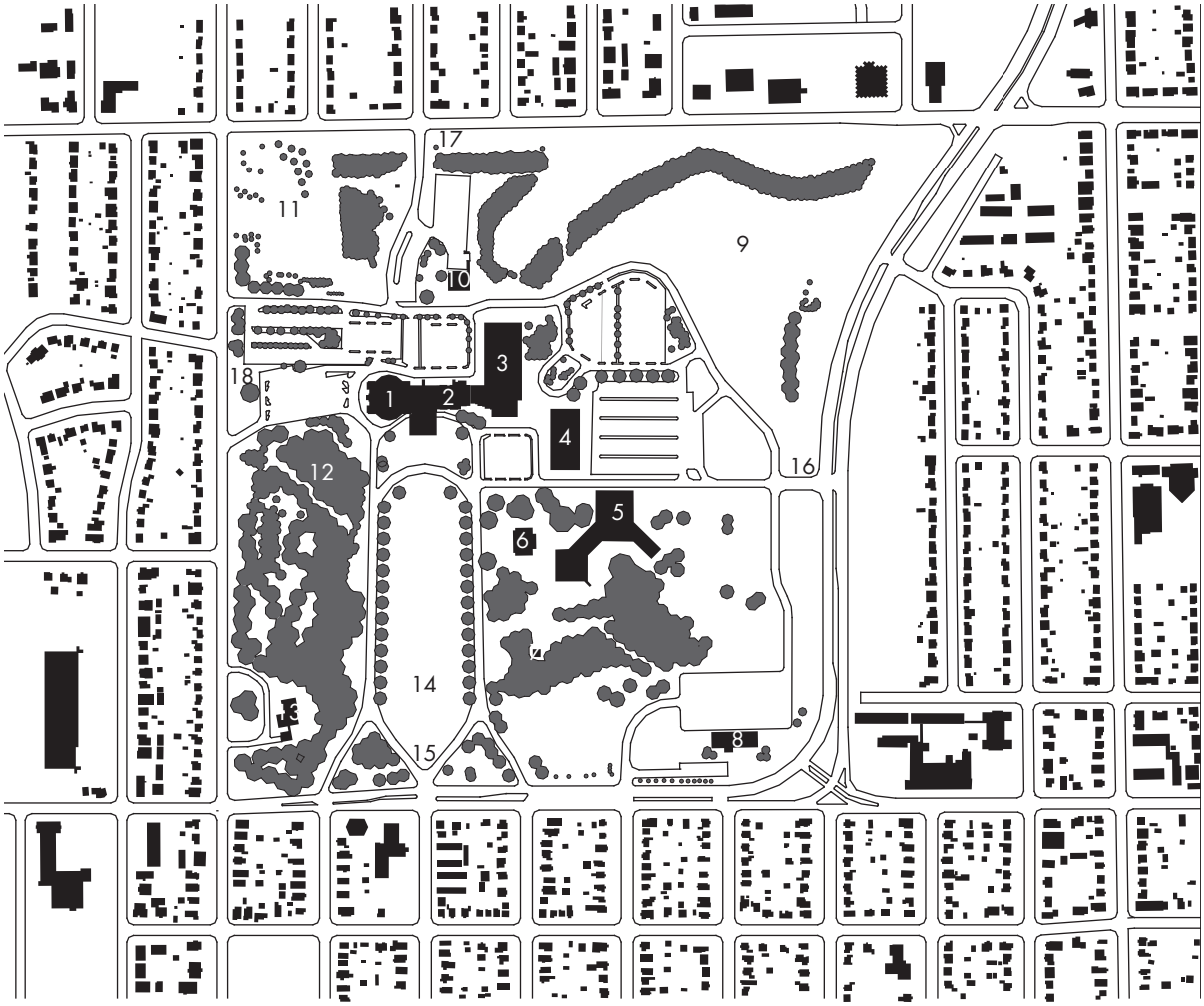
Function: Governmental

Location: Bismarck, North Dakota

Year Completed: 1934

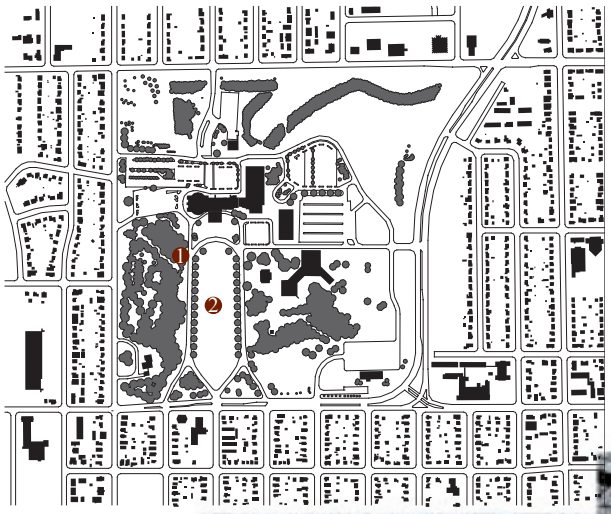
Nestled half way between the cottonwood groves of the Missouri River and the parched grass-covered hills of the North American High Plains is anchored the North Dakota State Capitol: The Plain's bridge to the sky. In a city and state of humble dwellings the 'Skyscraper of the Prairie' ascends 241 feet from its bed and 175 feet from above the river bottoms looming over neighboring homes becoming a beacon to the land Twenty miles in each direction. There are few points in Bismarck from which the capitol can not be seen making it a regular part

SITE MAP

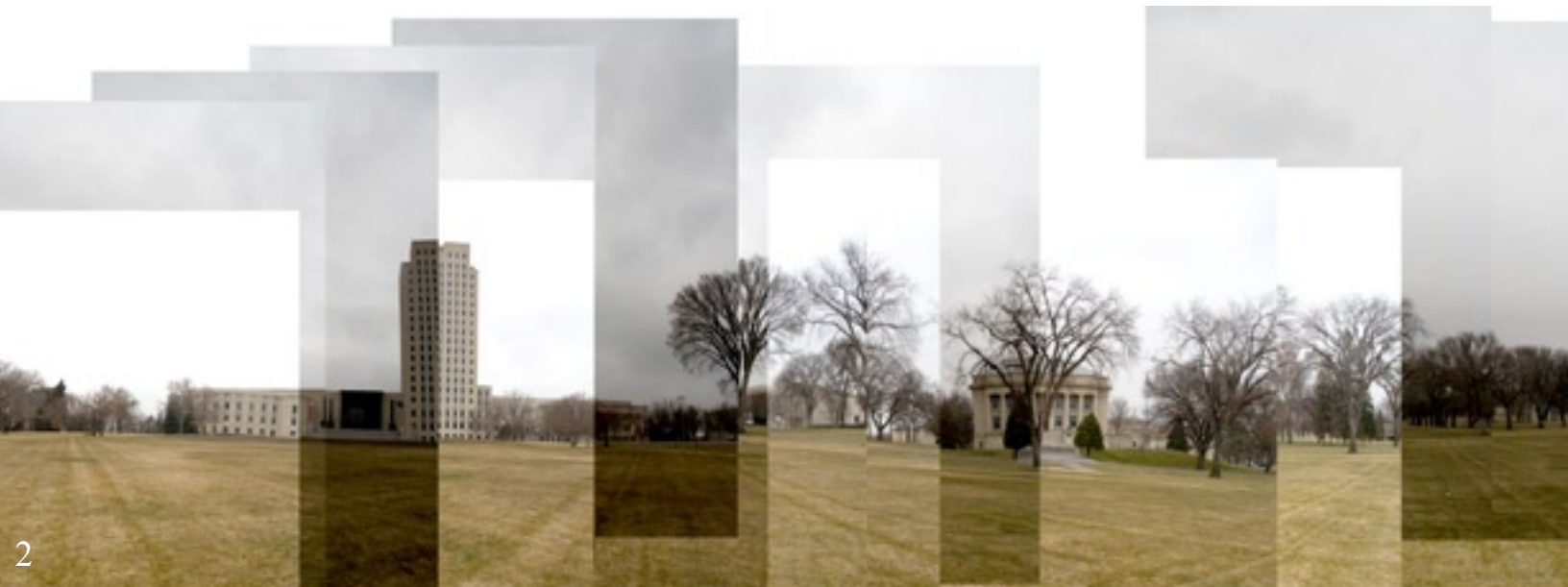


1 Legislative Wing
2 Administration Tower
3 Judicial Wing
4 Department of Transportation
5 State Heritage Center
6 State Library
7 Veterans Memorial
8 Burliegh County Water
9 Virgin Prairie Grass
10 Maintenance Facility
11 Capitol Park
12 Arboretum
13 Governor's Mansion
14 Capitol Mall
15 South Entrance
16 East Entrance
17 North Entrance
18 West Entrance

MATERIALS AND COLORS

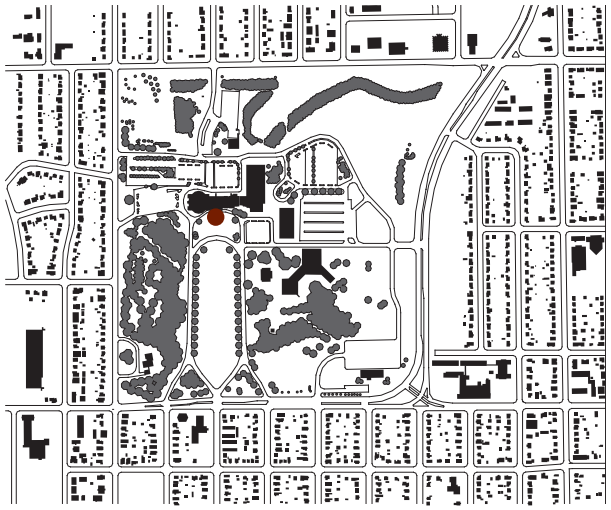


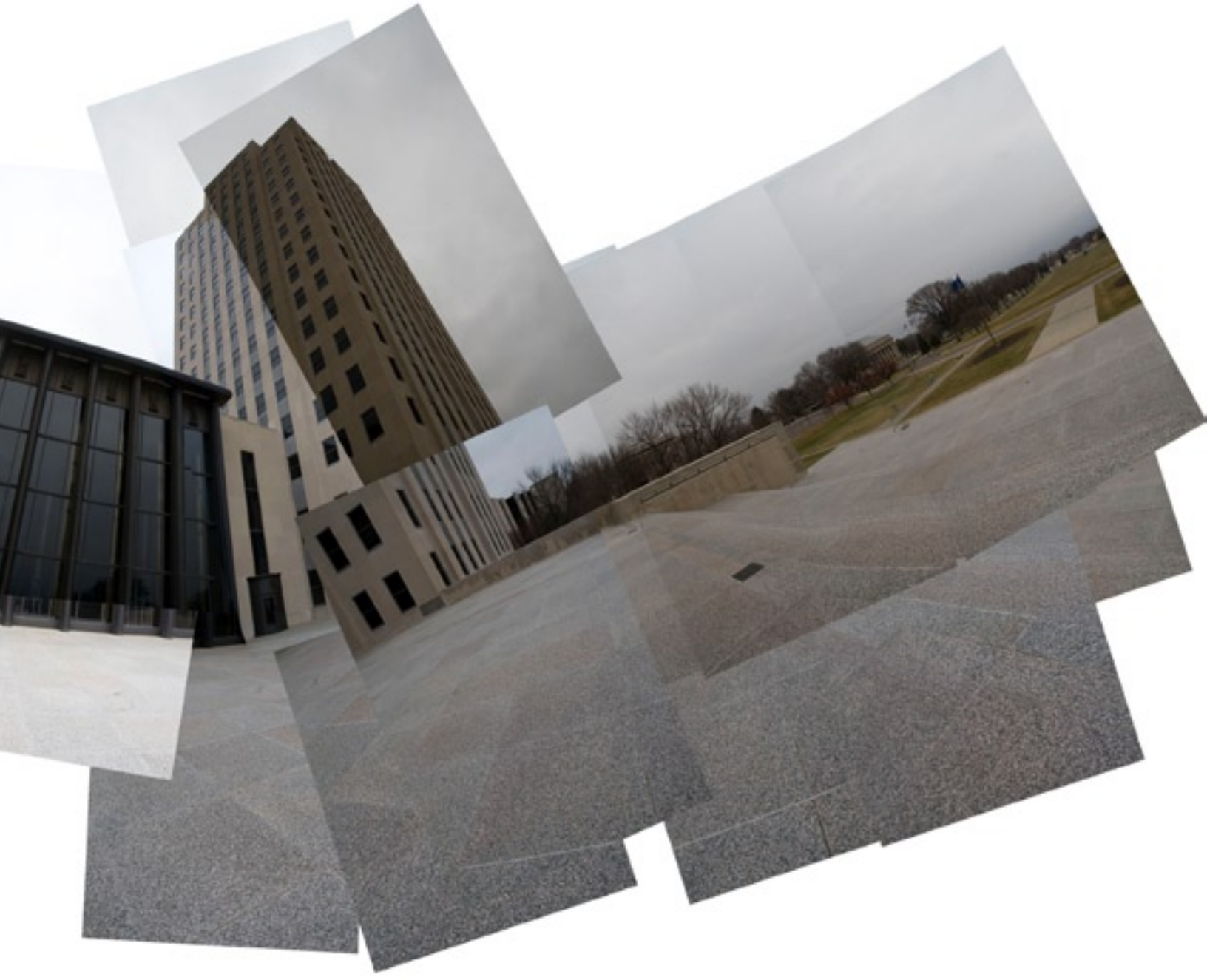
PANORAMA STUDY




NO
LEFT
TURN

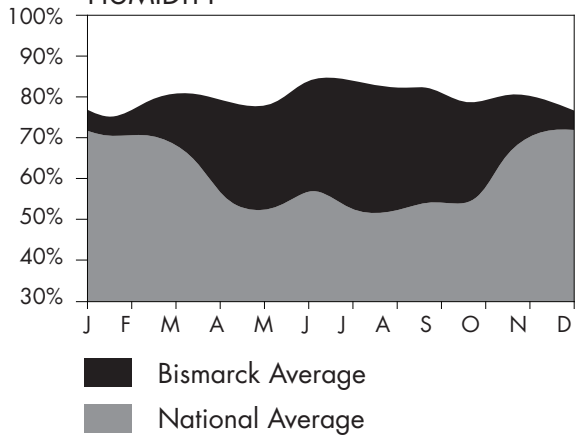
ON THE STEPS



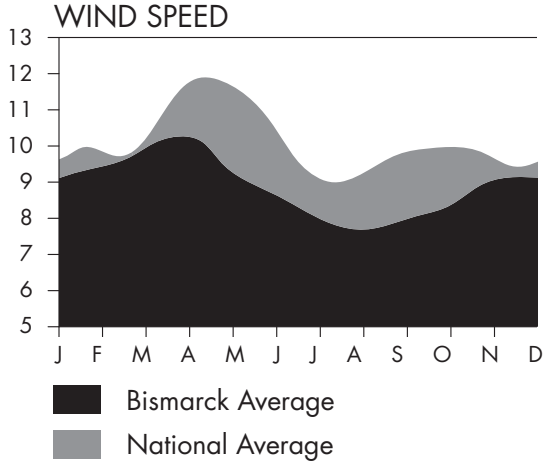


CLIMATE DATA

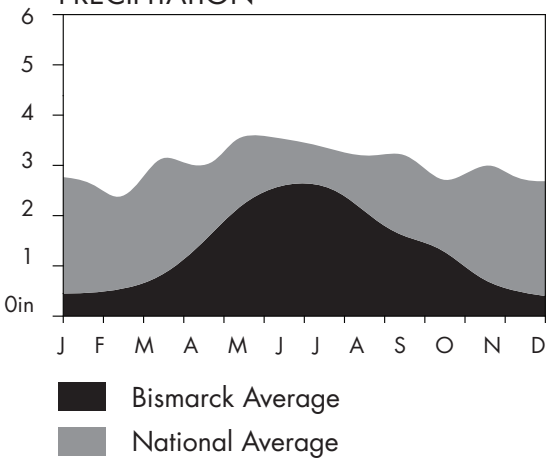
HUMIDITY



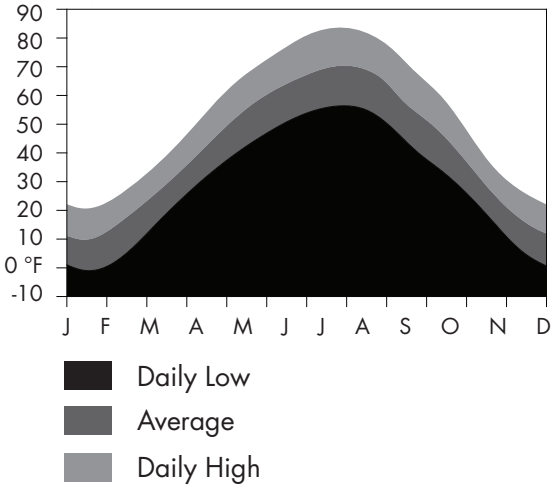
WIND SPEED



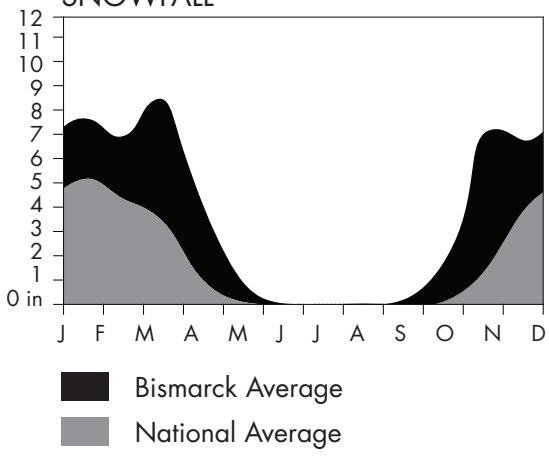
PRECIPITATION



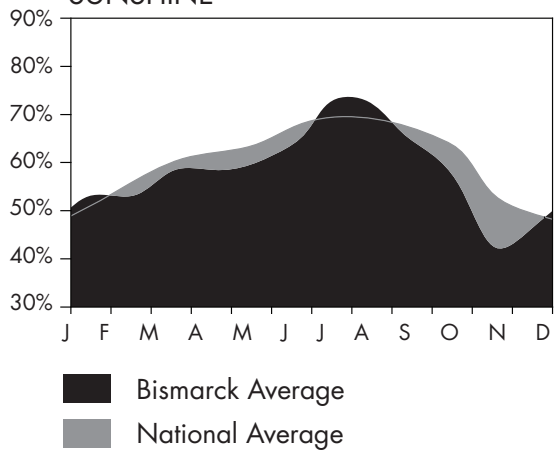
AVERAGE TEMPERATURES



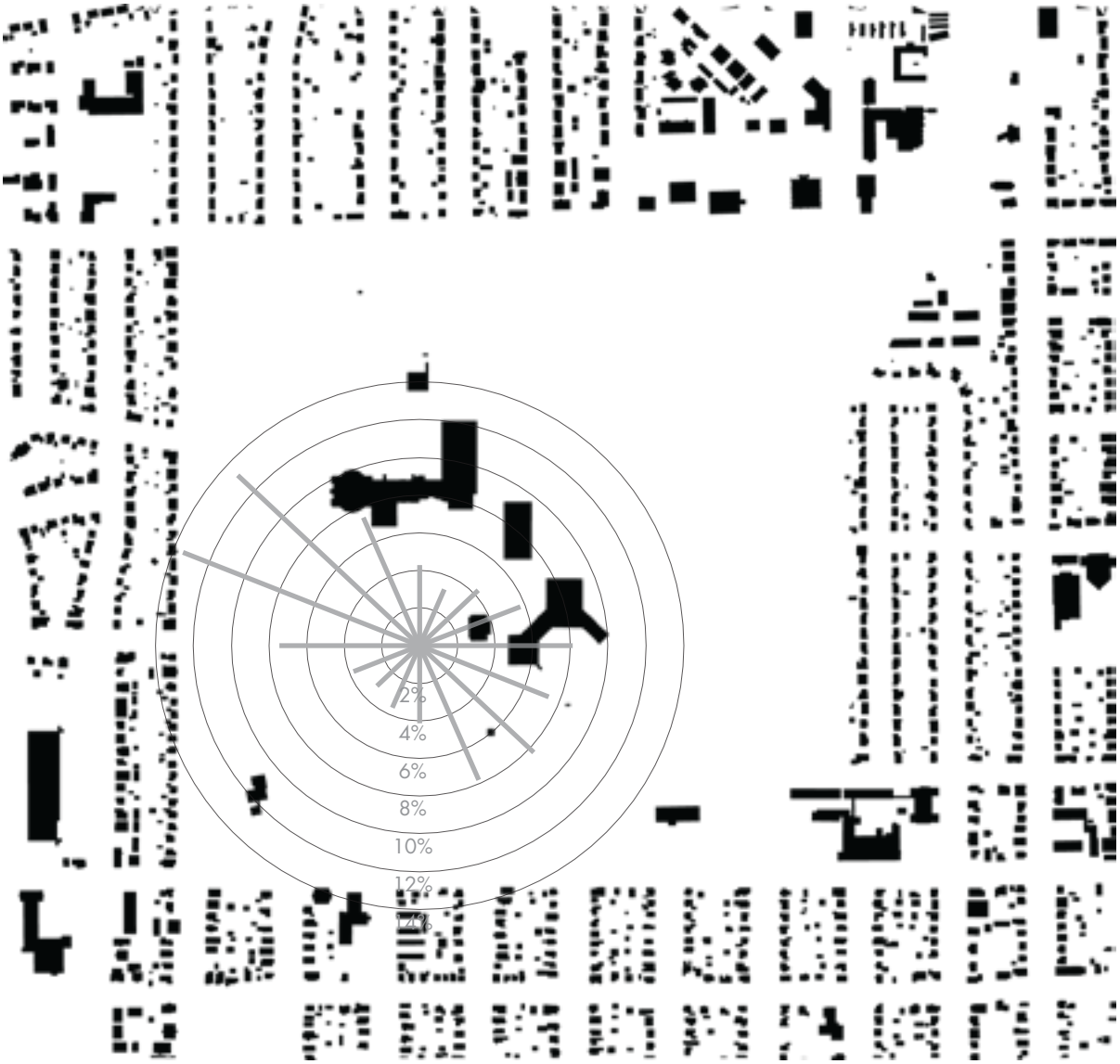
SNOWFALL



SUNSHINE

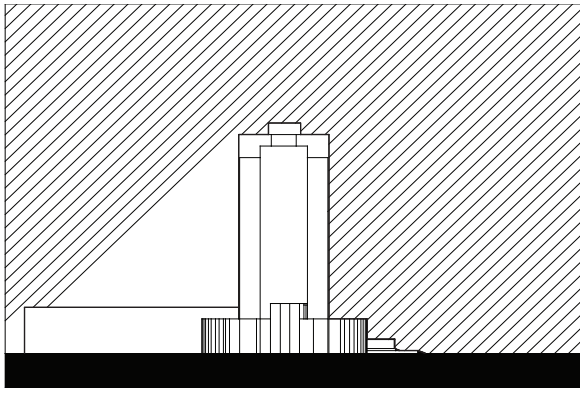


WIND FREQUENCY

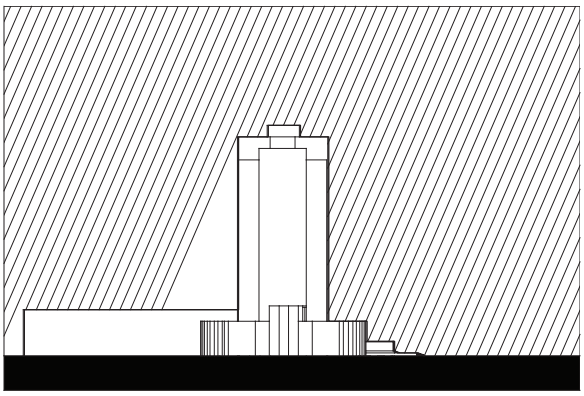


* Information from city-data.com

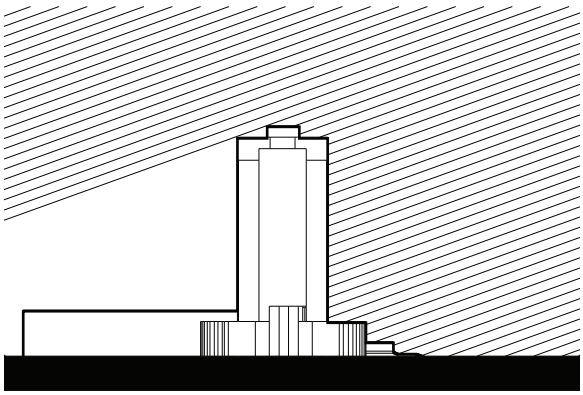
SEASONAL SUN ANGLES



Winter Solstice Sun Altitude : 19.8d

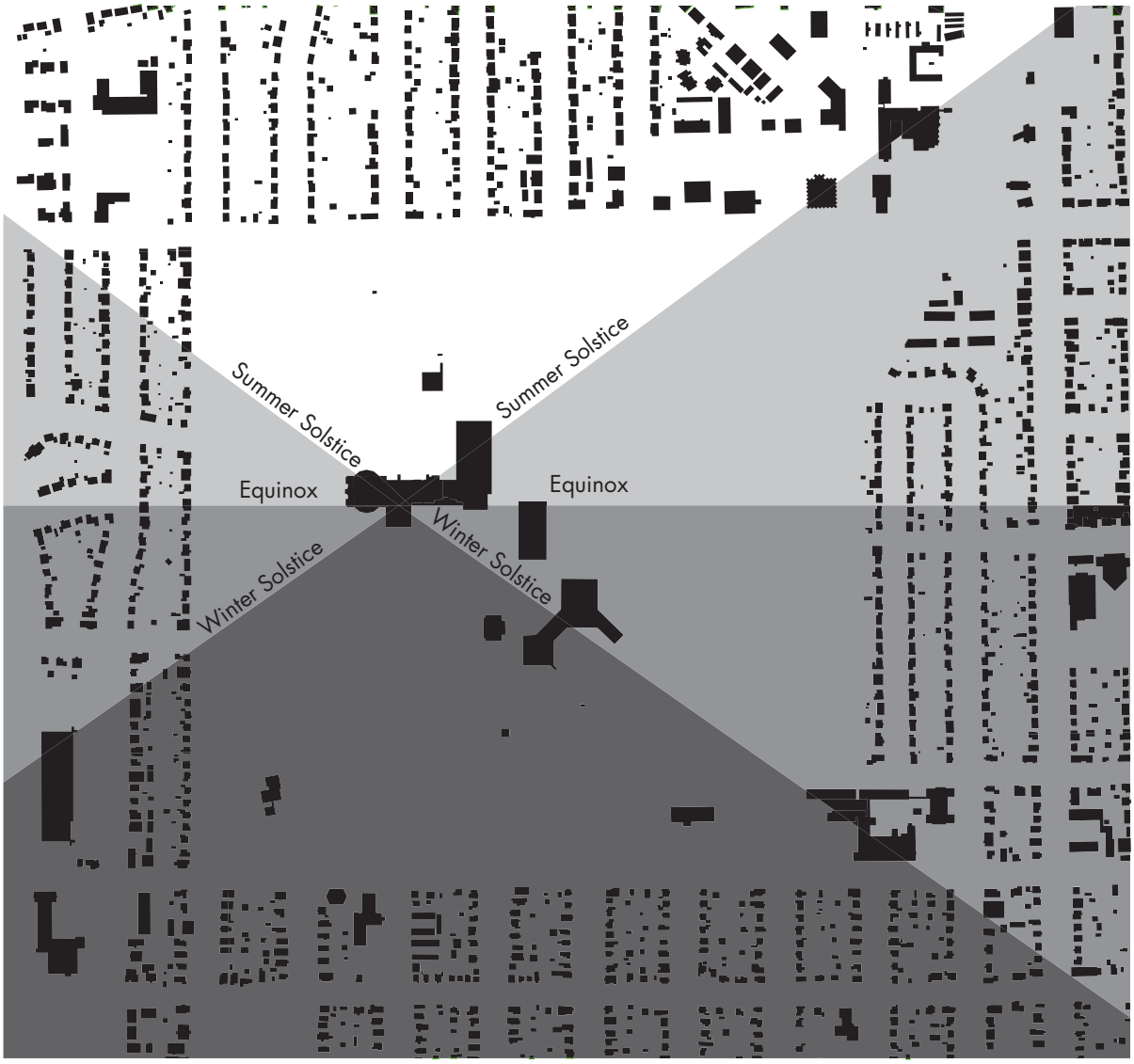


Equinox Sun Altitude : 43.7d

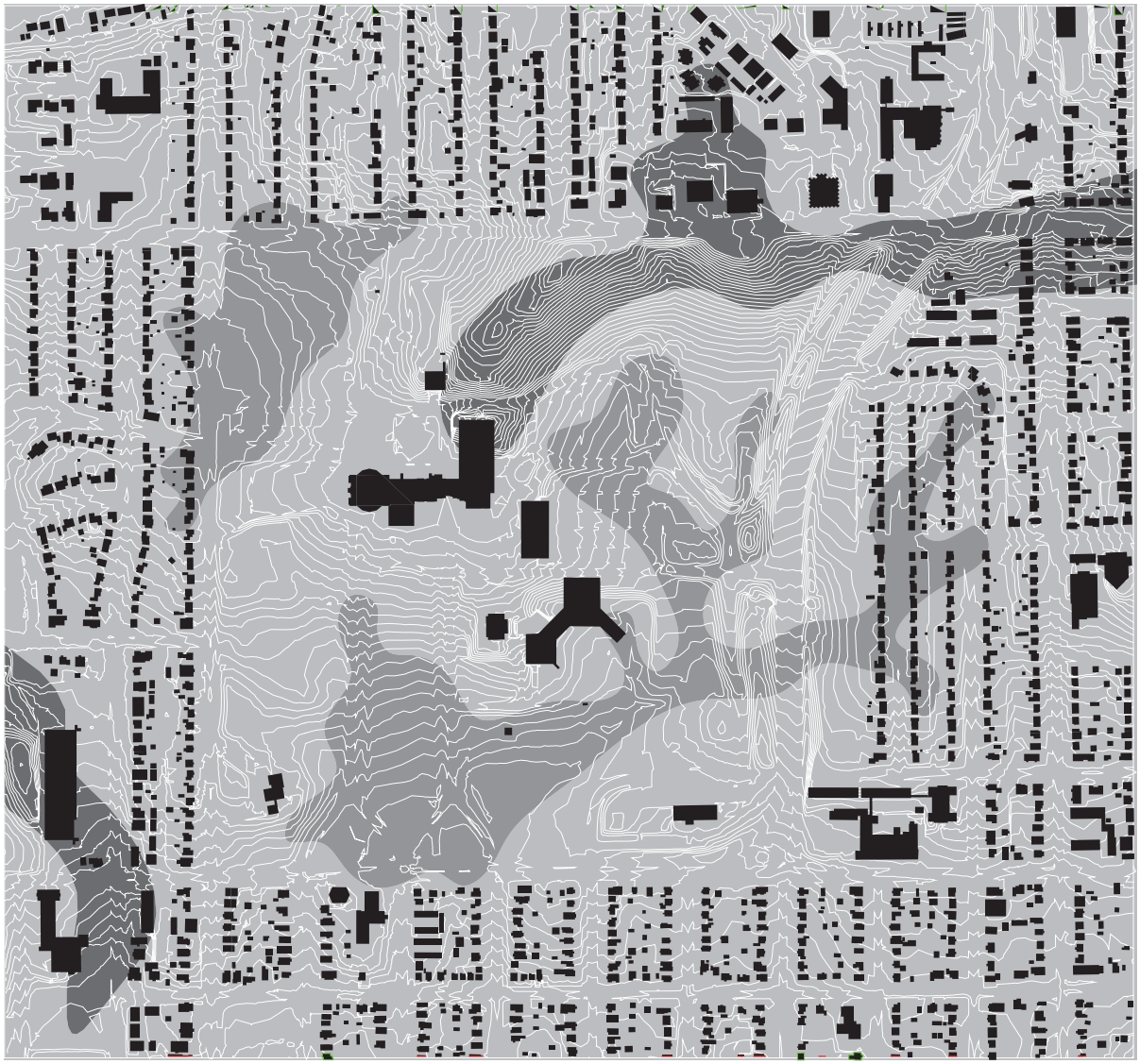


Summer Solstice Sun Altitude : 66.6d

SEASONAL SUN ANGLES



SOILS & TOPOGRAPHY ANALYSIS



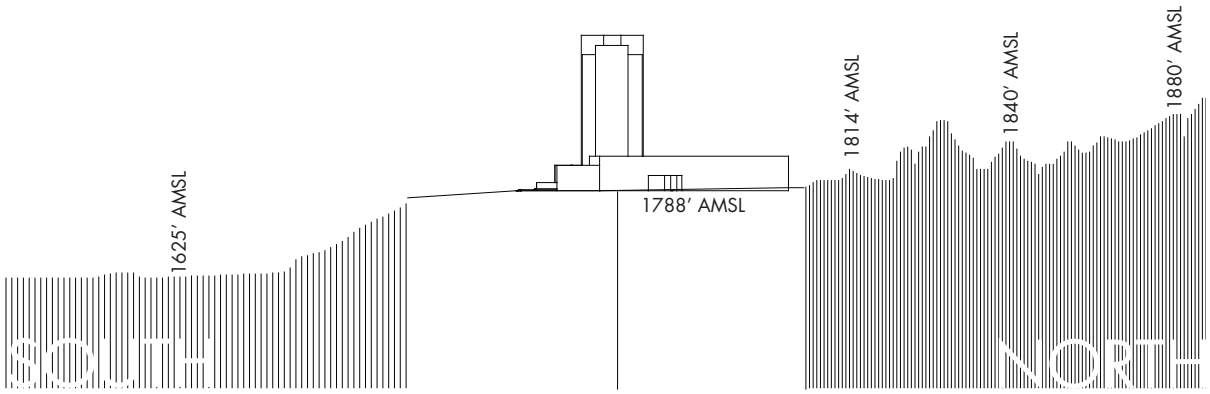
Temvik Silt Loam

Grail Silt Loam

2′ Contours

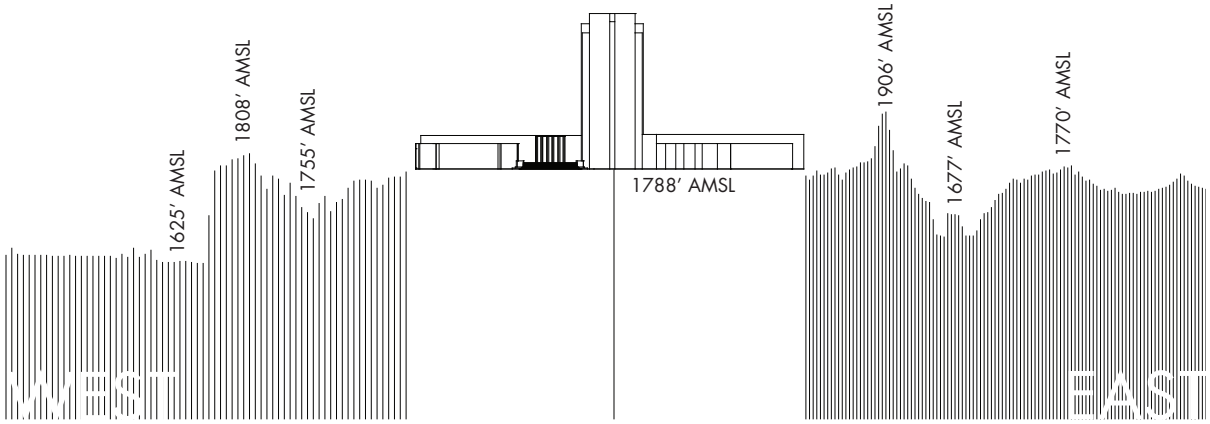
* Information from Natural Resources Conservation Service

BISMARCK TOPOGRAPHIC STUDY



600'

250' Increments



HISTORICAL CONTEXT OF THE NORTH DAKOTA STATE CAPITOL

The grounds of the North Dakota State Capitol has seen many pivotal historic events and has provided the medium for the state policy making process that has shaped the lives of the citizens of North Dakota. But the buildings history runs much deeper than the steel and stone from which it is constructed. The politics leading to its inception and a rich history with origins predating man gives a better understanding of how the plugs structure into its current infrastructure.

The following series of photos, maps, and commentary is designed to help develop that lens to understand the layers of people, ideas, and brick that are embodied in the architecture as it stands today.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One can not begin speaking about the North Dakota State Capitol without talking about the land. North Dakota, in the not so distant past, was a physically open landscape free of roads, fences, lines of ownership, etc. Georgia O' Keefe once described it as having "terrible winds and a wonderful emptiness." (O'Keefe, 1990) While the openness captured the imaginations of the few that had experienced it, the prairie as a place went unrealized until the placement of the railroad revealed it to the masses. Of course before the migration of immigrants the land had been inhabited for thousands of years by farming and nomadic tribes that used ancient but effective forms of way finding through a seemingly direction-less landscape. The site of the North Dakota State Capitol knew no framed alleys nor was it deemed as being more important or imposing that the surrounding landscape. Before the first trains came to present day Bismarck in 1873 the land was but a great, undulating buffalo commons yet to be sculpted. (Langemo, 2002)

Upon the rail line penetrating the prairie prospectors from the Eastern America and Northern Europe quickly grabbed the opportunity of cheap, available land and began dividing the once free range into more recognizable landscape. Humble dwellings began to litter the landscape and primitive forms of Bismarck began to take shape. The

Black Hills gold rush of 1874 is what got Bismarck on its feet. Being the end of rail line Bismarck became the jumping point to the Black Hills bringing great economic prosperity to the lonely village. (Hoffman, 2009)

The importance of the Bismarck as the queen of the prairie was solidified when Alexander McKinsey, an influential political figure, moved the official territorial documents from Yankton (SE South Dakota) to Bismarck and proclaiming it the new territorial capitol. The oncoming of the capitol as well as securing the of the state penitentiary gave the young community great optimism of become the regions star city. A modern street grid was established and the future growth pattern of Bismarck was procured. The selected site for the new territorial capitol was to the North of the city where it sat atop a hill and overlooked its domain. (Remele, 1989)

After a slough of proposals Minneapolis architect Leroy S. Buffington, famed architect of Pillsbury Hall on the University of Minnesota Campus, was commissioned for the plans of the new center of government. His plan called for an identical plan to the recently completed Minnesota state capitol with one extra floor. The structure was to be topped by a 180' edifice capped with a humble dome. The facades were of local bricks with terra cotta and sandstone accents. (Remele, 1989)

The city was in a fervor. Investors

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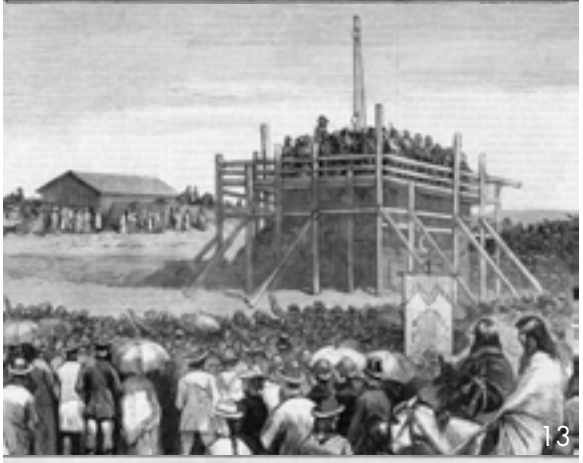
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flocked to the newly established capitol guided by the promise of vast economic prosperity that seemed to be coming. A Radial plan was developed, inspired by that of the Wisconsin state capitol in Madison. To pay for the magnificent new structure the surrounding 320 acres were divided and sold to the droves of new citizens and entrepreneur that were destined to be on their way, but politics had different plans. (Hoffman, 2009)

Angry politicians of deep South Dakota threatened to move the capitol from Bismarck dissuading investors to buy. In the end the Three-quarters of the lots went unsold and the new facility had to be greatly reduced in scope. The tower was out as well as two flanking wings. The building went incomplete for 13 years until awkward appendages were added to the facility in 1893 and 1903. (Remele, 1989) By this time the North Dakota State Capitol Building had become a misfit still sitting alone on the prairie and made up of a medley of misfit parts. The rooms quickly became cramped for the expanding government and was falling into disrepair. The citizens looked at the facility with dampened hearts and viewed it as a mere monument of what was to be but never was. (Remele, 1989)

Only 20 years after the completion of the original structure talk had begun circulating about the construction of a new capitol building. While the state legislature ultimately apposed the idea

money was allocated for the master planning of the existing complex. The plan took a much different approach from making the capitol the center of a dense urban fabric. Instead, spacious grounds full of gardens, tree groves, and paths were planned. Though a new structure was out of sight the master plan called for a new structure at the height of a gracious capitol mall. The existing North-South axis was to prevail in the new plan with a Romanesque symmetries calling for an additional two state buildings flanking the mall on the east and west sides. Other site features included a new governors mansion on the Southwest corner and an array of various artifacts, points of interest, and historic markers. The plan quickly began to take shape with the construction of a new veteran memorial that acted as overflow office space. Road networks were also laid out despite their lack of connection to the existing building.

Just days before the 1931 legislative session the North Dakota state capitol building burned to the ground. The event require quick actions and the legislature promptly approved the construction of a new state capitol facility. (Remele, 1989) The planning commission found themselves in a the confusion of the time. Classically inspired capitols monopolized the design arena. While the master plan matched this trend the meager $2,000,000 budget would not allow for such a highly ornate facility while maintaining the

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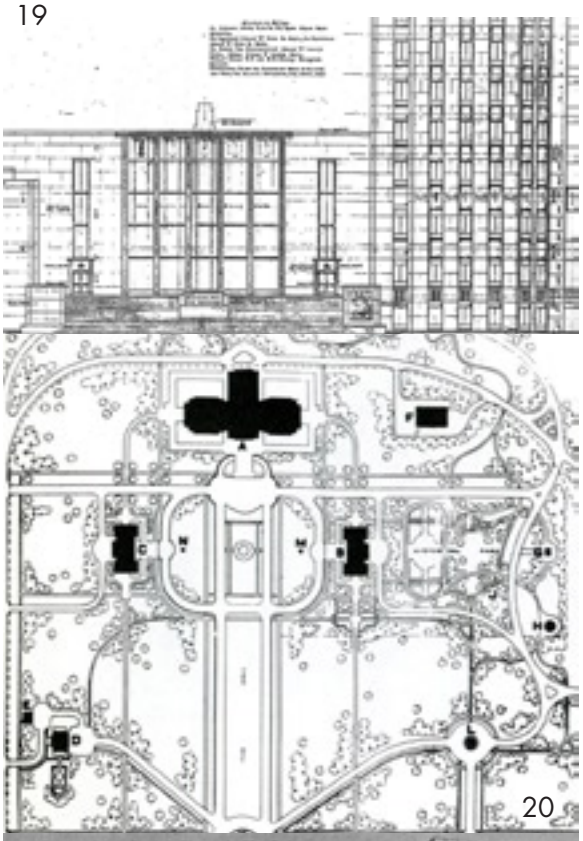

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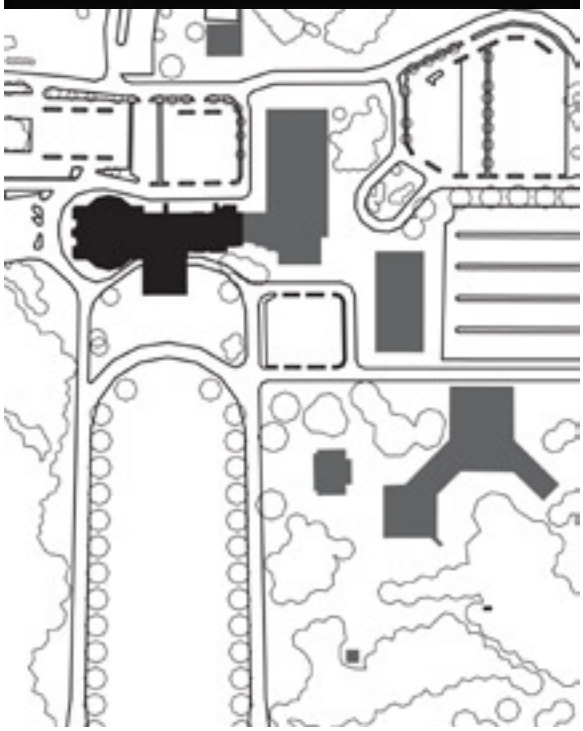


square footage needs of the growing state agencies.

The architect selection committee toured some of the regions new capitols including Louisiana, Nebraska, and Colorado. The commission was unimpressed by the highly lavish, inefficient, outdated design of the Colorado capitol. The board was much more impressed by the more modern capitols of Nebraska and Louisiana that de-emphasized the dome and rather showcased steel construction with slender towers. The group was especially grabbed by the functionality of the Louisiana state office tower and decided to hire Chicago skyscraper architects John A. Holabird and John W. Root. Though The two had little experience in governmental design but were renowned nationally for their cutting edge office, residential, and hotel high rises. (Remele, 1989)

The commission proved to be a group of confident innovators willing to turn their backs on traditional capitol design. They believed that the new age capitol ought be efficient and refined to reflect efficiency of the government at work. The plan was simple a narrow, slenderly proportioned great hall slicing between the house and senate chambers. an office tower, 240' in height, would sit slightly off the north south axis and hold the offices for all the agencies for years to come. (Remele, 1989)

But the state, in battle with the

national economic depression, could not find the funds for even the sparse ornamentations in the design. (Remele, 1989) Sculpted limestone panels were simplified and distinctive vertical flutes on the tower were omitted. What was left was as raw tower bordering somewhere between the stream lines of Art Deco and the simplicity of International Style. What the buildings lacks in ornamentation it makes up for in boldness unashamedly defying what it means to be a state capitol building by refusing classical ordering and the cliche of a dome.

Since its completion in 1932 the capitol has continued to grow. The once lonely building with oversized lawn has become engulfed in the structure of the city creating a great urban park and like a giant compass divides the city into the four cardinal directions. A brutalist judicial wing was designed in the 1980's to plug into the existing navigational system with direct connections to the great hall maintaining both the natural flow of the facility while also paying homage to materials and proportioning systems set by the original building.

The grounds of the North Dakota State capitol has already become a layer of history, ideas, and stone that continues to thicken with each passing decade. The only certainty about the future of the State Capitol and grounds is its inevitability to grow and change.

GOALS FOR THE DESIGN THESIS

The Design Thesis capstone project is the pinnacle of the architecture education. Its successful completion indicates a fruitful educational career and acts as a spring board into a competitive profession. In saying this I have high expectations of myself to create a thesis that clear, relevant, and valuable.

My highest priority for the thesis project is personal. It is important to me to prove to myself that I have fully developed the graphical, lingual, and critical thinking skills necessary to explore architecture thought and engage in an architectural conversation at an academic level. I hope for this thesis to be the premiere project in my educational career that is a source of pride wherever my professional life may take me. The ability to compile relevant investigations to make fruitful arguments is at the top of what I would like to develop. But arguments and investigations do not come only by word. I would like to focus on my graphic skills to communicate a broad range of information and thought processes in ways that are engaging and of the highest professional quality. Just as it has been throughout the rest of my architecture education it is important to me to be inventive, original, and daring. I would feel very much regret in the future to not take full advantage of the flexibility, facilities, and knowledge that the NDSU provides.

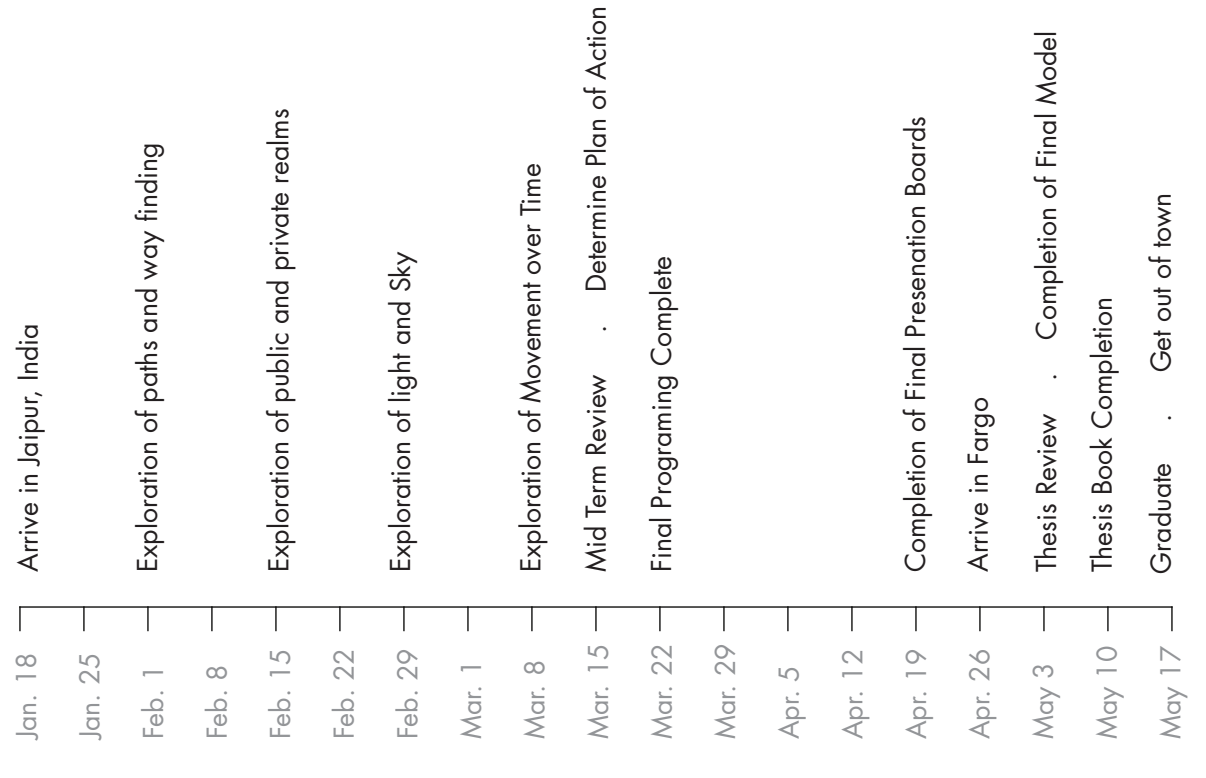
While I have a high level of personal aspirations I also feel a certain responsibility to the school that has provided the resources to engage in such a thesis. I feel that the importance of a the project is to further the academic realm of architecture at the school and to provide a credible source of research for future students, faculty, and area professionals. My ambitions also extend to a professional realm. In a day when architecture faces challenges of economic hardship, environmental degradation, technological dependence, and increasing specialization it is imperative to display leadership and awareness. The work as a student must not stop upon graduation and translate into professional explorations and endeavors.

I also have goals in more specific terms in regards to the project. I hope the resultant of the work is an opportunity for myself and for others to rethink the way we see the North Dakota State Capital Building and how we move through and perceive space in general. To create an a conversation about the importance of

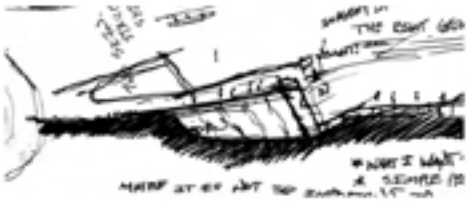
intuitive way finding and raise questions about what it means to make addition to existing infrastructure.

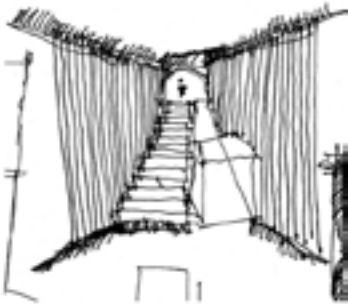
My goals for my senior thesis are lofty but with hard work, proper organization, and a bit of luck I feel that these goals can become something great that I can take pride in throughout my architectural career.

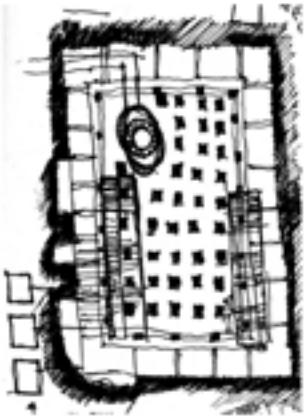
PROJECT SCHEDULE

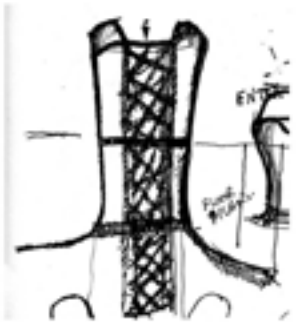


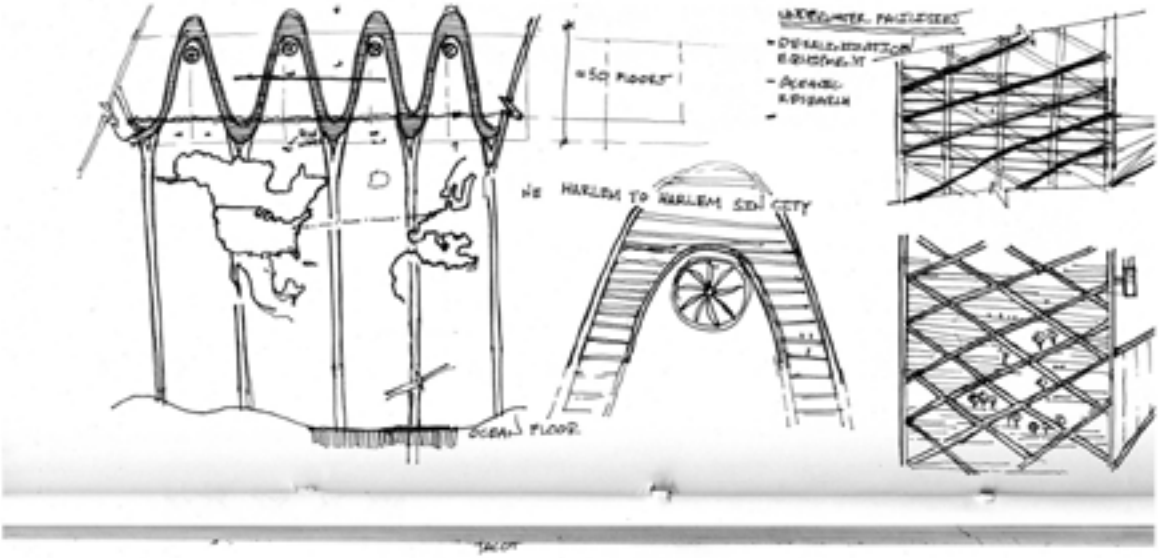

PROGRESS







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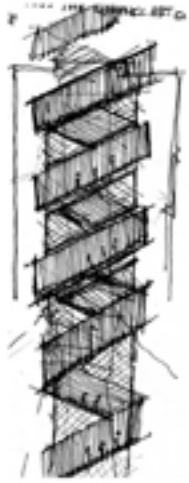
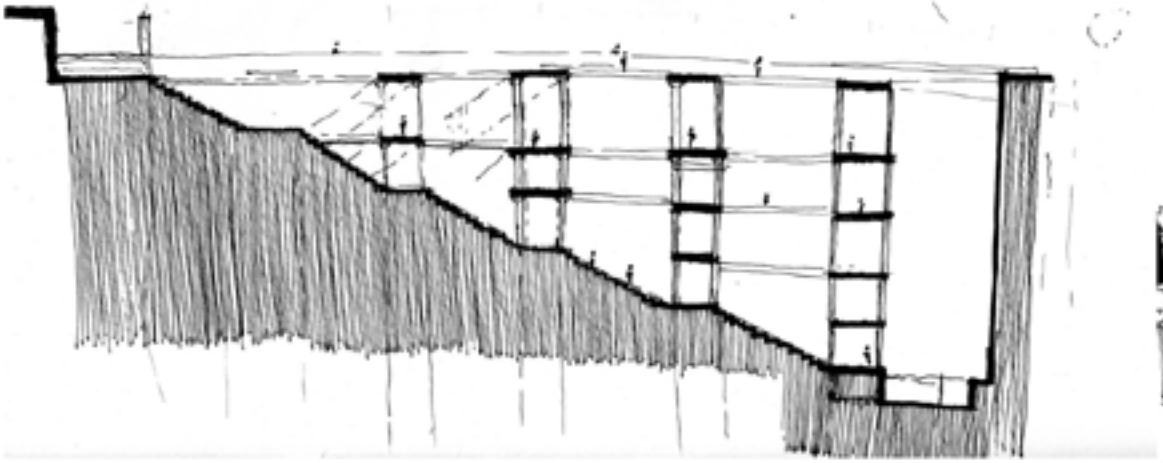
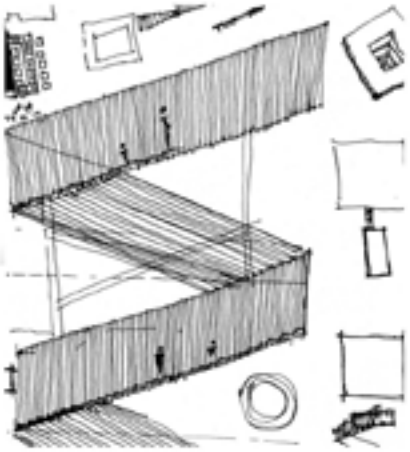
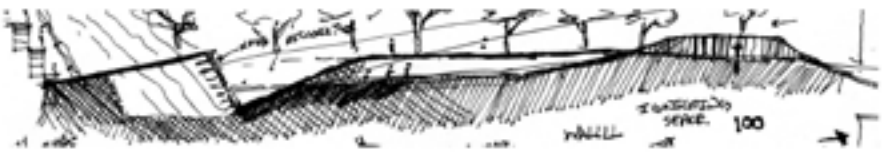
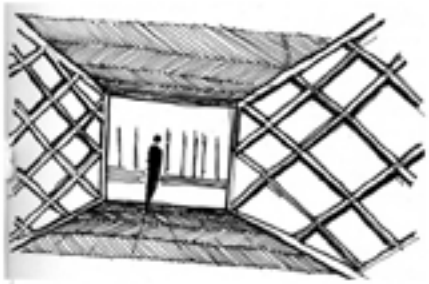
HARLEM TO HARLEM SEA CITY
OCEAN FLOOR

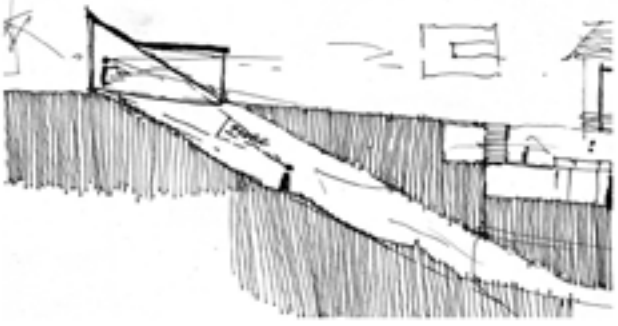


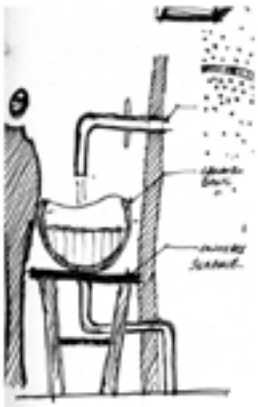


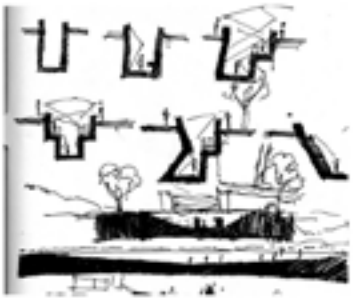


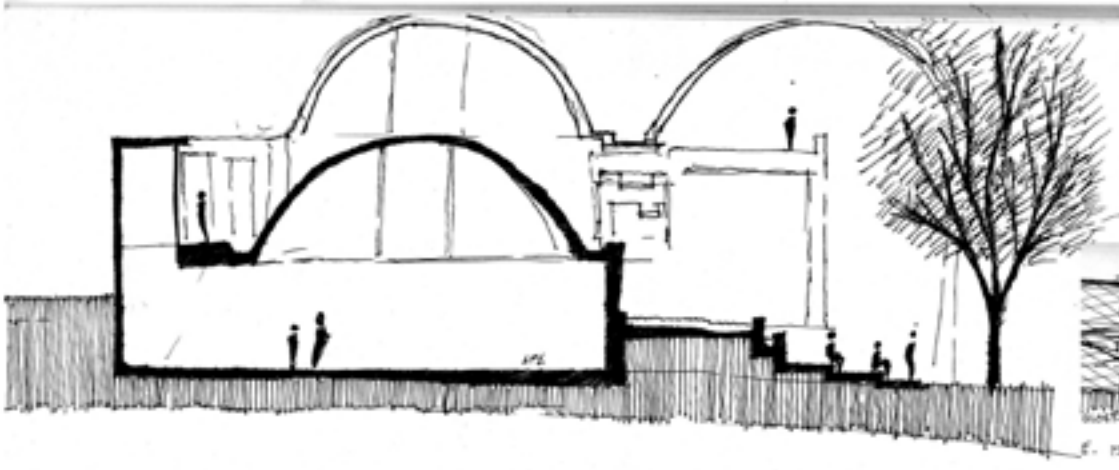


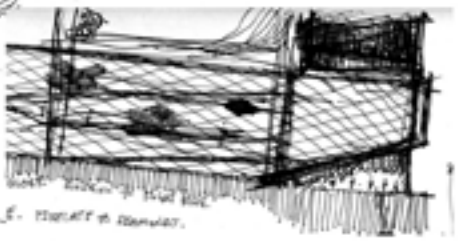


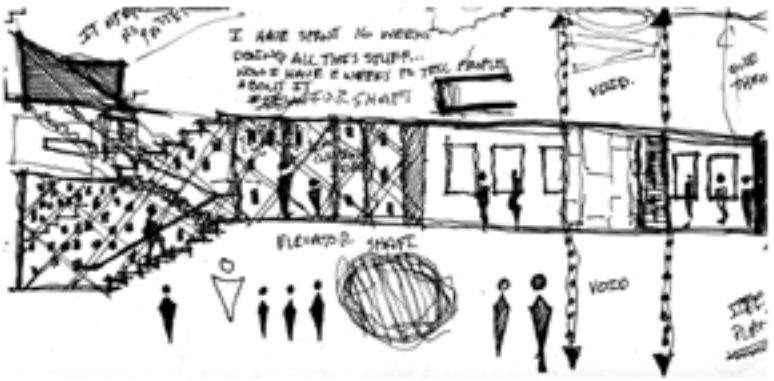




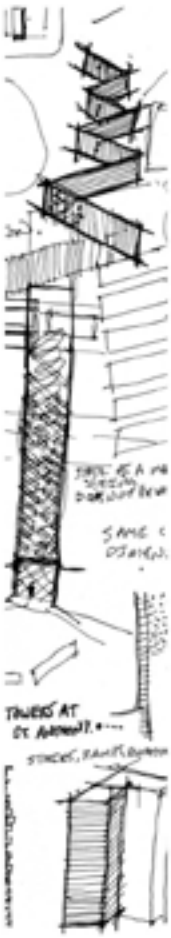








AN ARCHITECURE OF SEEING


TRUSS AT
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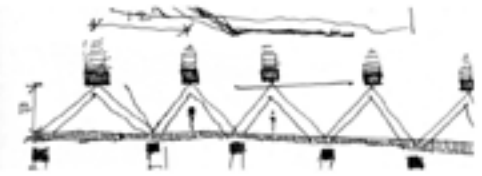
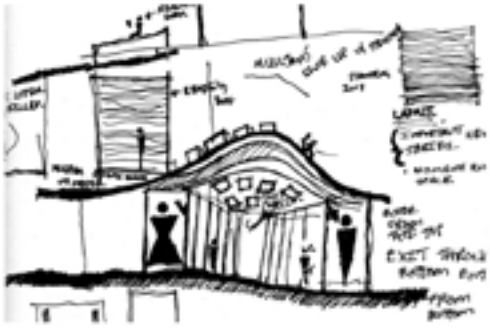
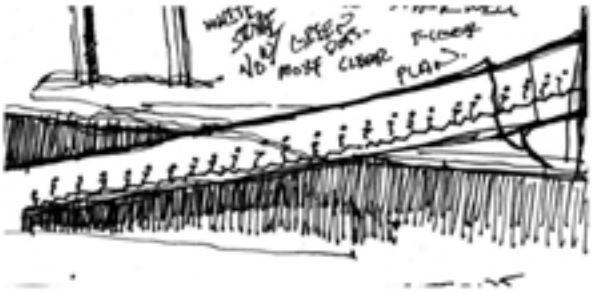
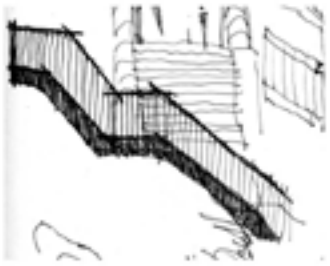
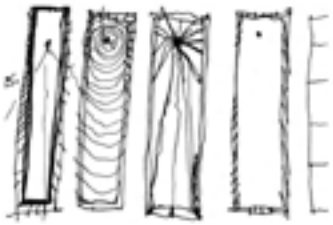


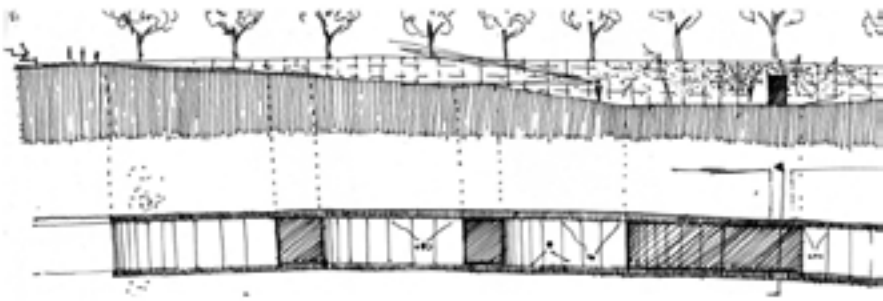


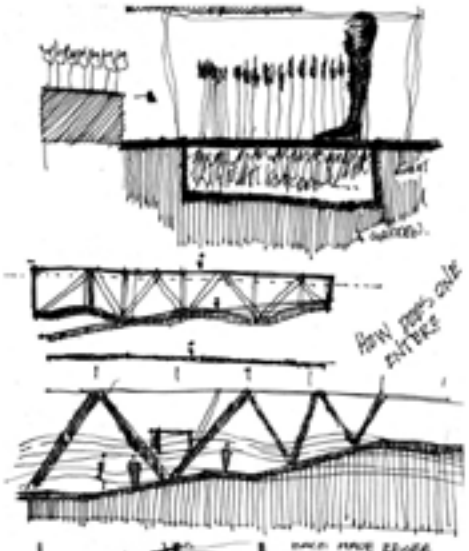



SQUARE









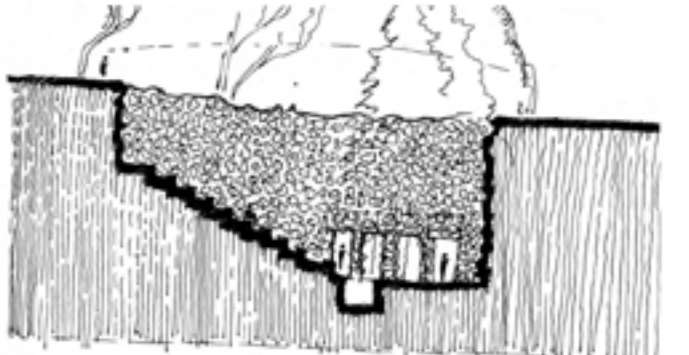
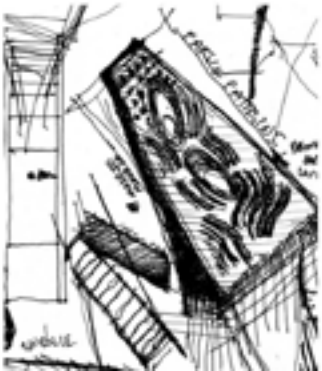
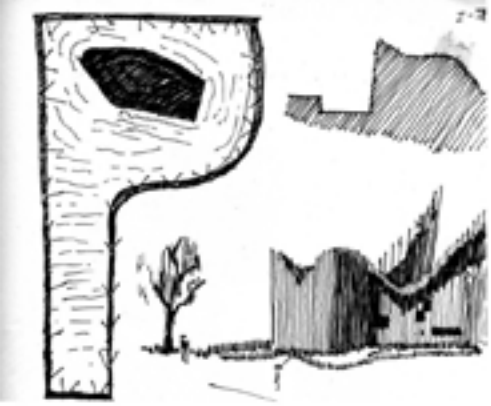


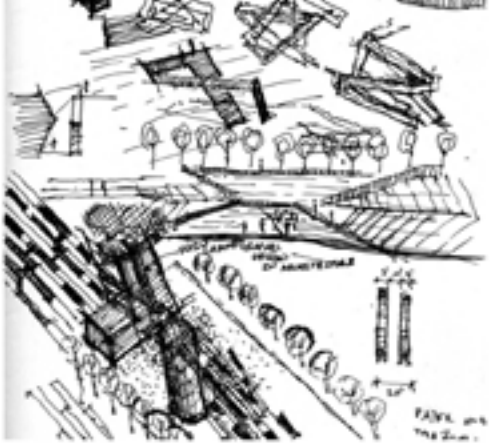

PLATE
STEEL

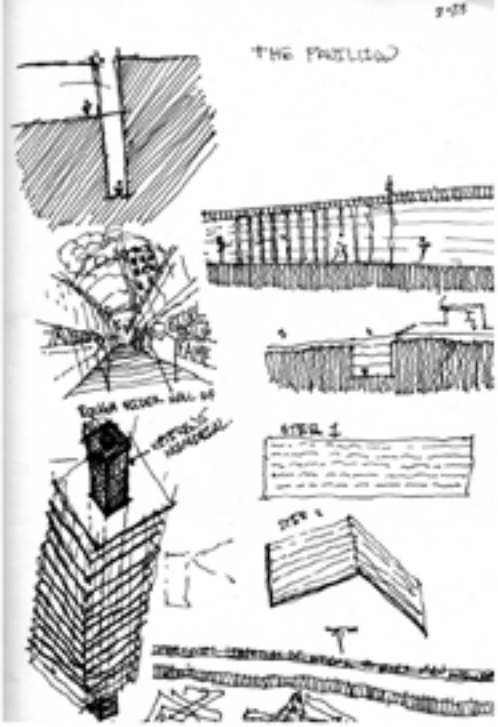


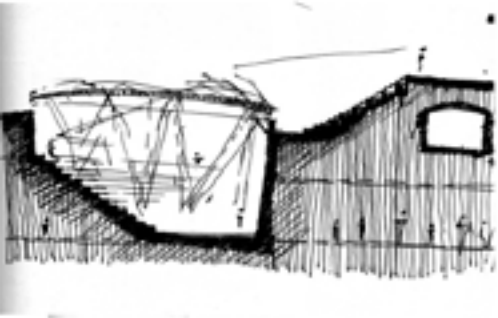

DAKOTA

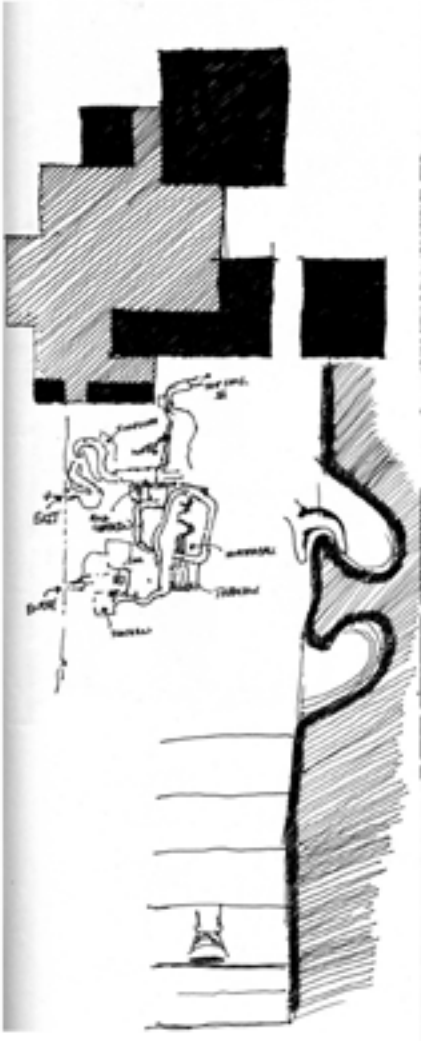

CAMERA

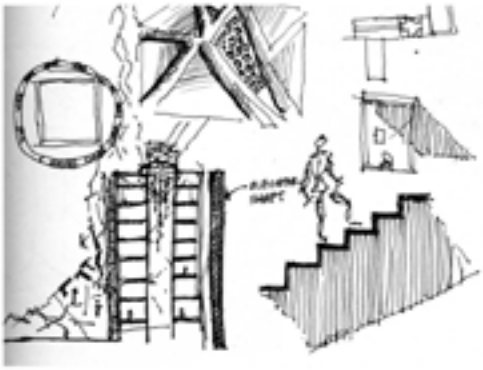


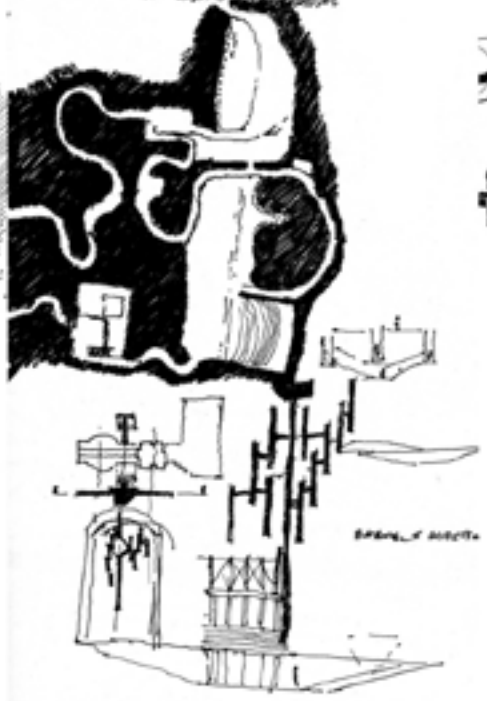


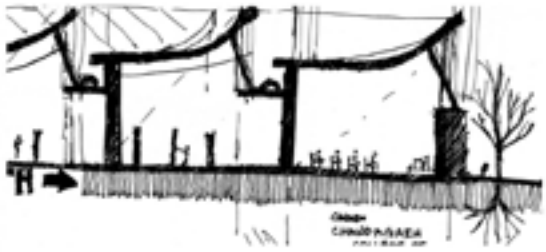

THE PAVILION











ARCHIVE OF VISUAL CULTURE

All individuals are by nature equally free and independent and have certain inalienable rights, among which are those of enjoying and defending life and liberty; acquiring, possessing and protecting property and reputation pursuing and obtaining safety and happiness; and to keep and bear arms for the defense of their person, family property, and the state, and for lawful hunting, recreational, and other lawful purposes, which shall not be infringed

the military shall be subordinate to the civil power. No standing army shall be maintained

STRUCTURED LIVING

A living document concerning frames, navigation, and the synthesis of form

Architecture and its infrastructure act as a mediating tool defining the world around us by structuring experience. This thesis defines the consiquence of building and how designers structure experience by opening and obscuring creating physical, intellectual, and even political boundaries. The vehical of the study is an addition to the iconic North Dakota State Capital Building in Bismarck, North Dakota. The addition includes interpretive space at the base of the current structure as well as new entry condition and vertical circulation. The new architecture questions how one makes additions to existing pieces of architecture and studies how the manipulation of paths and frames impacts the perception of space. The study also questions the issue of site and how architectue acts as both an object looked at, often from far distances as well as looked through, sculpting views of the surrounding horizon.

The study focuses on four frames of intrest within the North Dakota State Capitol complex. Each studies how interventions of new architecture sculpt understanding by redefining movement and views.

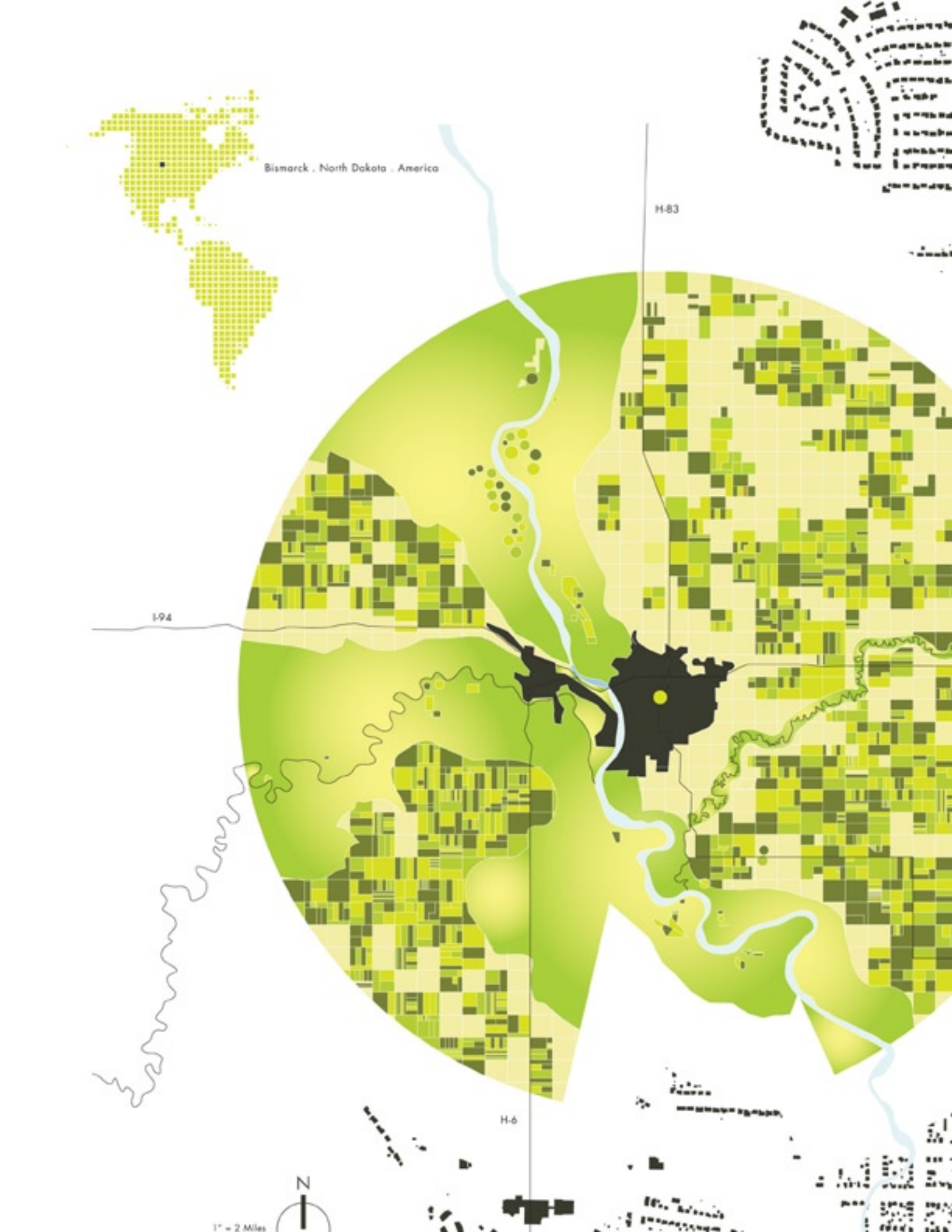
1 Entry is to the North Dakota Archive of Visual Culture. The center is a repository of media describing the establisment and growth of the state presenting imagery from Mass Media to children doodles. The architecture question the how one generates form and movement as well as how architecture can create anticipation of remote space.

2 Exit from the Archive. A vertical circulation space that acts as multiple frames giving telescoping views that highlights spaces not yet visted and reflects upon prior paths.

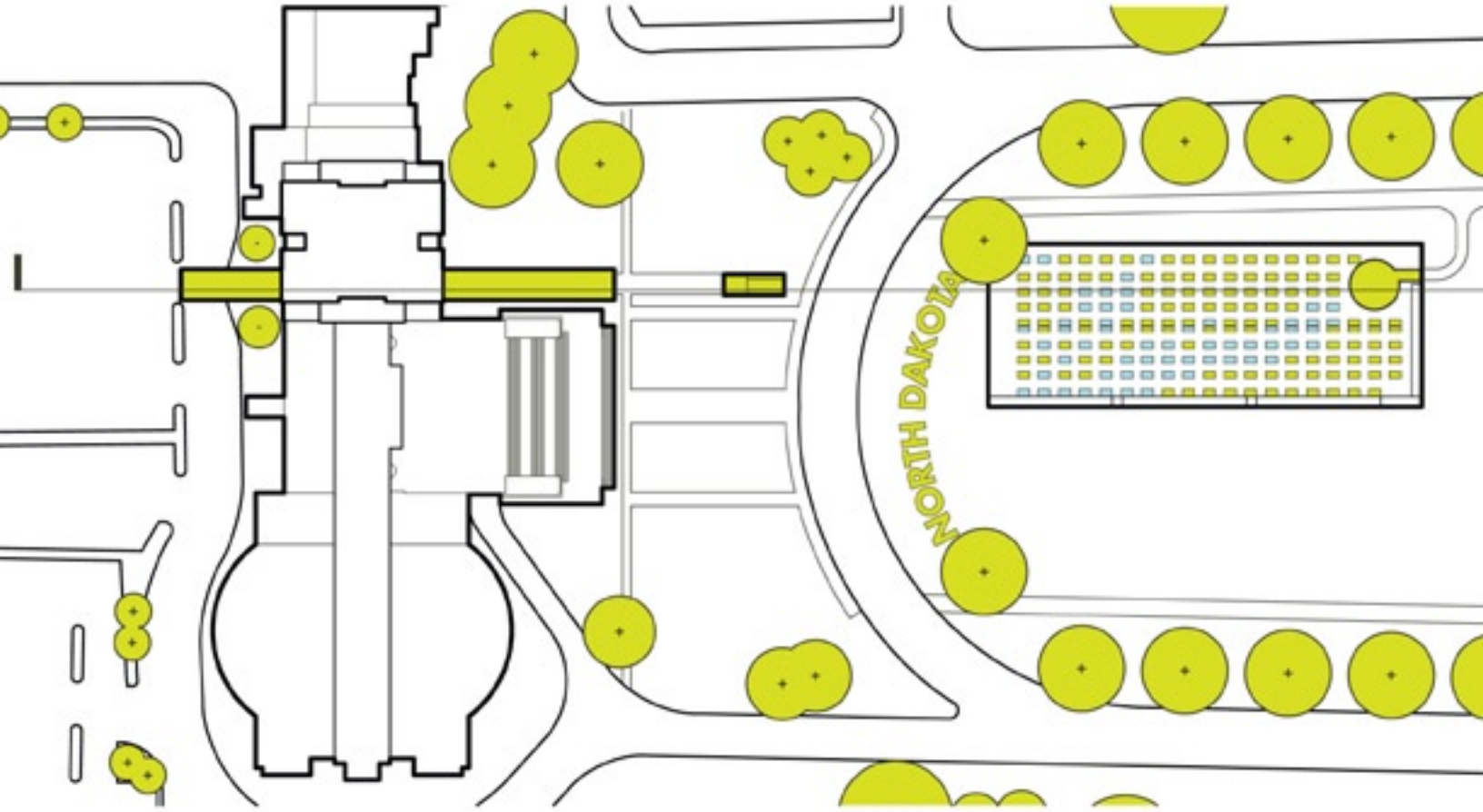
3 Capitol tower vertical ciculation. A new series of ramps, stairs, and elevators on the towers North face that redefines how one moves up the tower allowing changing views to the surrounding region and capitols facade as one climbs. The structure investigates how facades act as an apperature opening and obscuring views .

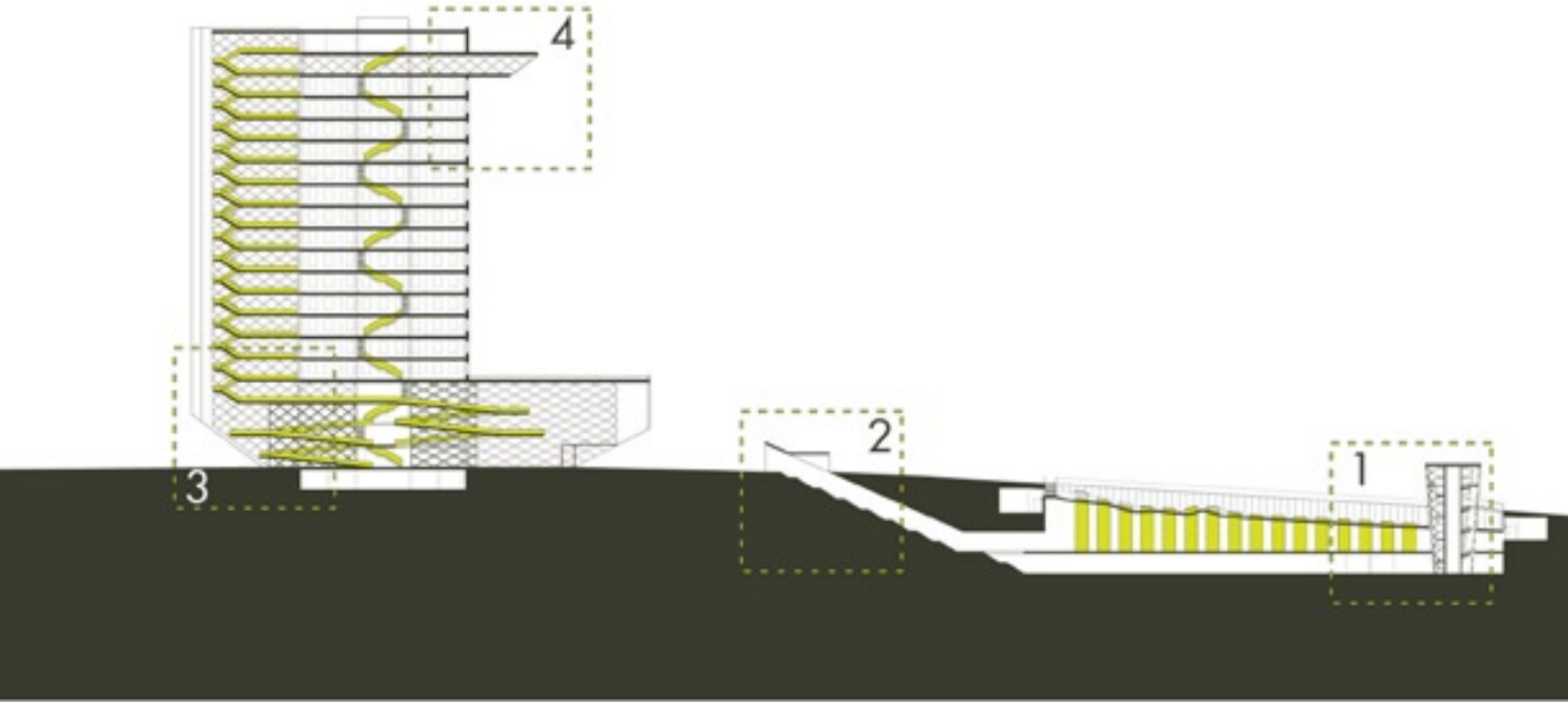
4 Horizon Room. A cantilever 224 feet above the ground protruding 25 feet past the capitols south face producing new viewsheds to the horzion 18+ milles away.

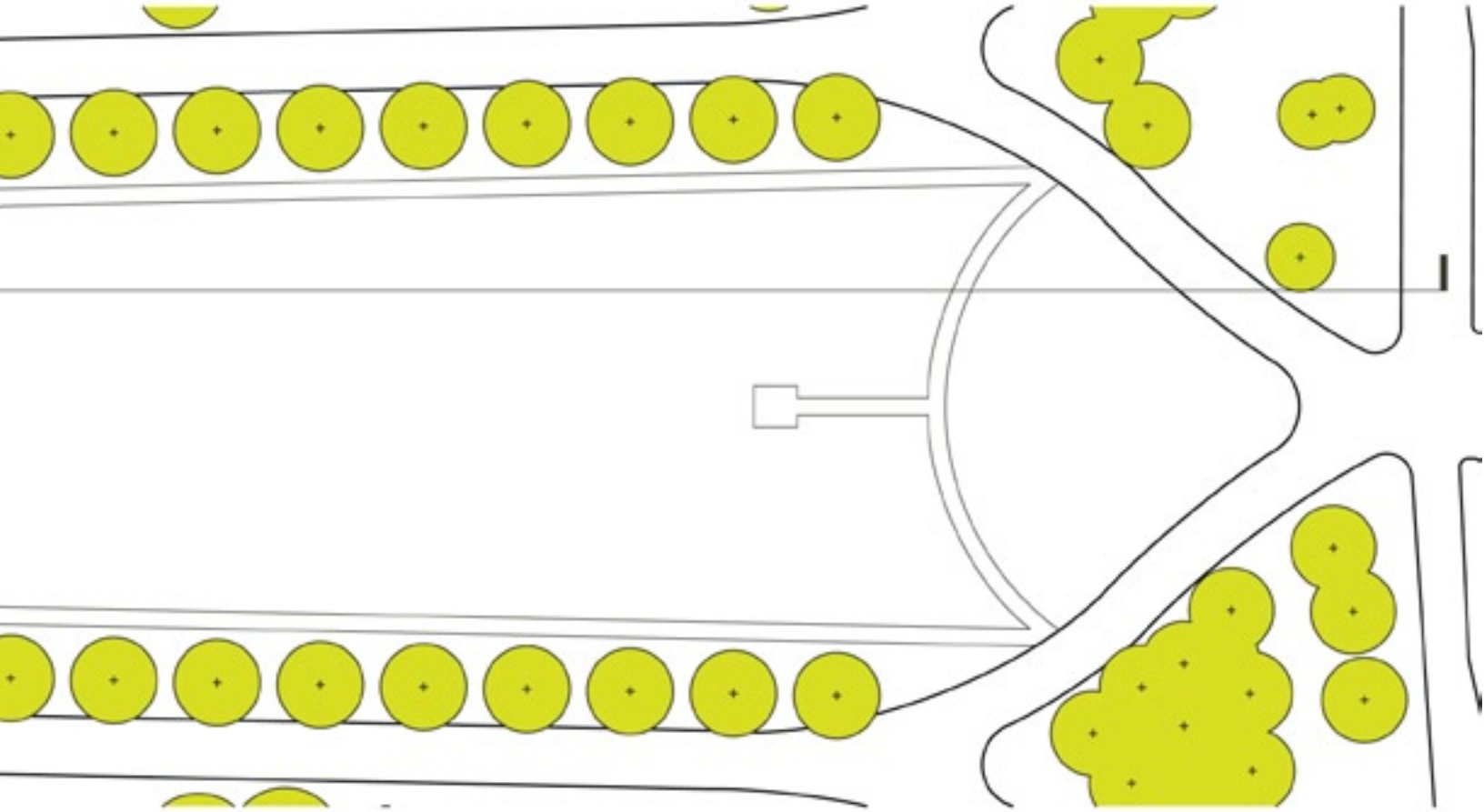
Student: Brent Nelson
Instructor: Mike Christenson
ARCH 772 Design Thesis
Spring 2010
Department of Architecture and
Landscape Architecture
North Dakota State University
Software Applications:
Rhino3d, Adobe Illustrator


Bismarck . North Dakota . America
I-94
H-83
H-6
N
1" = 2 Miles


H1804
194
1 : 450

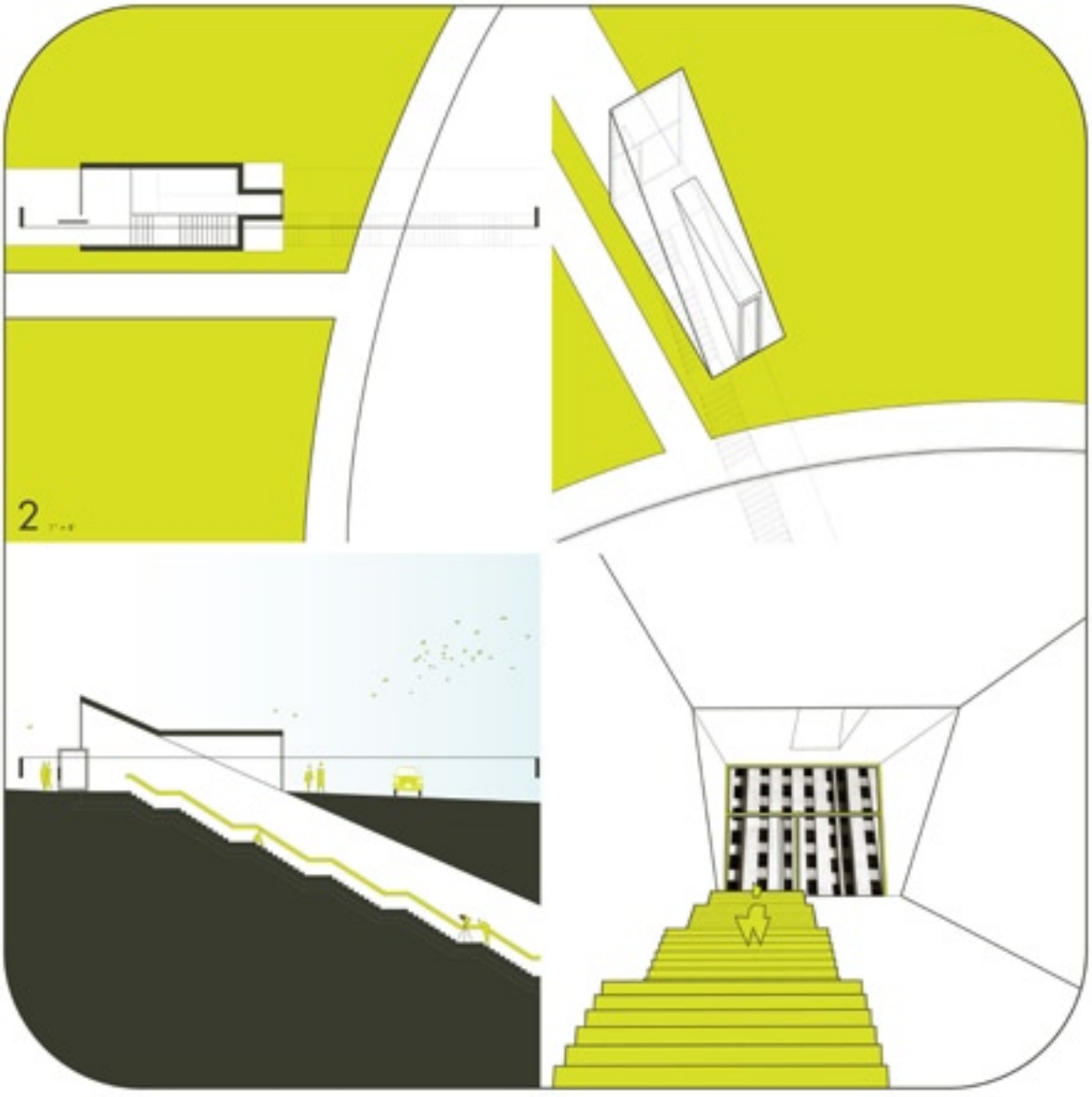

NORTH DAKOTA


4
3
2
1



1" = 50'

Z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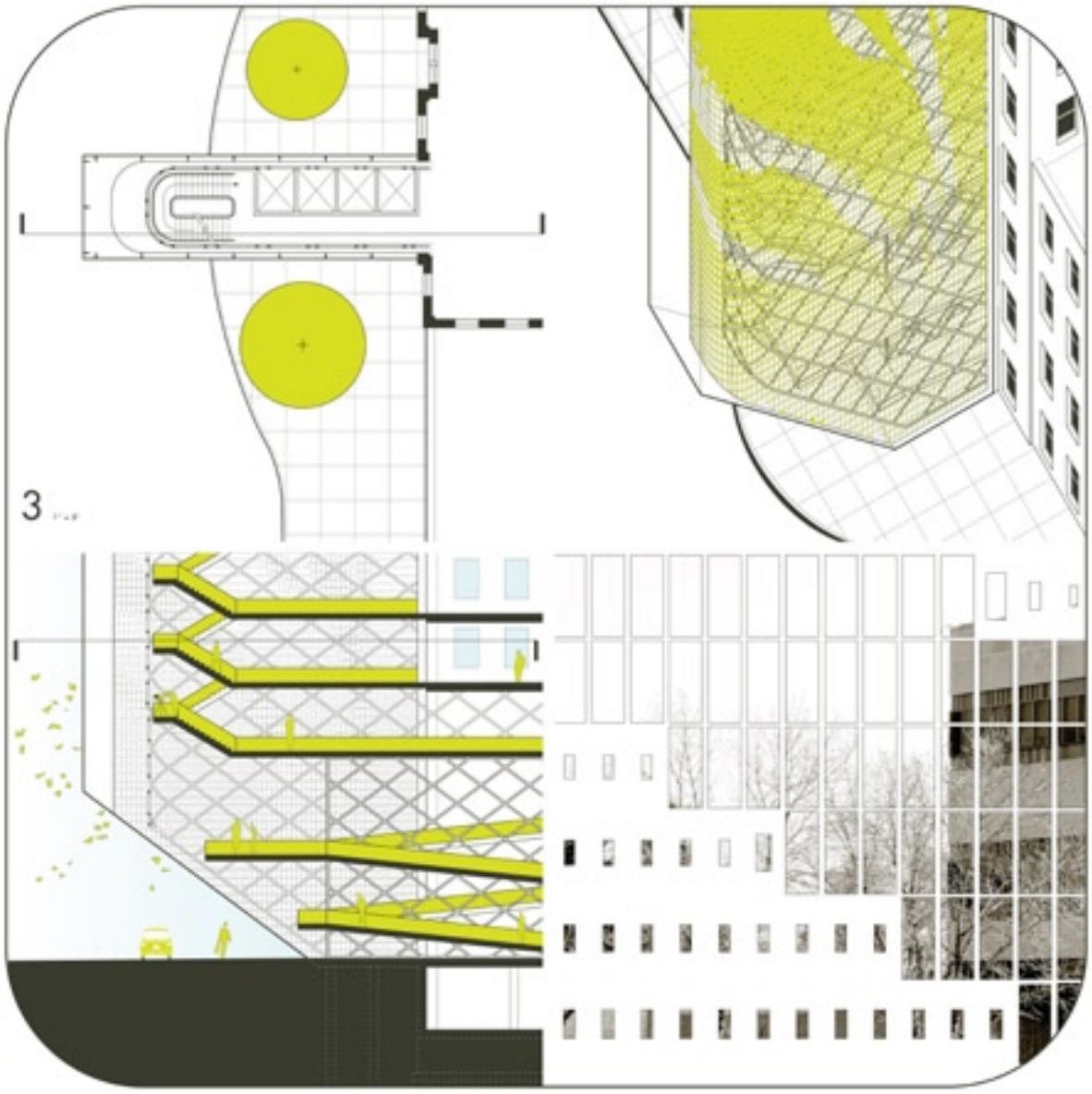
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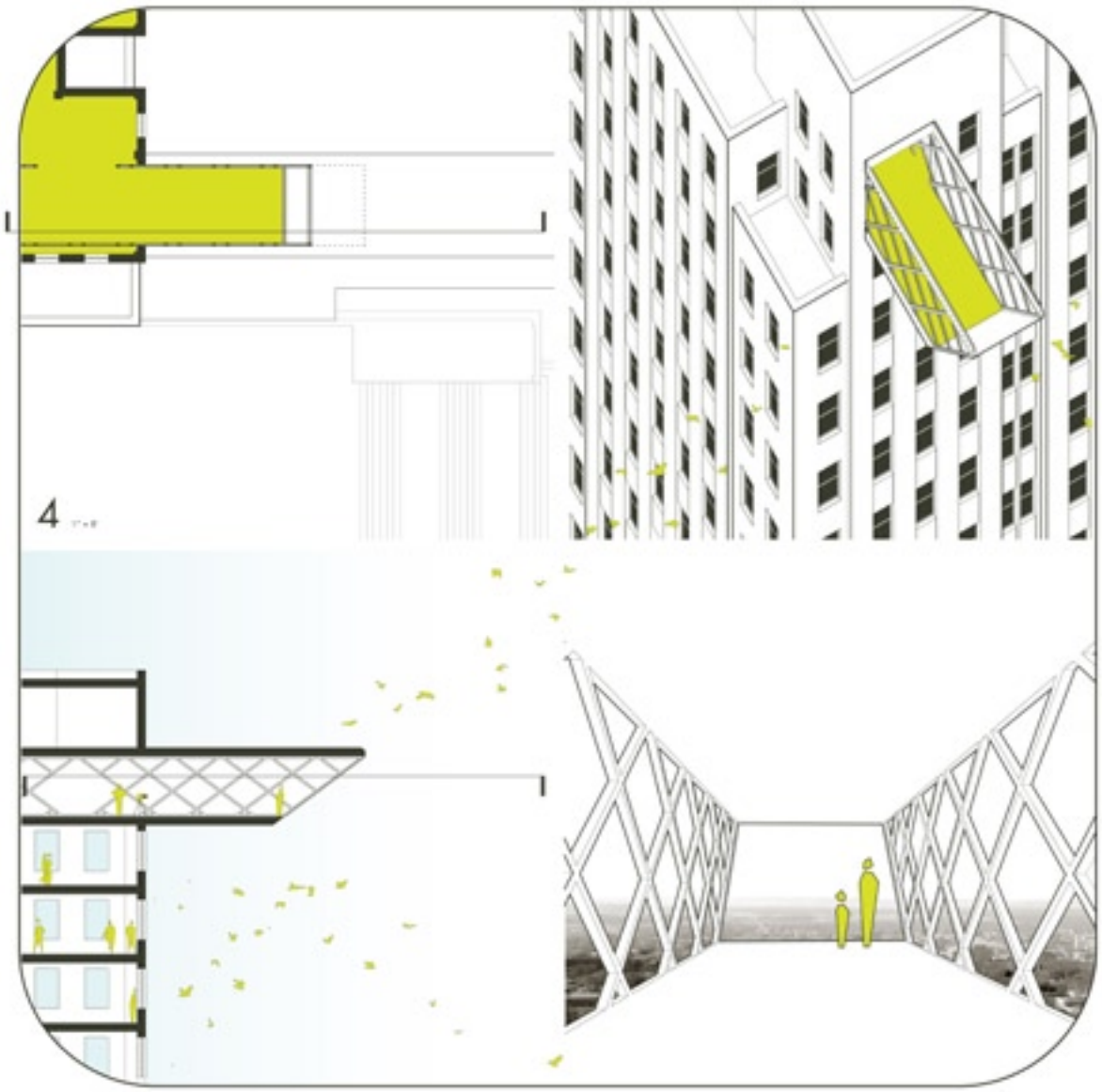
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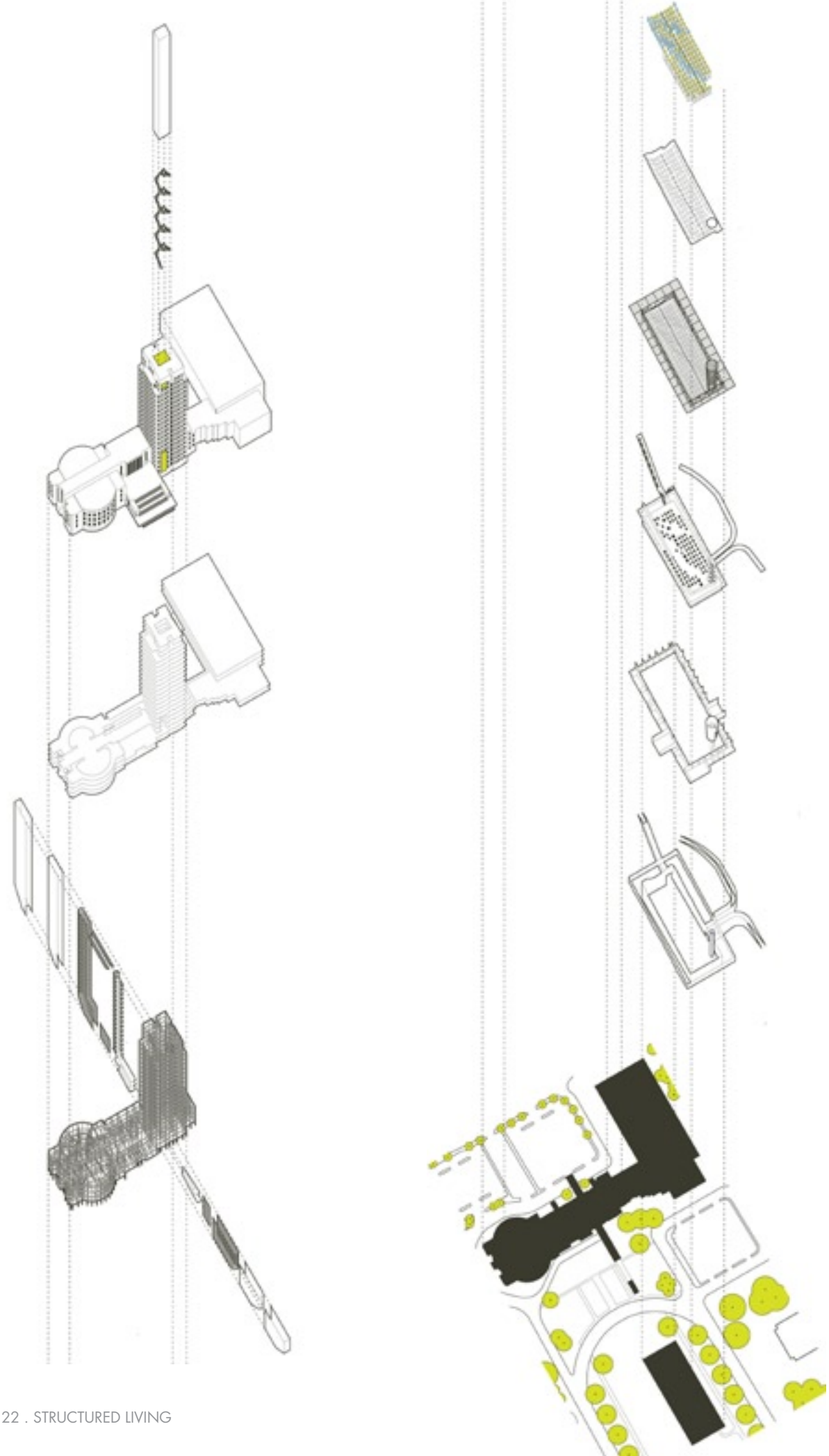

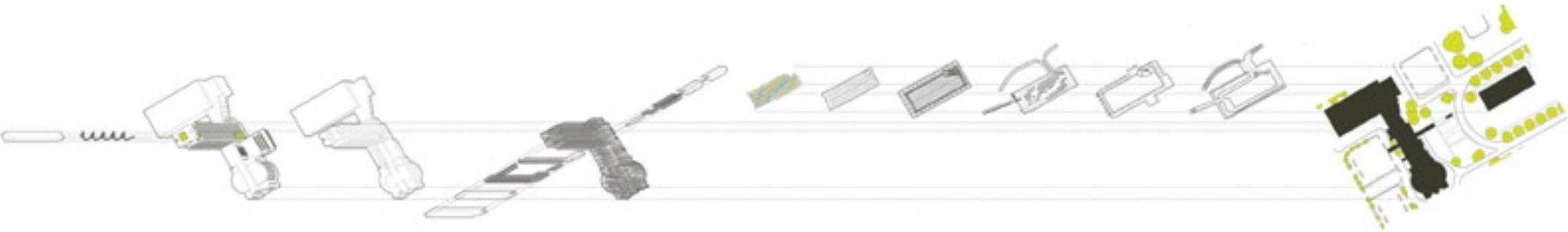

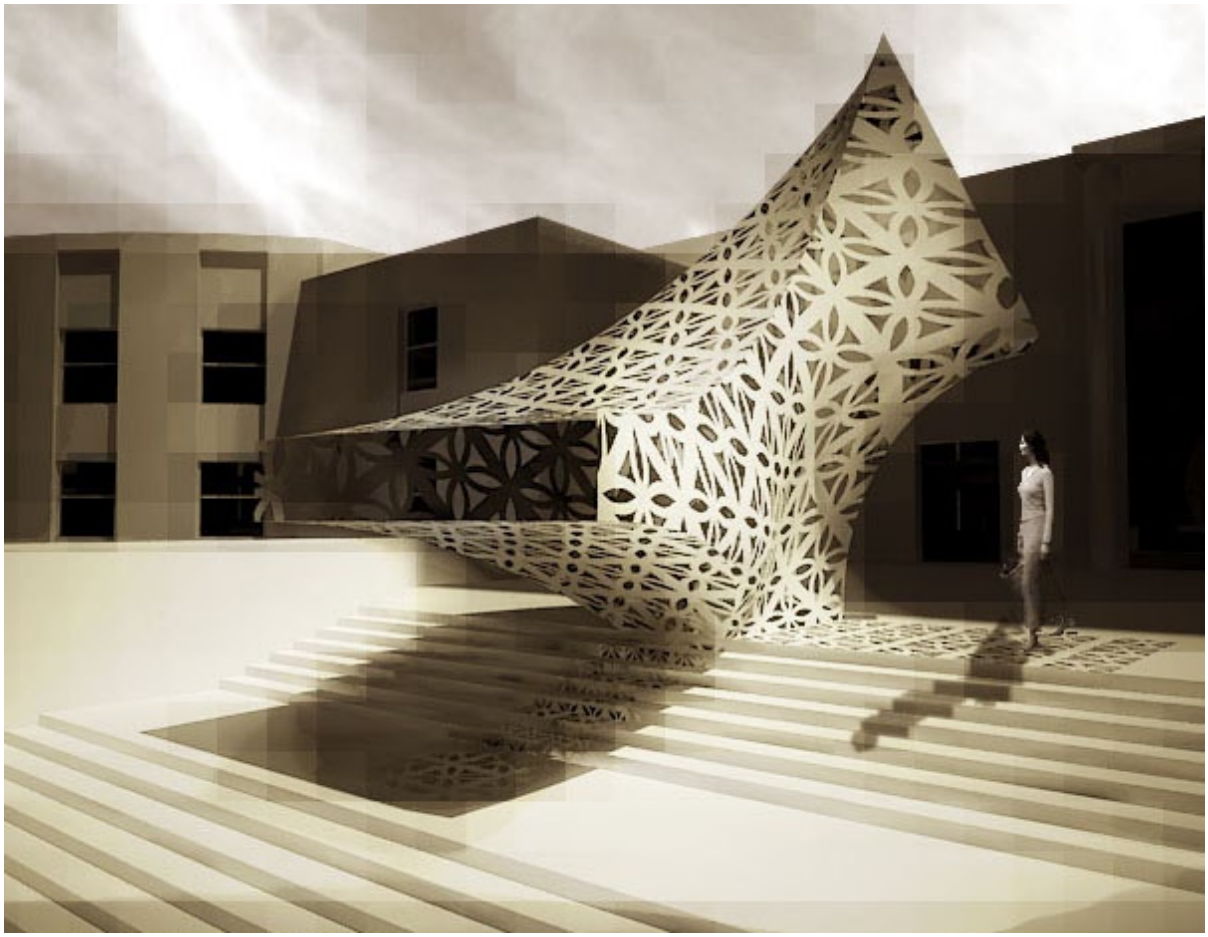

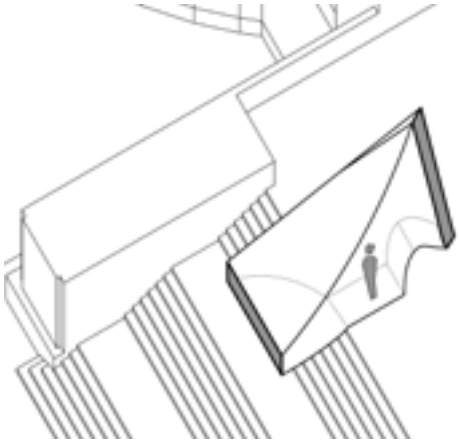

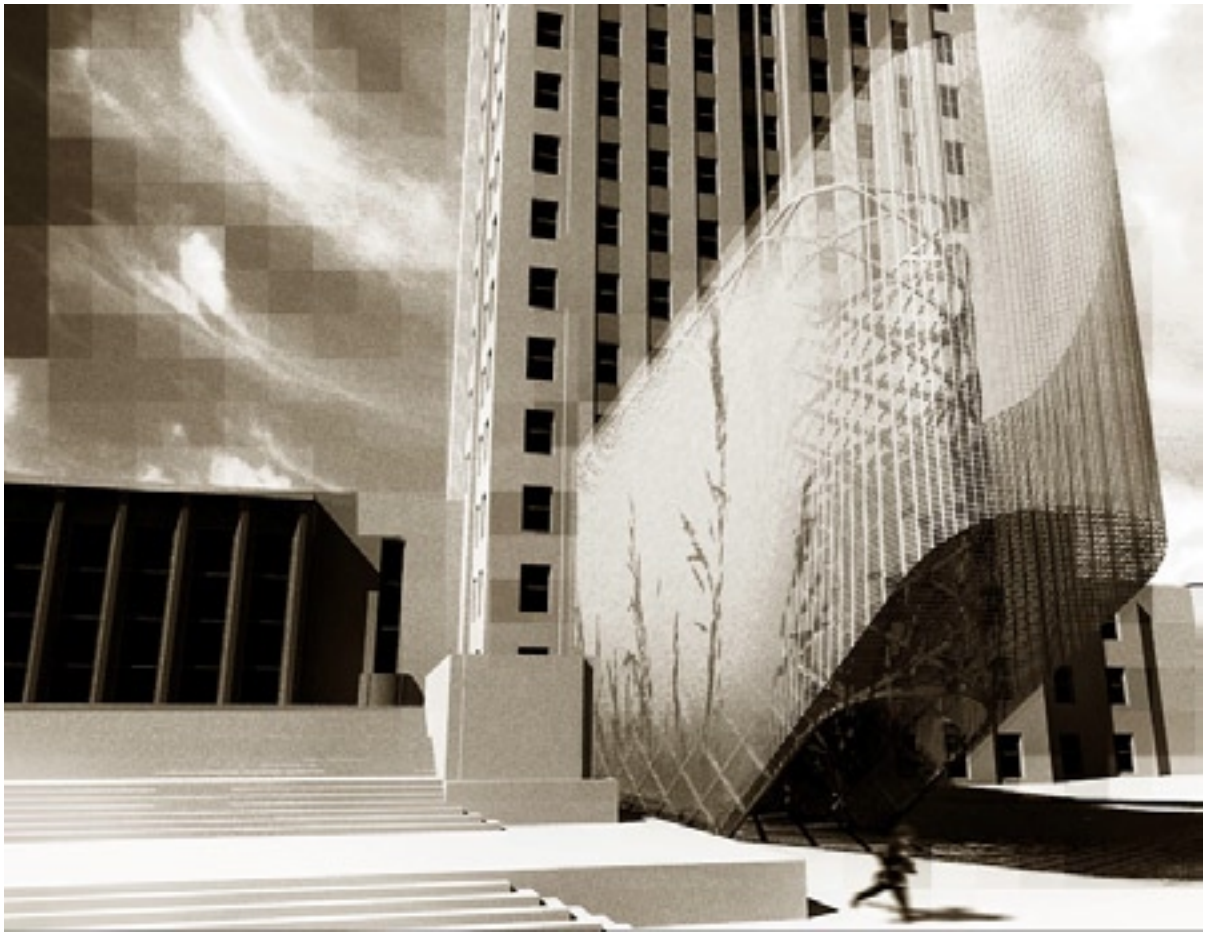

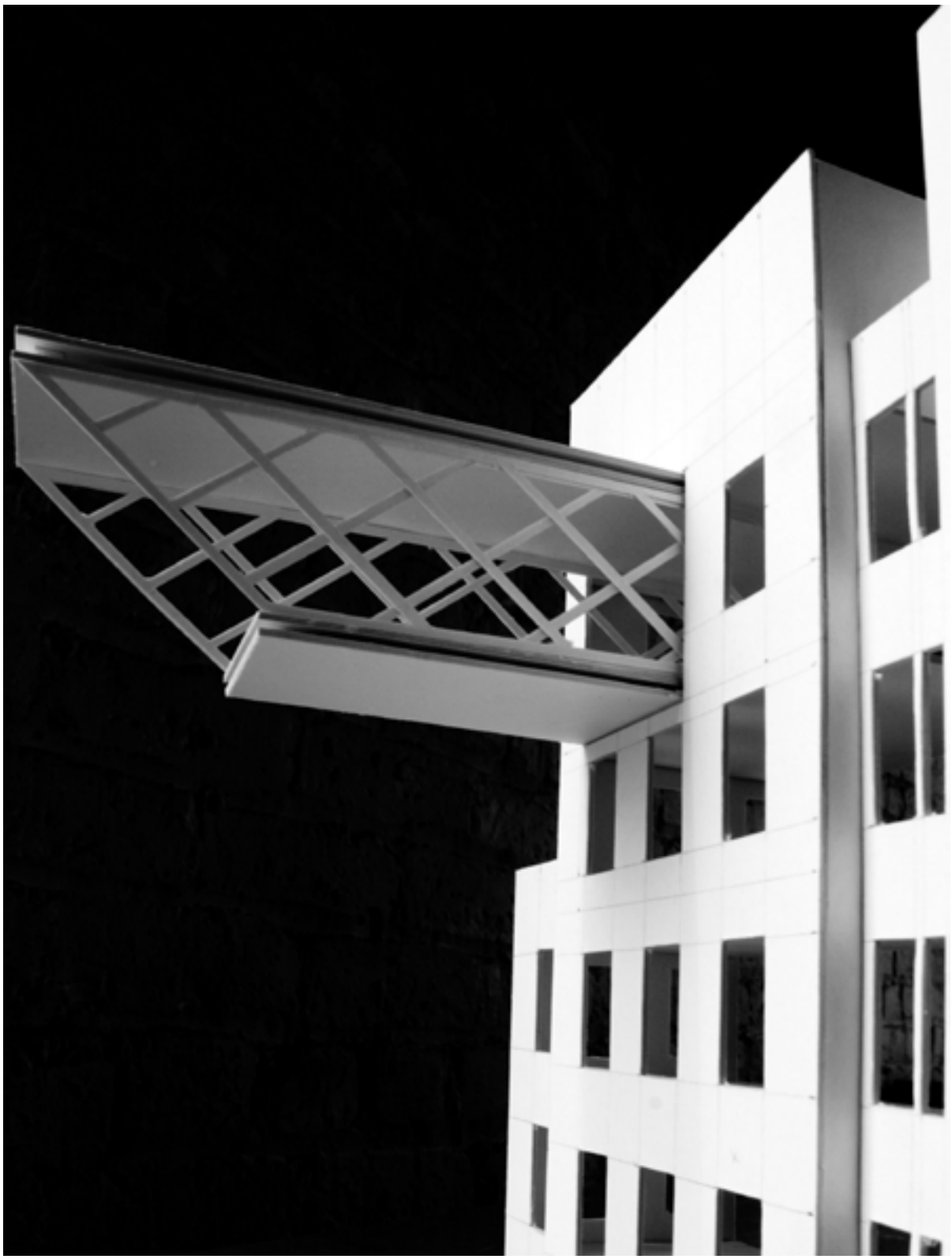

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