

# Portfolio

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Design at the University of Houston

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*Projects A-H are in order from most recent to least recent.*

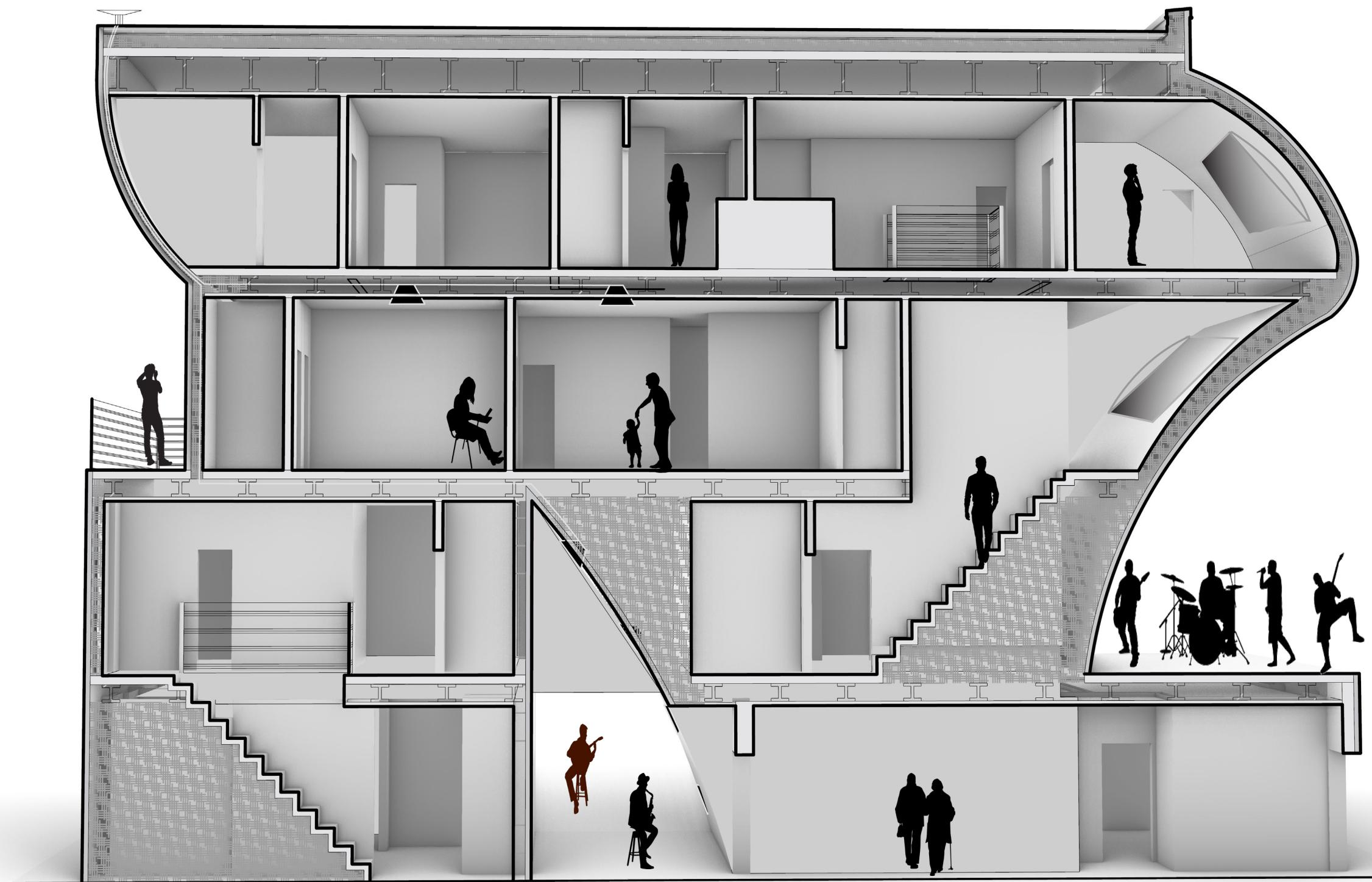
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# Introduction

For all of my design work, I intend to create spaces with maximum functionality that are bold enough to be noticed, and just simple enough to make a statement whilst still integrating within their surroundings. I take the requirements and specifications of the assignment very seriously in order to achieve maximum satisfaction in my work.

In addition to my original designs, I have made many models of existing buildings and structures, both in my college career and in my free time. Each of them was done with the most amount of reverence for the source projects.

All of my digital work is done in either AutoCAD, Revit, Rhino, or Adobe Creative Cloud software.



My second year of college, I had to build a modular home with a built-in business. The theme of my project was music.

# St. Peter Catholic Church

March 2025

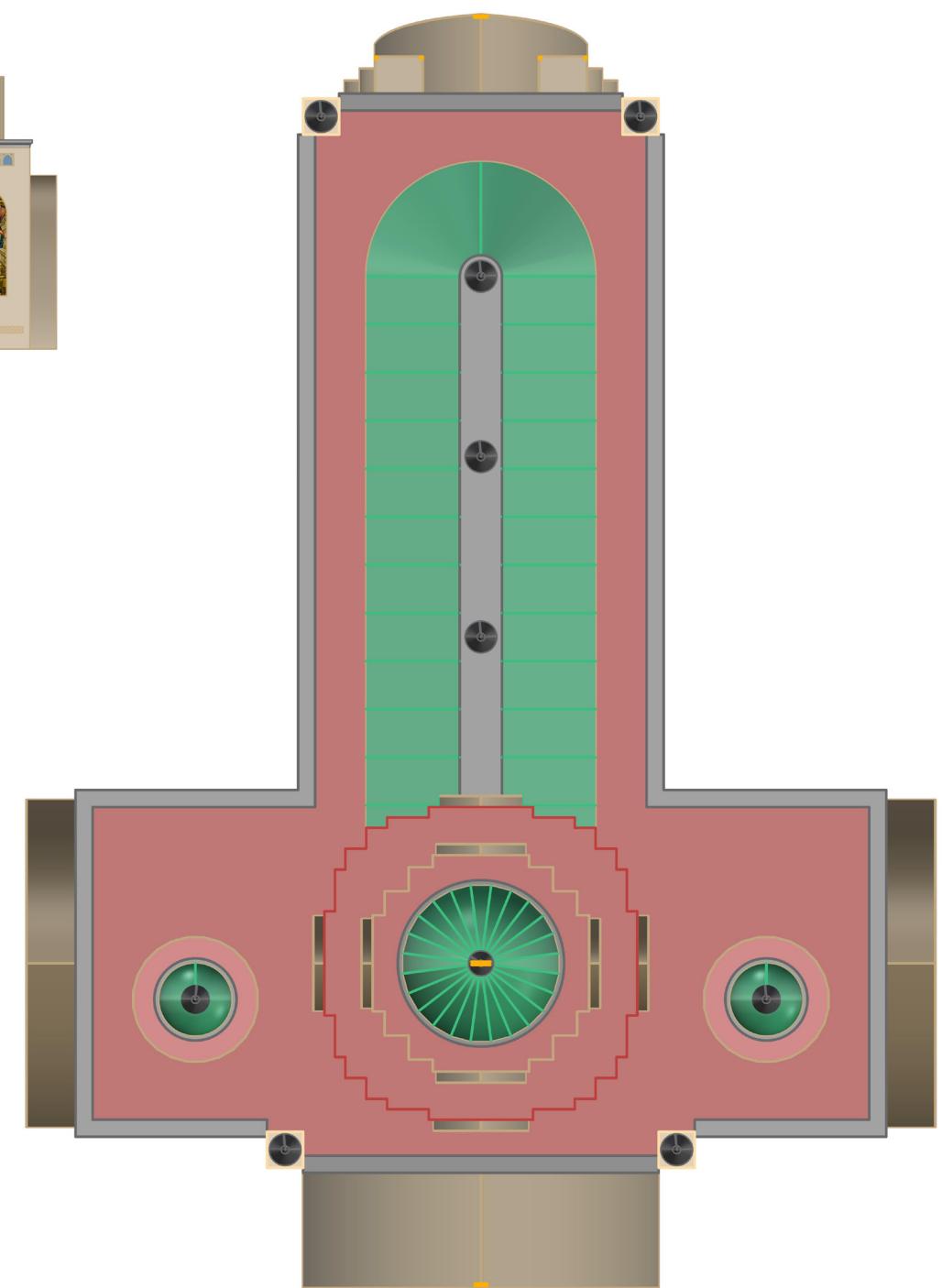
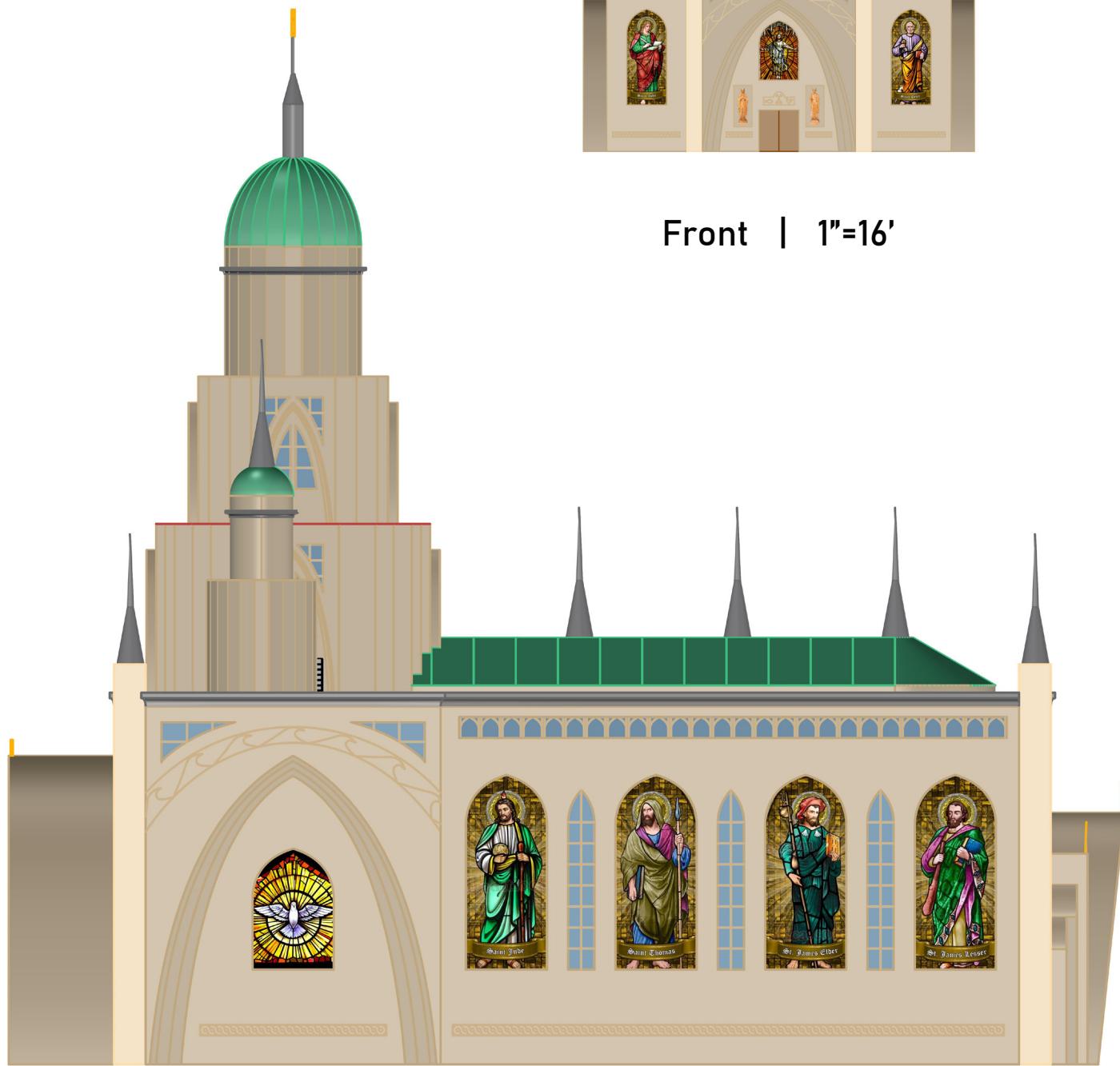


1"=16'



1"=16'

Shown here is a design of a Catholic church which includes allusions to Saint Peter, such as an upside-down cruciform floor plan and symbols inscribed above the entrance.

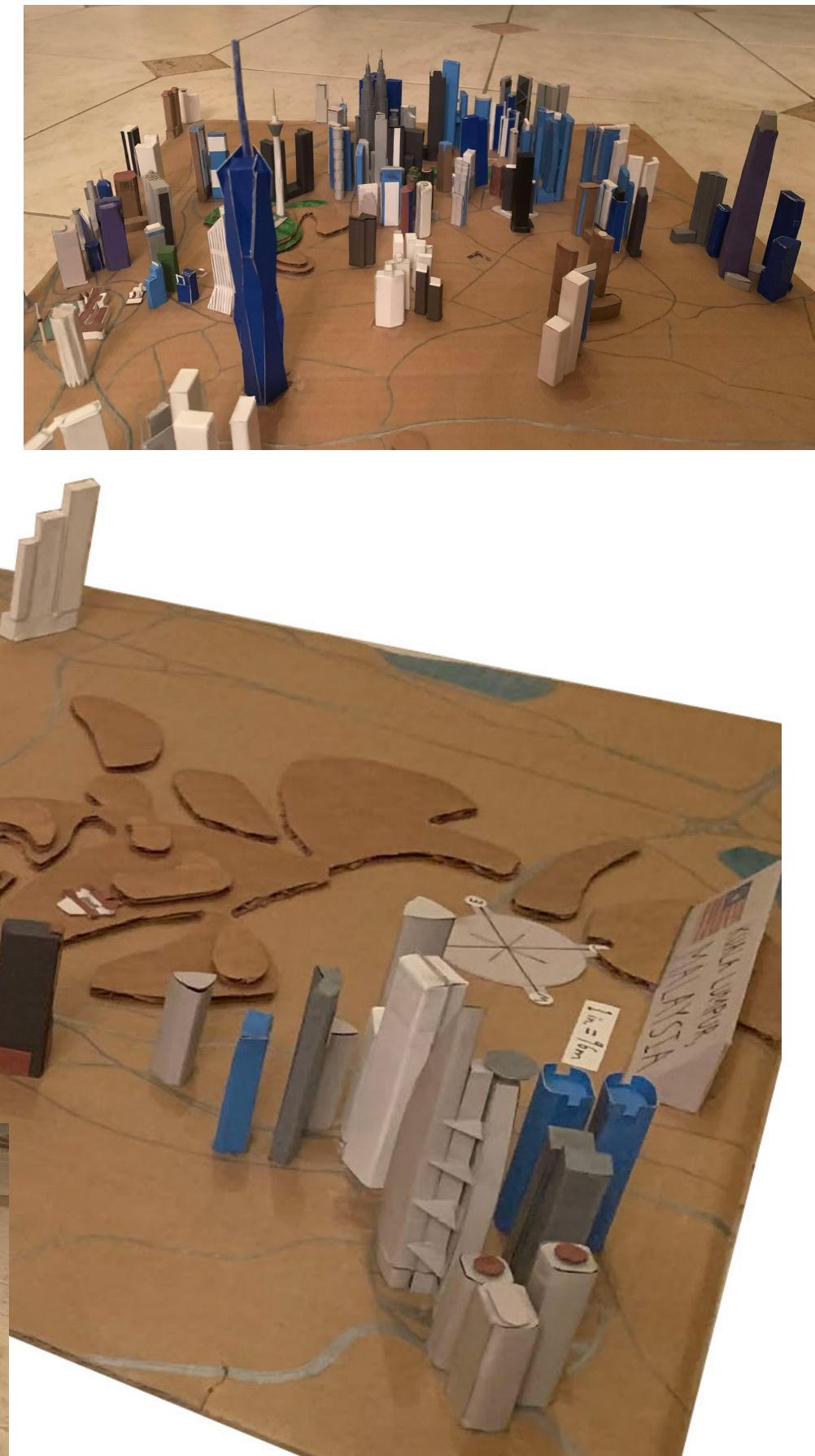
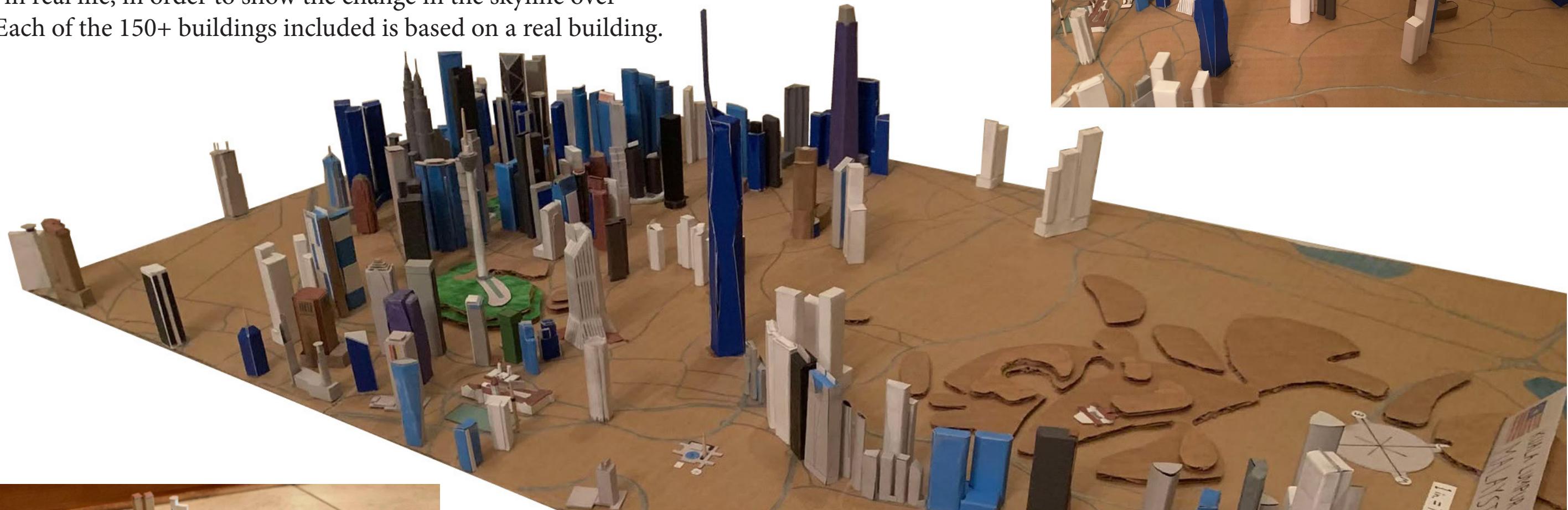


Top | 1"=16'

# Kuala Lumpur Skyline Model

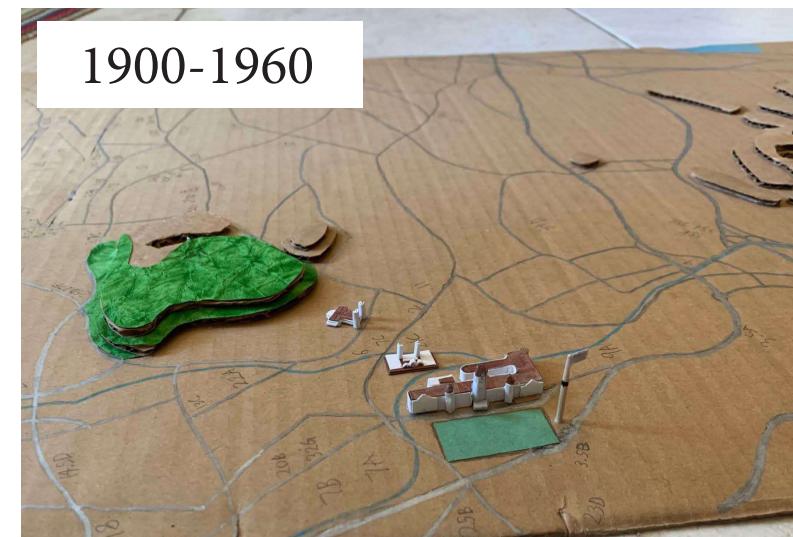
Summer 2024

Shown here is a model of the skyline of Kuala Lumpur, Malaysia. Each building was added according to when the building was completed in real life, in order to show the change in the skyline over time. Each of the 150+ buildings included is based on a real building.



(model made at 1" = 315' scale)

# Timeline

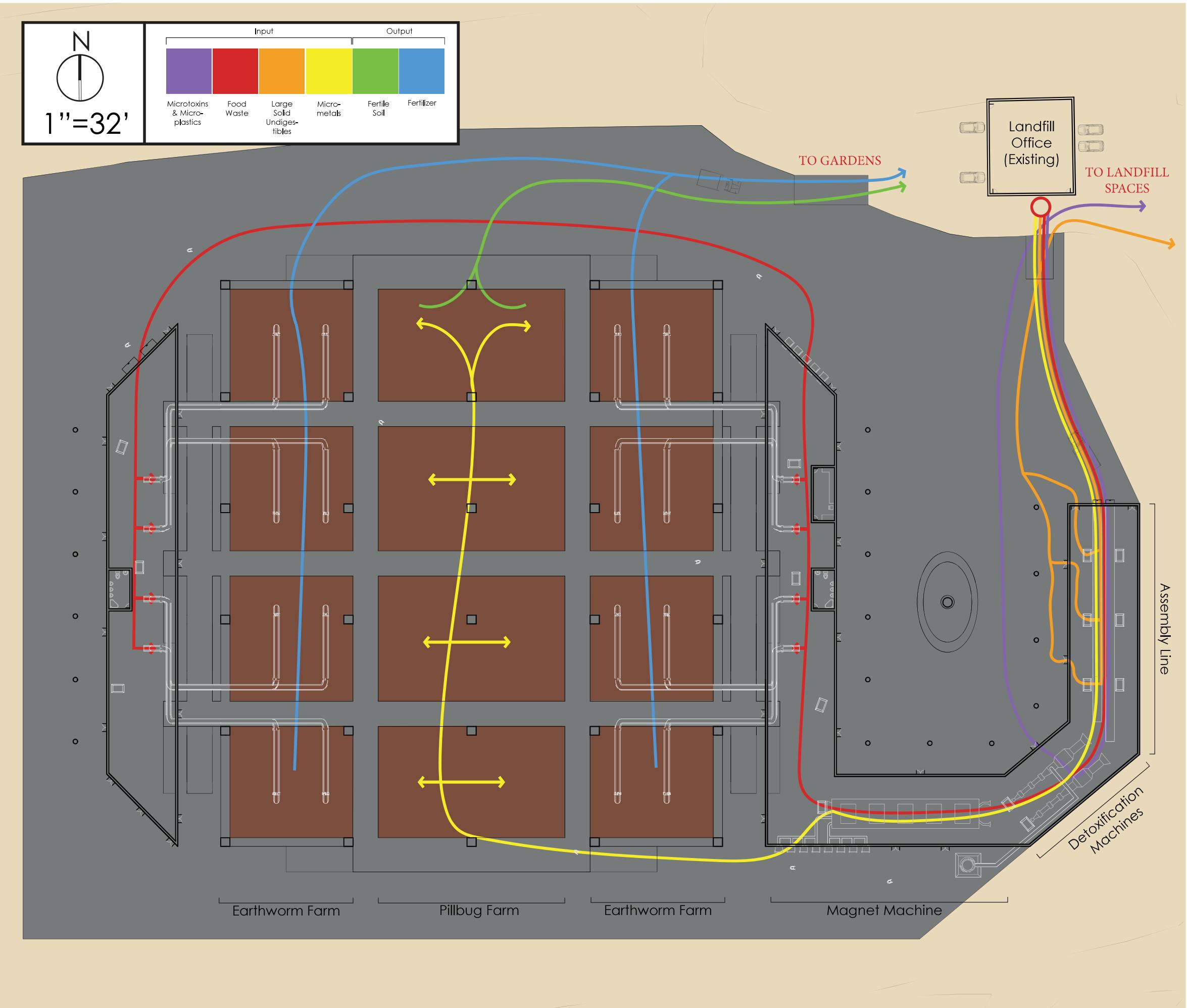


# Kimball City Landfill Revitalization & Earthworm Farm

5th Year | Spring Semester

For the second semester of fifth year, students were tasked with creating a system that interacts with nature. Each student had to choose a different organism, and the following project involves earthworms because they are great for composting. The design consisted of a composting facility within an existing landfill property in Nebraska. It follows a strict process whereby garbage is distilled into matter that can be consumed by earthworms and pillbugs and converted to fertilizer and fertile soil. The entire structure was designed with maximum productivity and functionality in mind.

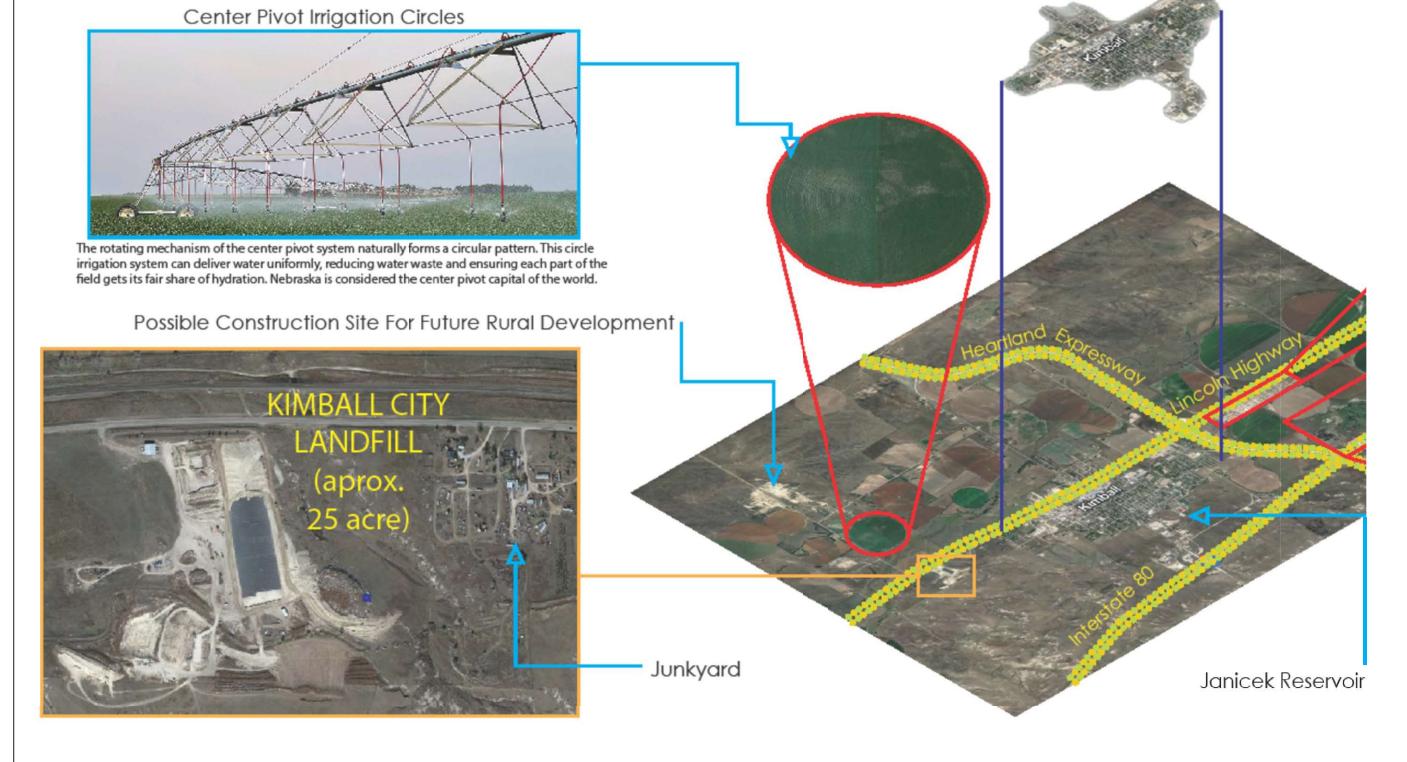
In addition to designing a facility, the project includes a proposal to completely renovate and revitalize the entire landfill property. Some notable features include center pivot irrigation circles, garden systems with roofs containing solar panels, and a brand new fresh water reservoir. The goal was to transform something like a landfill, which is typically associated with ugliness and waste, into something pleasant to work in and that actually puts something of value out into the world rather than merely taking in all of the world's dross and rubbish.



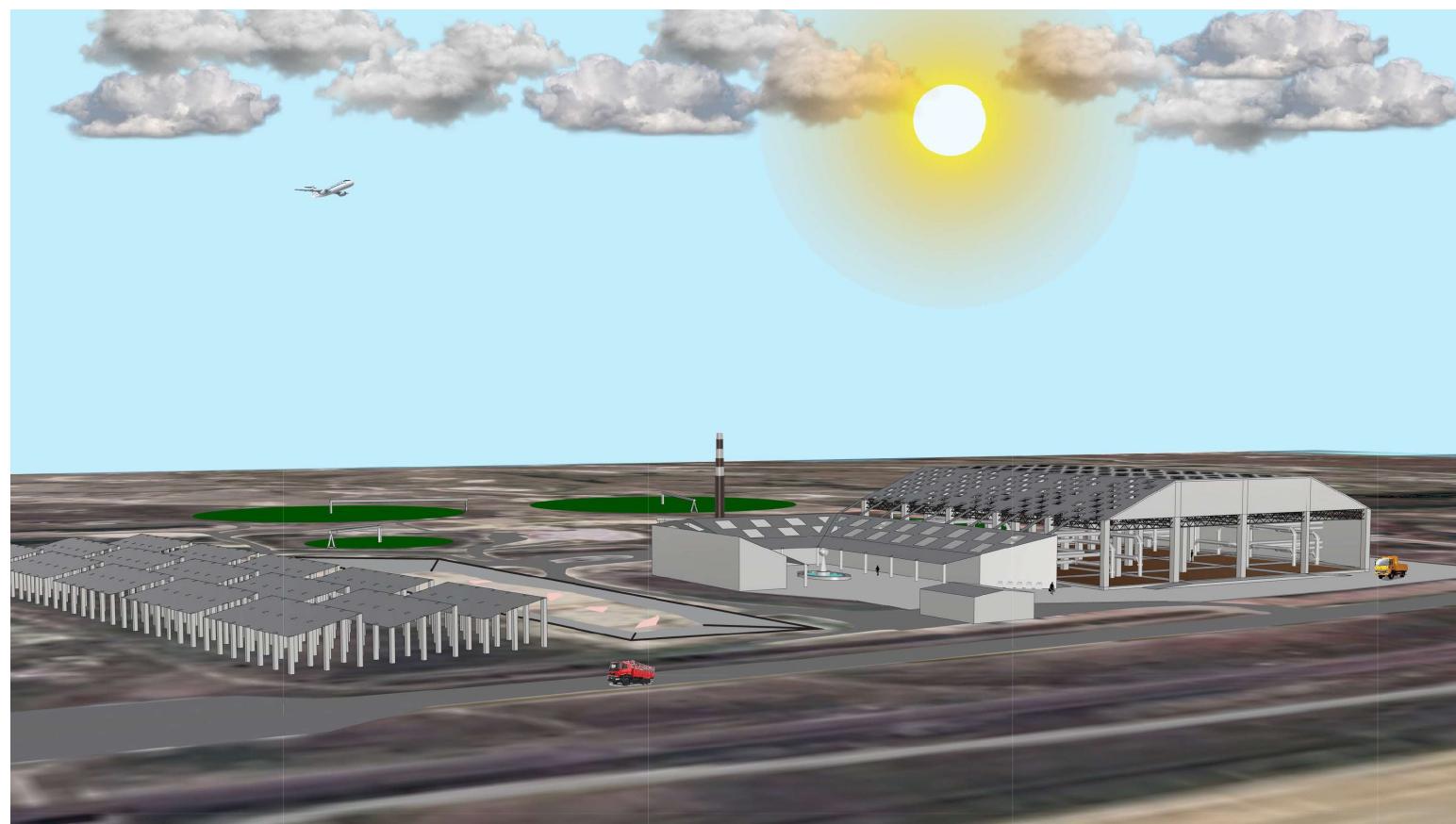
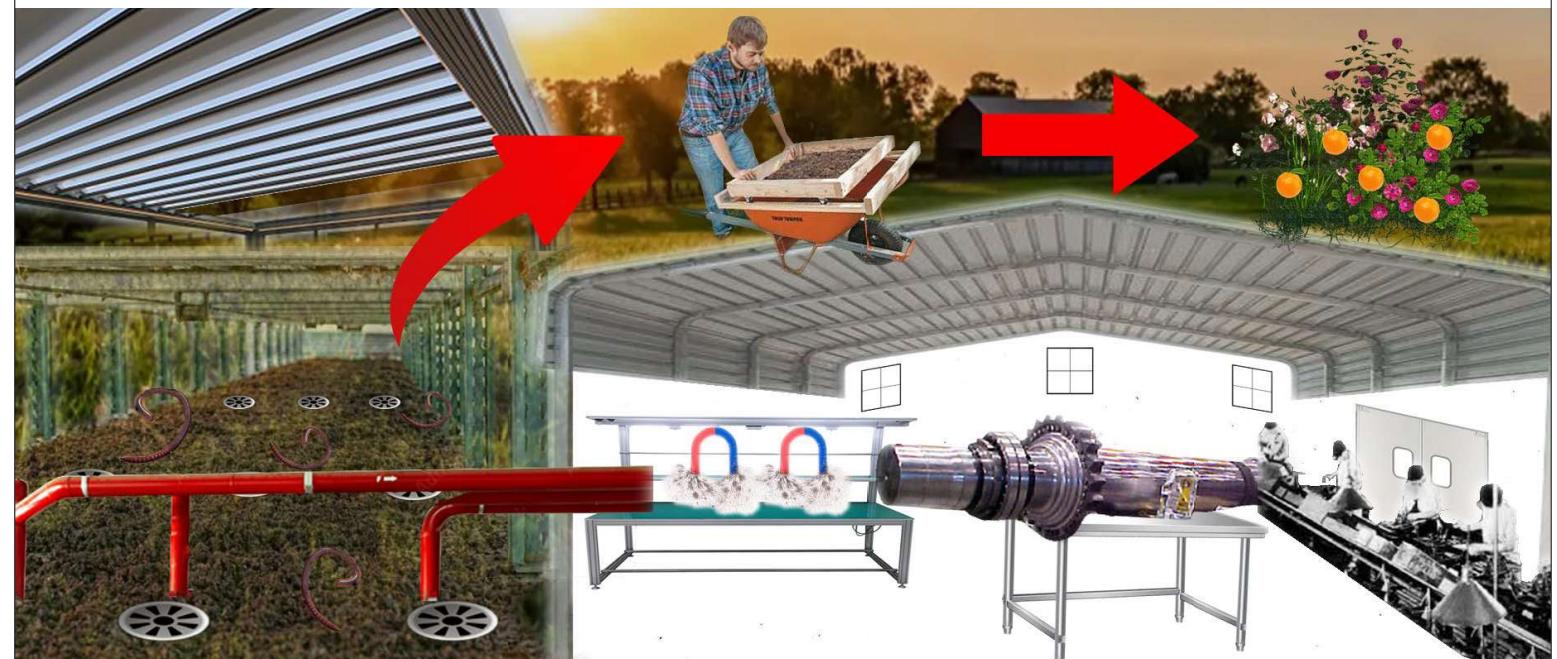
Model (approx. 1' x 2')



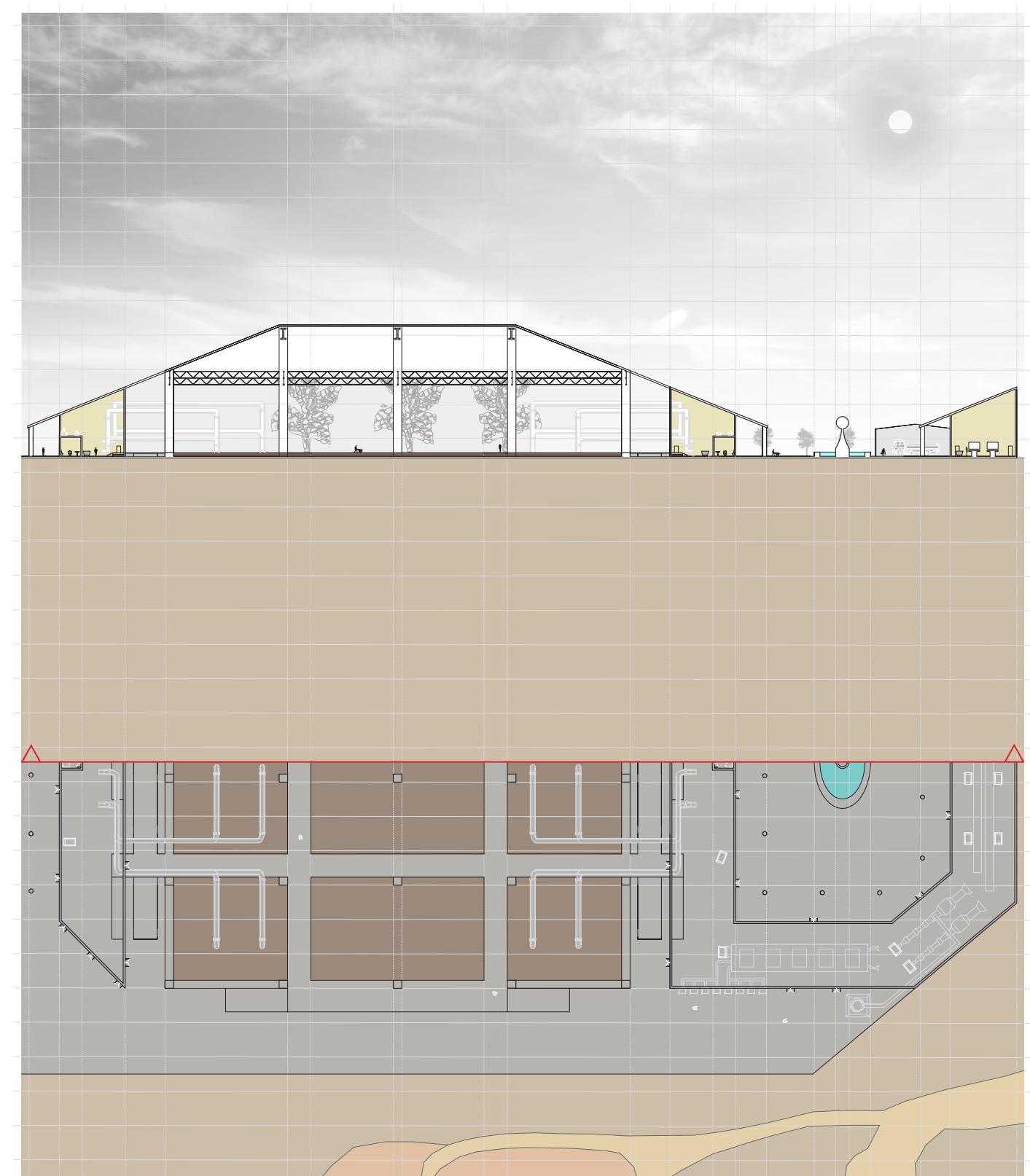
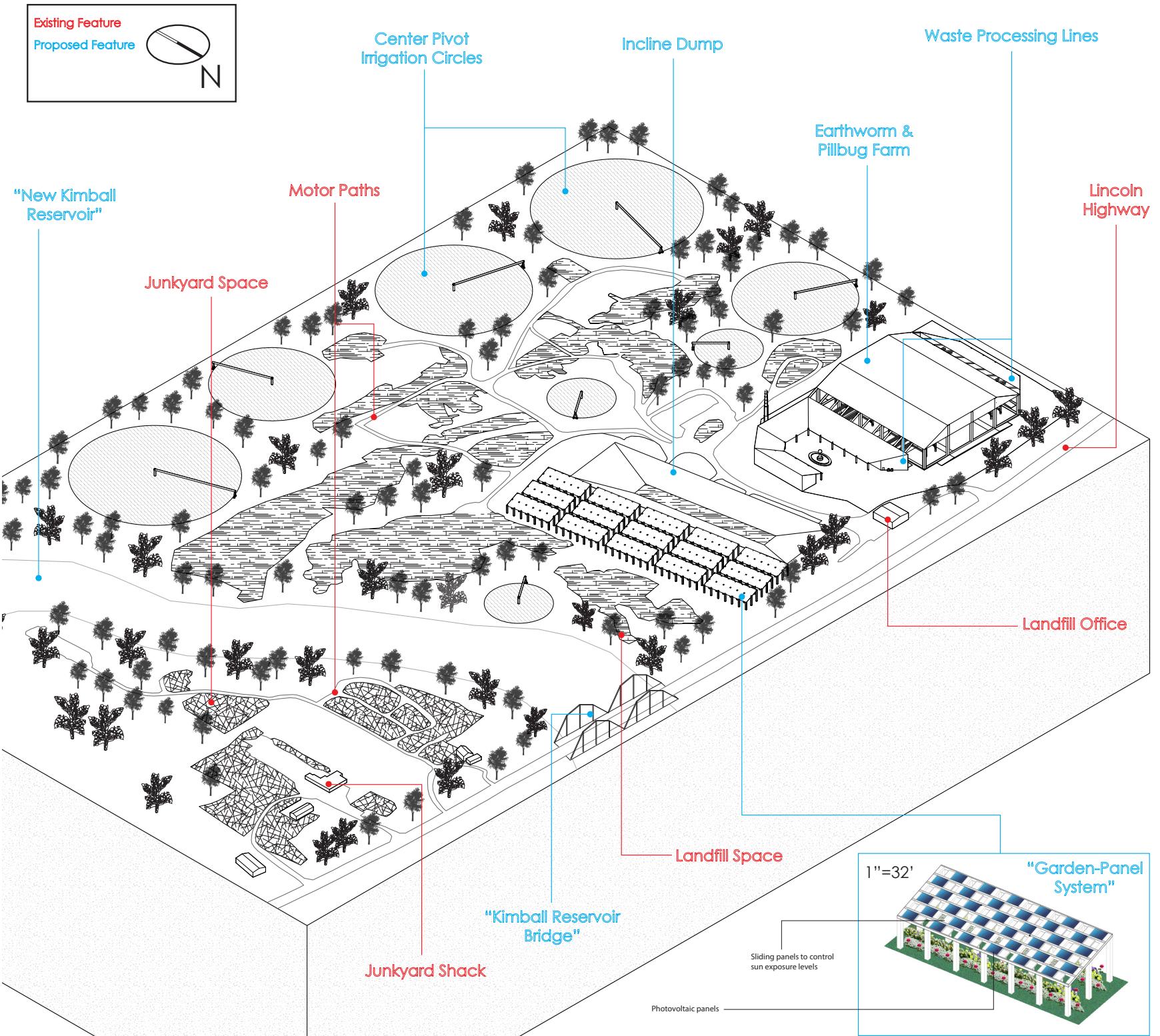
## KIMBALL, NEBRASKA



## Concept Collage



## Kimball, NE City Landfill [Revitalized]



# Greenspoint Innovation Hub

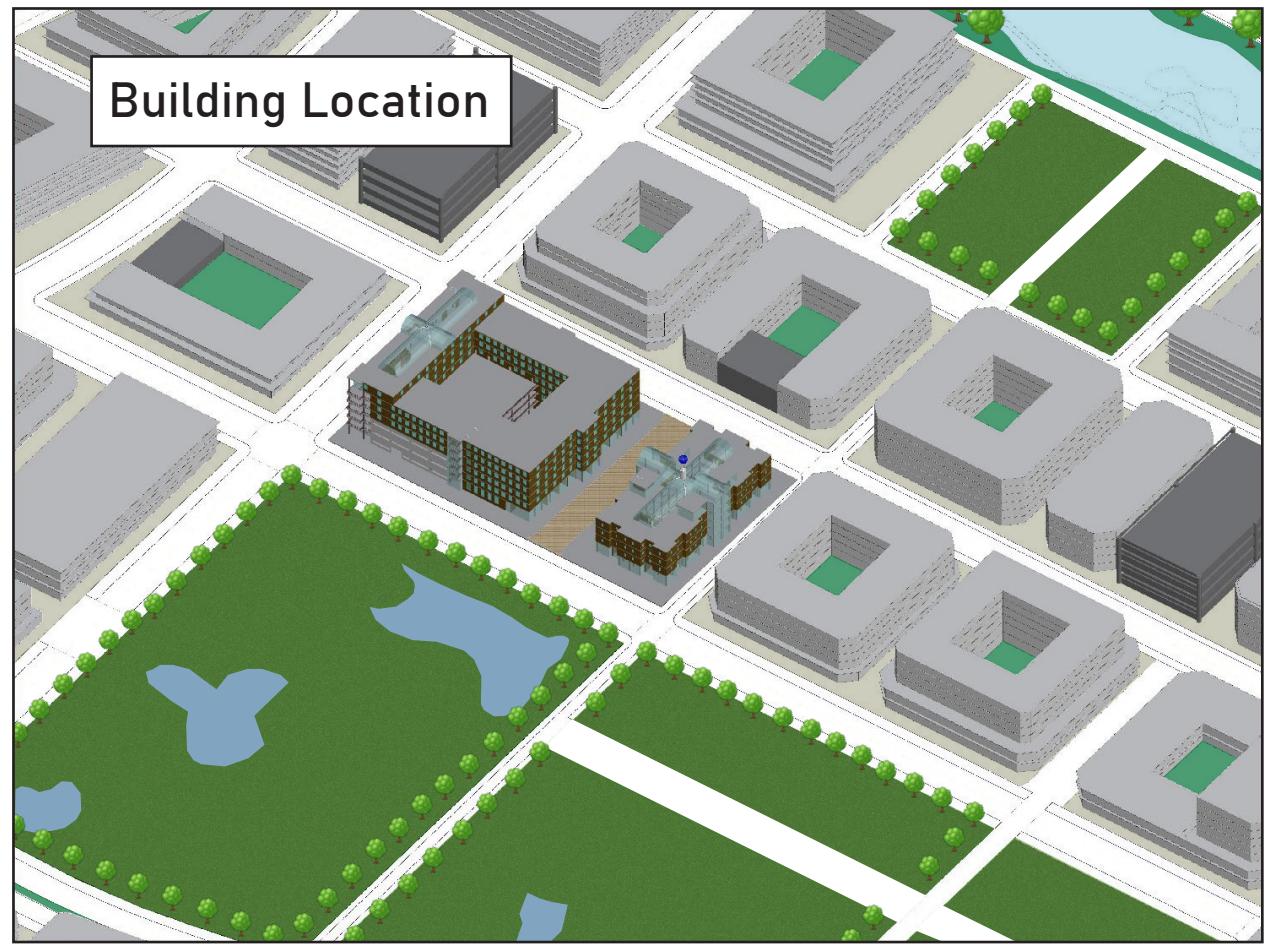
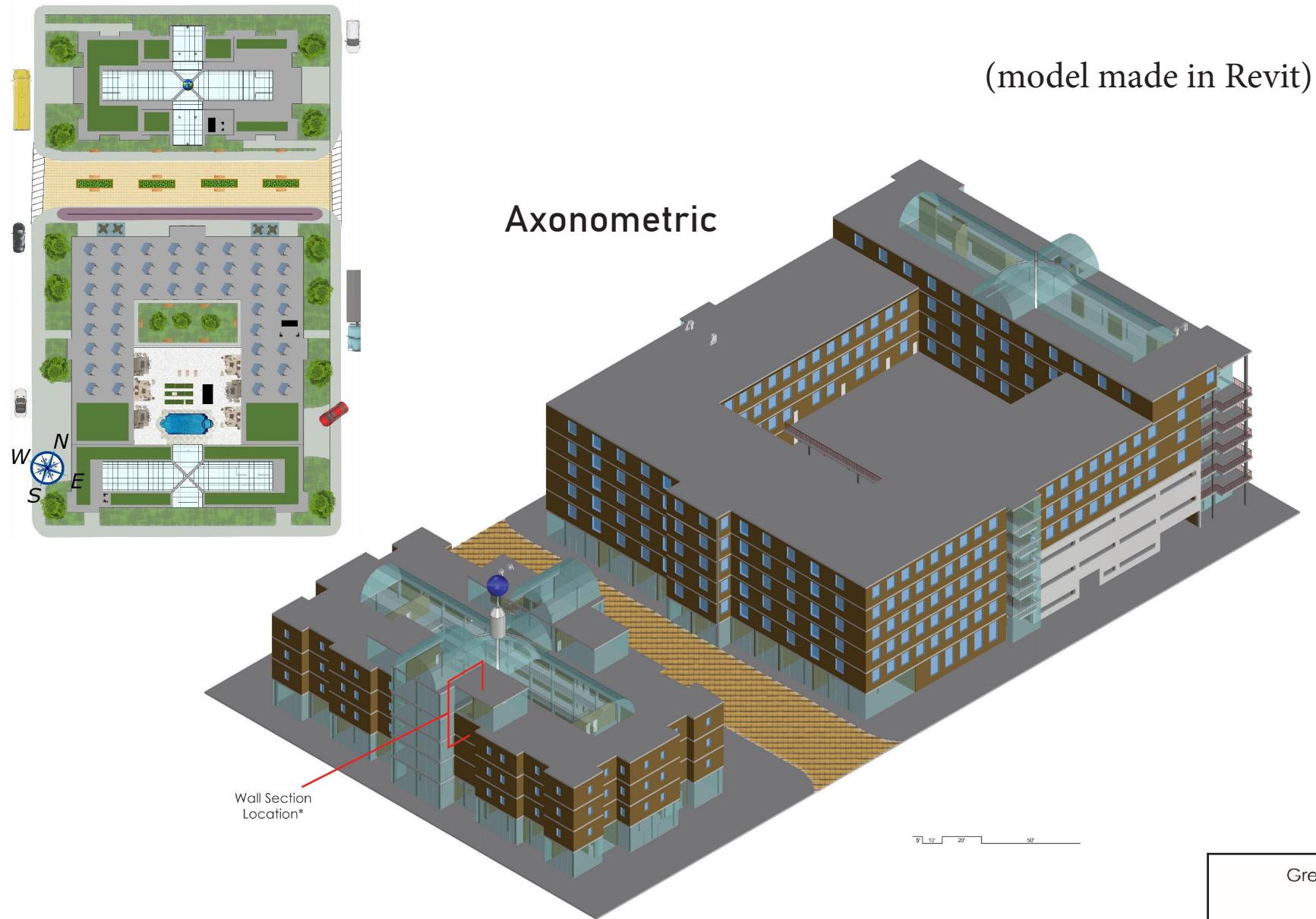
Fall 2023 | 5th Year

During the fall semester of fifth year at university, the studio class was divided into groups. each group had to pick a “dead mall” in the Greater Houston area and transform it into thriving city center. Then, each student individually had to design a building within this new city center, and the work shown here is a design of an office building accompanied by an apartment complex for employees to be within walking distance of work.

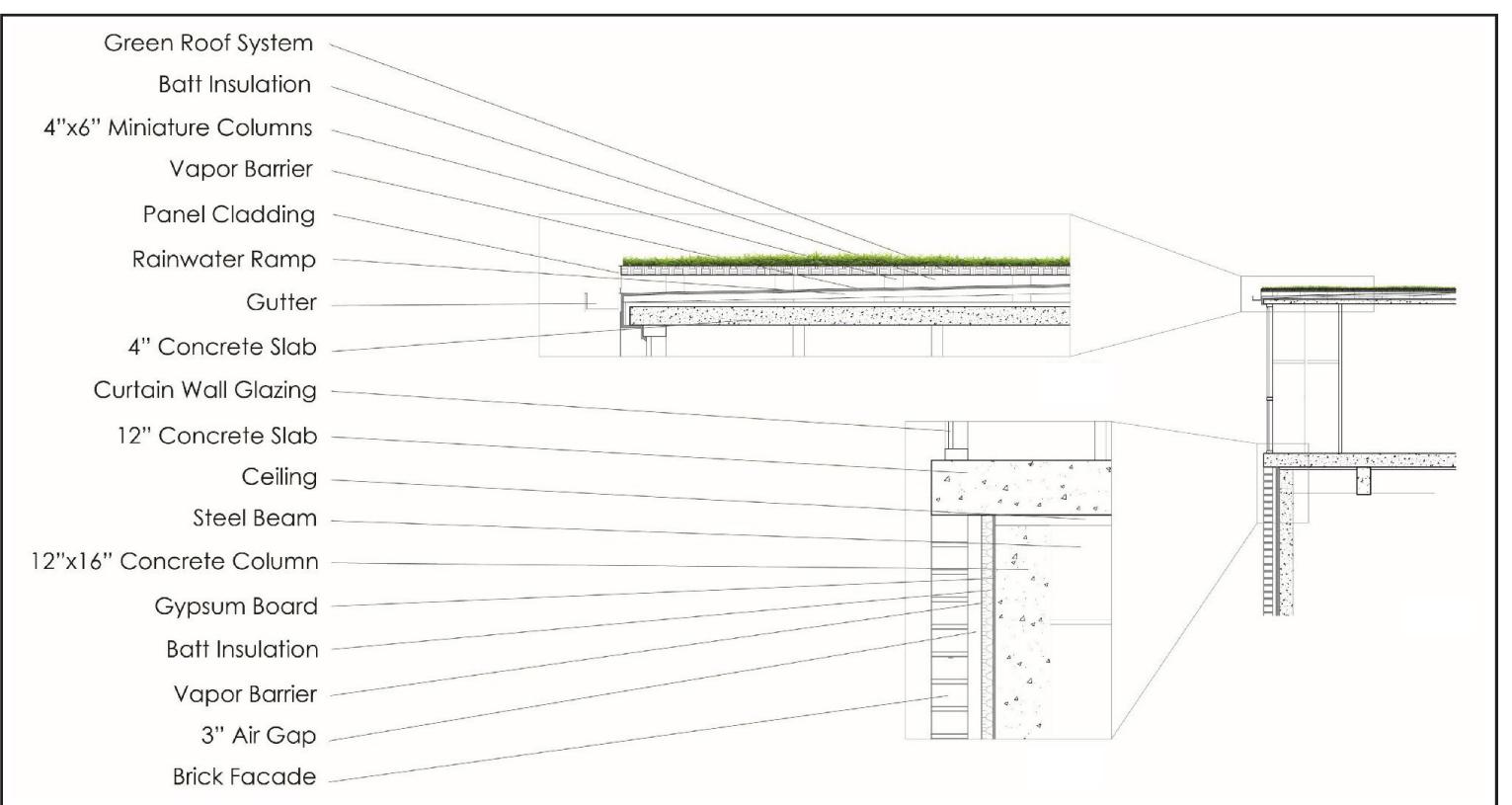
With so much white-collar work in the modern world happening in front of computers, it only makes sense that future office buildings be designed around mixed-use programs. The time and energy spent commuting between home and the workplace is better allocated toward making avenues of human society and experience flourish through innovation. As such, the student opted to build the headquarters of innovation for this district.

Innovation Quarter describes an innovation hub as “a place where people collaboratively convene, conduct research and widen their influence.” This influence has the potential to reach well beyond the limits of Greenspoint, throughout Houston. One way this can happen is by supporting three areas of inquiry: logistical analysis of remote sensing networks, breakthroughs in transportation technology, and solving supply chain challenges. The goal is to create a self-configuring hub whose identity is that of an incubator for new modes of innovation.



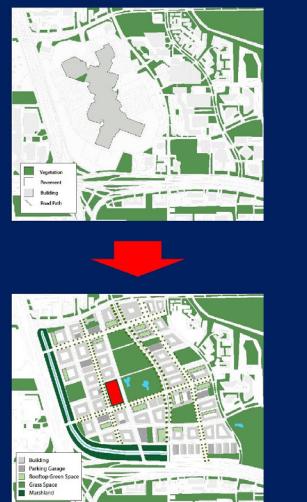
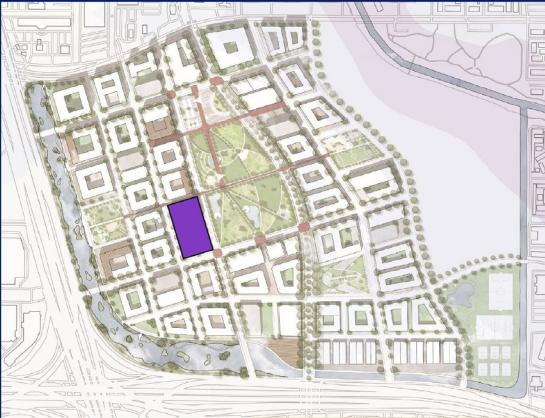


- Three main areas of study: logistical analysis of remote sensing networks, breakthroughs in transportation technology, and solving supply chain challenges
- Goal: to create a self-configuring hub whose identity is that of an incubator for new modes of innovation.
- Objective 1: Develop a contemporary economic anchor project integrating workplace and lifestyle programs.
- Objective 2: Create an active pedestrian-oriented “third place” alley address interface between the workplace and residential buildings.
- Objective 3: Design an iconic landmark that anchors the central park.



My team and I transformed Greenspoint into a sustainable city center. We each chose a different building type to design, and I chose office.

## NORTHGRENNS



## Floor Plans

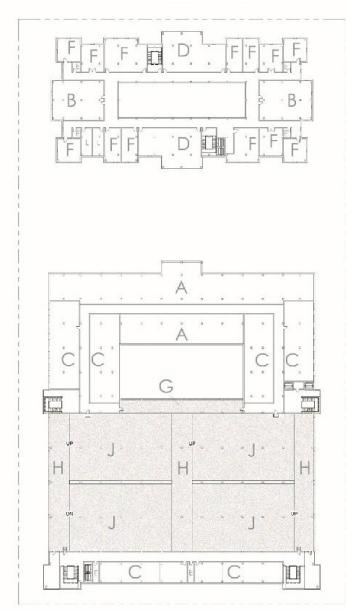
- A. Apartment Unit
- B. Conference Room
- C. Double-Height Loft Unit
- D. Laboratory
- E. Mechanical, Electrical, or Plumbing Room
- F. Office

- G. Outdoor Deck/Balcony
- H. Parking Garage Landing
- J. Parking Garage Platform (Incline)
- K. Resident Gathering Space
- L. Restroom
- M. Store/Commercial Unit

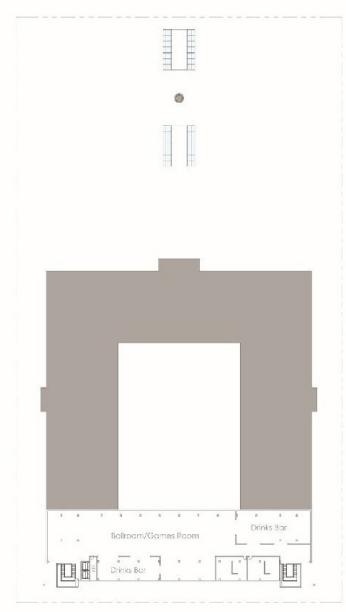
### Level 1



### Level 2



### Level 7

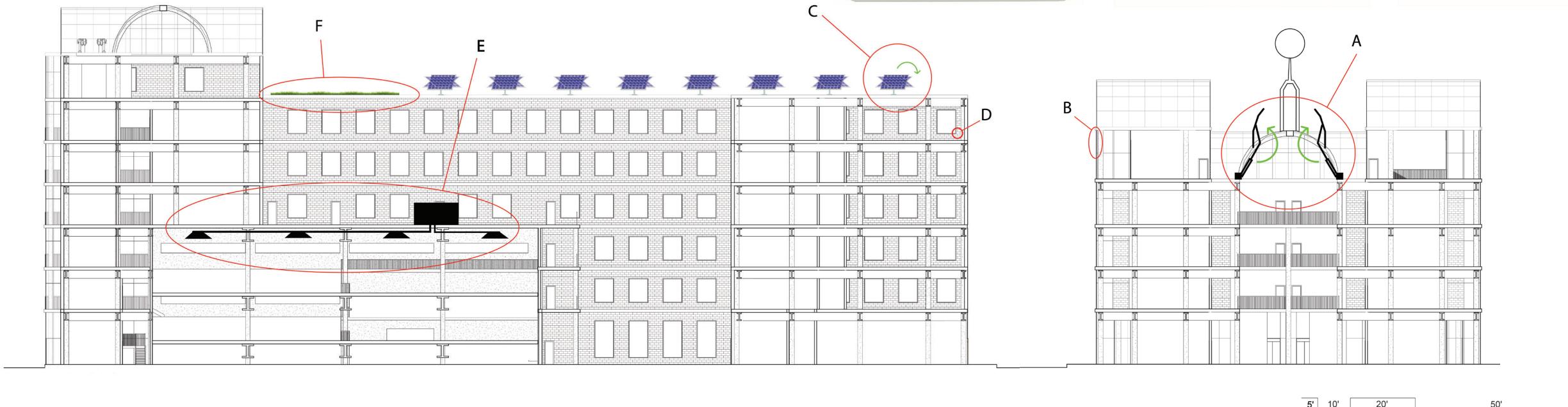


## Design Features

- Brick façade
- Building Massing wrapped around a parking garage
- Barrel vaults atop the highest floor of each building
- Community pathway
- Ornamental spire with globe



## Sustainability Strategies



- A. Vault glass panels opening up for hot air ventilation, powered by hydraulic cylinders
- B. Skylight glazing coated in translucent heat resistance film
- C. Solar panels which move throughout the day so as to always be pointing towards the sun

- D. Carbon-neutral bricks; an innovation recently developed for the first time ever in Australia
- E. Air detoxification and decarbonization system for cars in the garage releasing carbon monoxide through their exhaust pipes
- F. Green roof system

# Juneteenth Museum

Fall 2022 | 4th Year

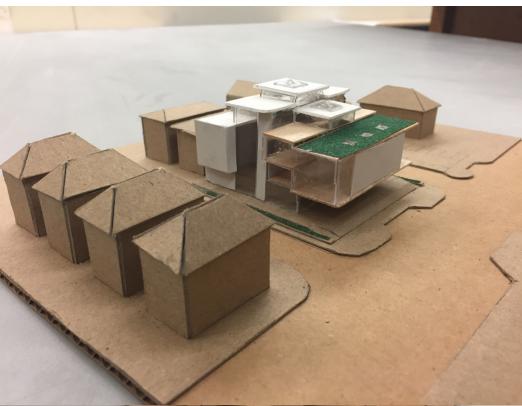
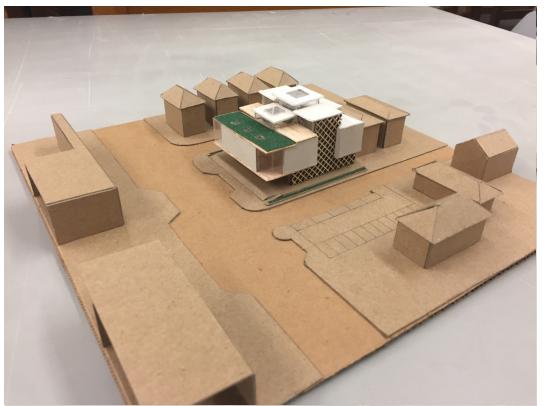
For the first semester of fourth year at college, students were asked to design a museum dedicated to presenting the story of Juneteenth, a holiday that is integral to the history of our very own Galveston-Houston. For the proposed “Juneteenth Museum”, this student, along with a partner, wanted the museum to breathe new life into the surrounding community through a deep respect for the cultural significance of Juneteenth and its societal implications. This is why they incorporated a skin system and a large mural across the front which directly call upon the cultural roots of the community. There is also a large exhibition space spanning the width of the building and can be viewed from the above floor balcony. All of this sits atop a large cantilever jutting towards Emancipation Avenue which provides shade over an outdoor gathering area.

The entire building sits on an elevated platform that is accessible by stairsteps or by two wheelchair ramps on either side. It is arranged in a nine-square-grid floor plan system across all floors. This is highlighted by the stepped square roof arrangement. There are also some skylights on different parts of the roof, including one which serves as the crown of a four-story-tall atrium which provides natural lighting to all building levels. Finally, there are terrace spaces on the second floor as well as on the roof. The roof terrace system includes a walkway connecting the two halves that cuts right through the clerestory portion of a double-height interior space.

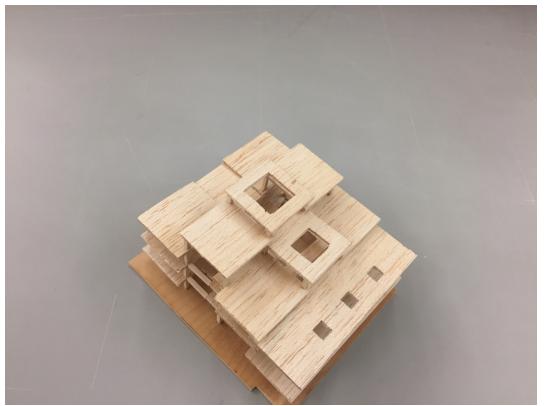


## Model Photos

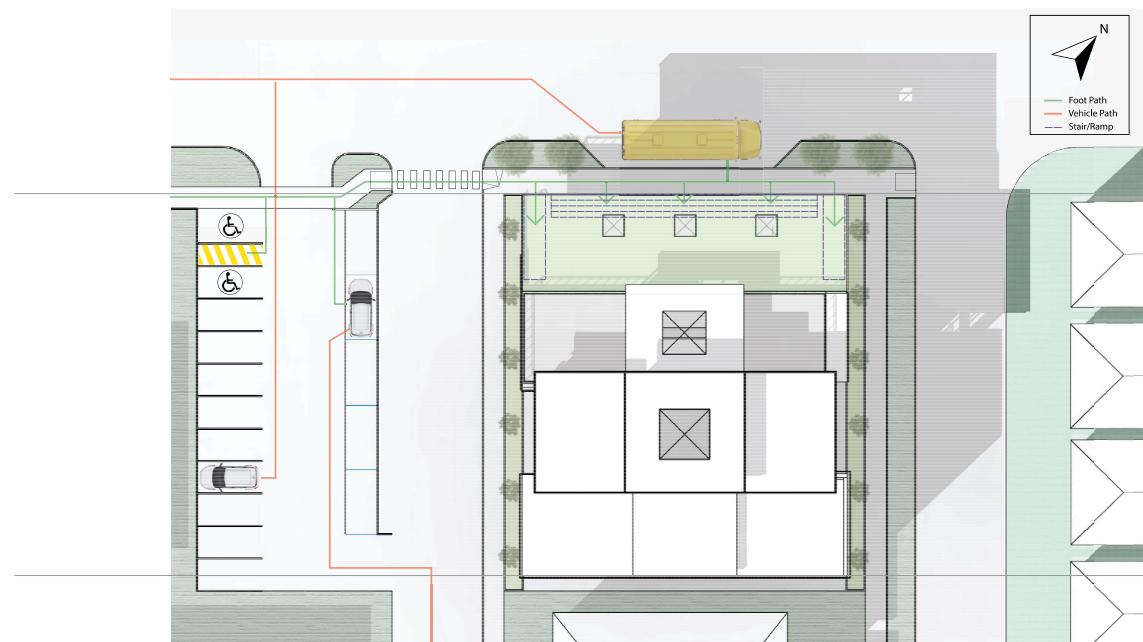
Final Model (1/32"=1')



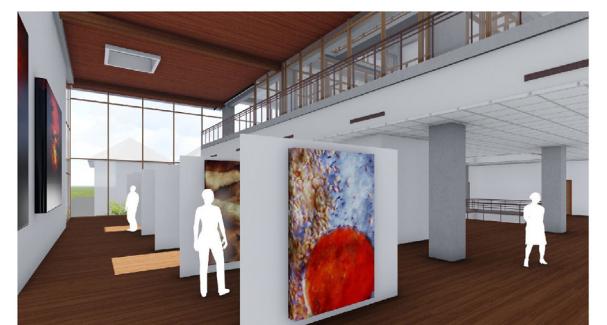
Structure Model (1/16"=1')



Site Plan



## Renderings



(model made in Revit)

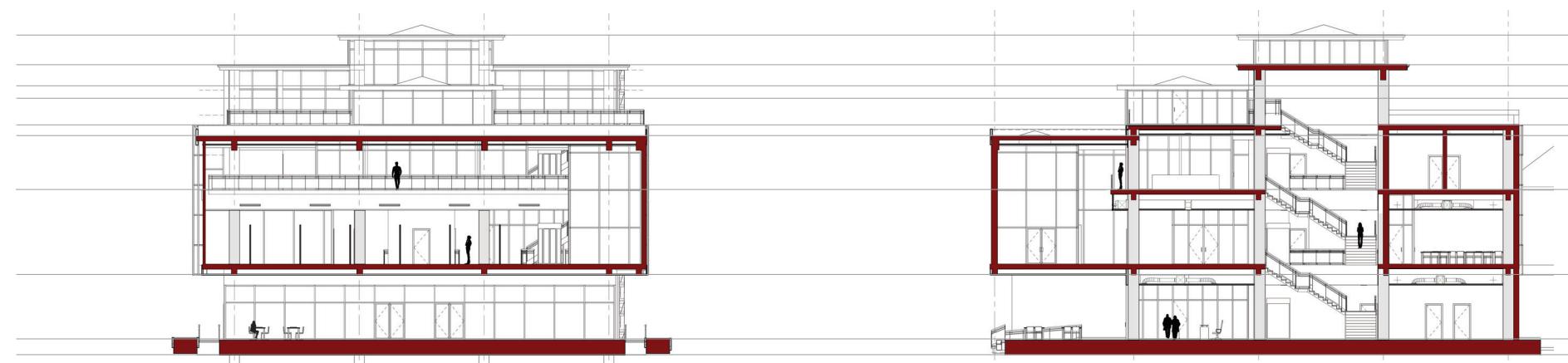
Emancipation  
Ave. Elevation



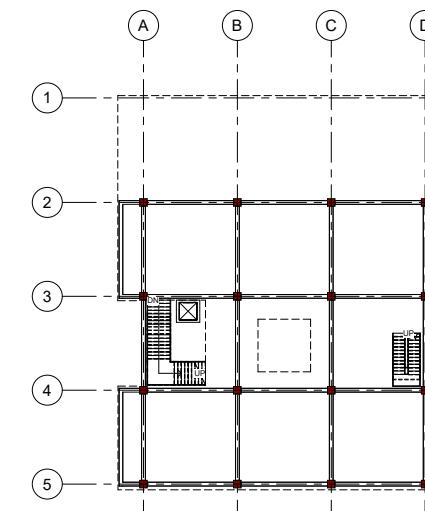
Rosalie St.  
Elevation



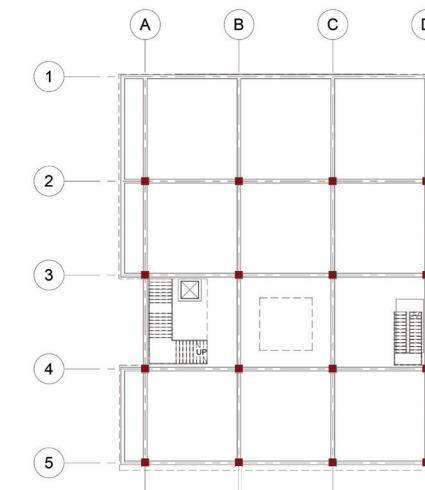
Sections (1/32"=1')



## Structure

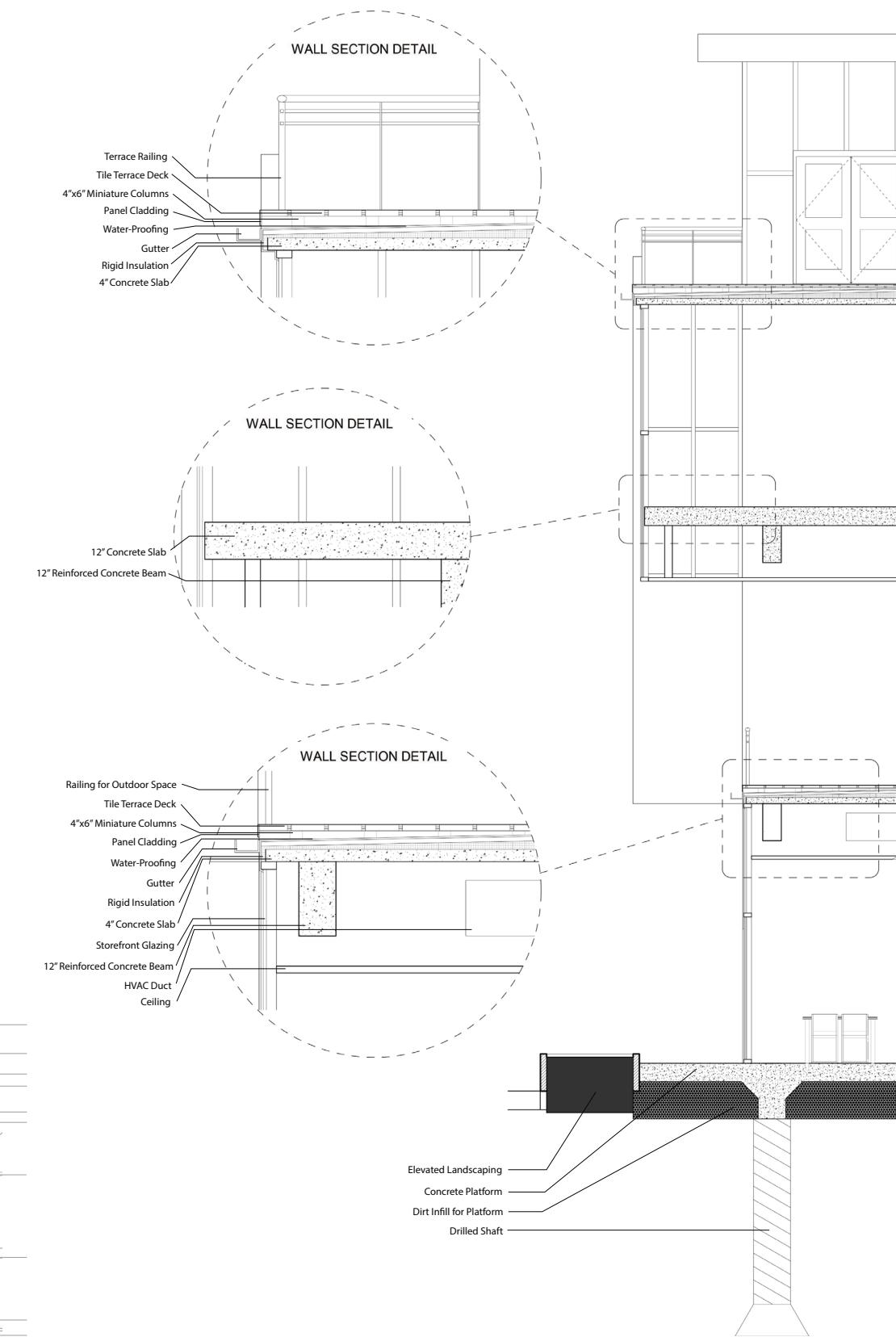


Level 3



Level 2

## Wall Section



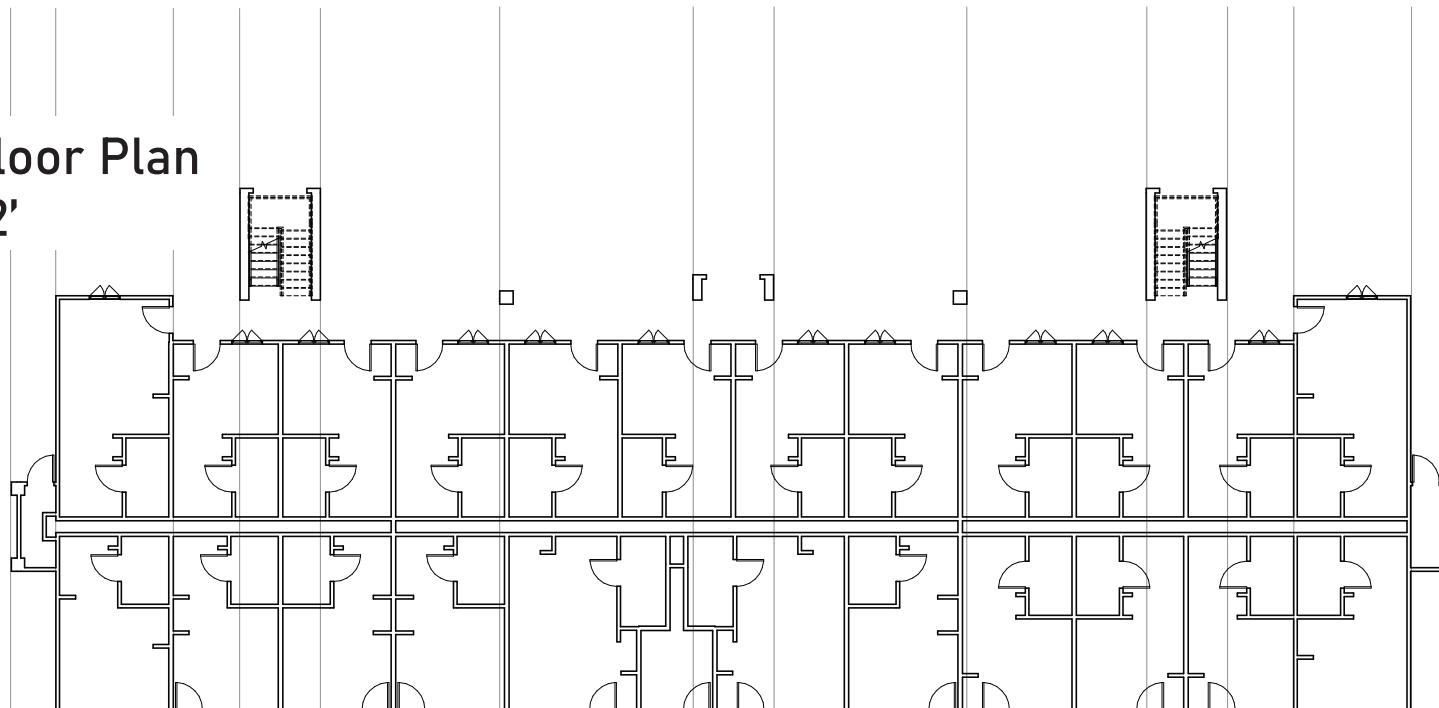
# Homestead Village Motel (existing)

Seasonal Internship | January 2022

The assigned task was to interpret old printed-out construction documents of an existing motel and transcribe it into a Revit model to make it more up-to-date with current software.

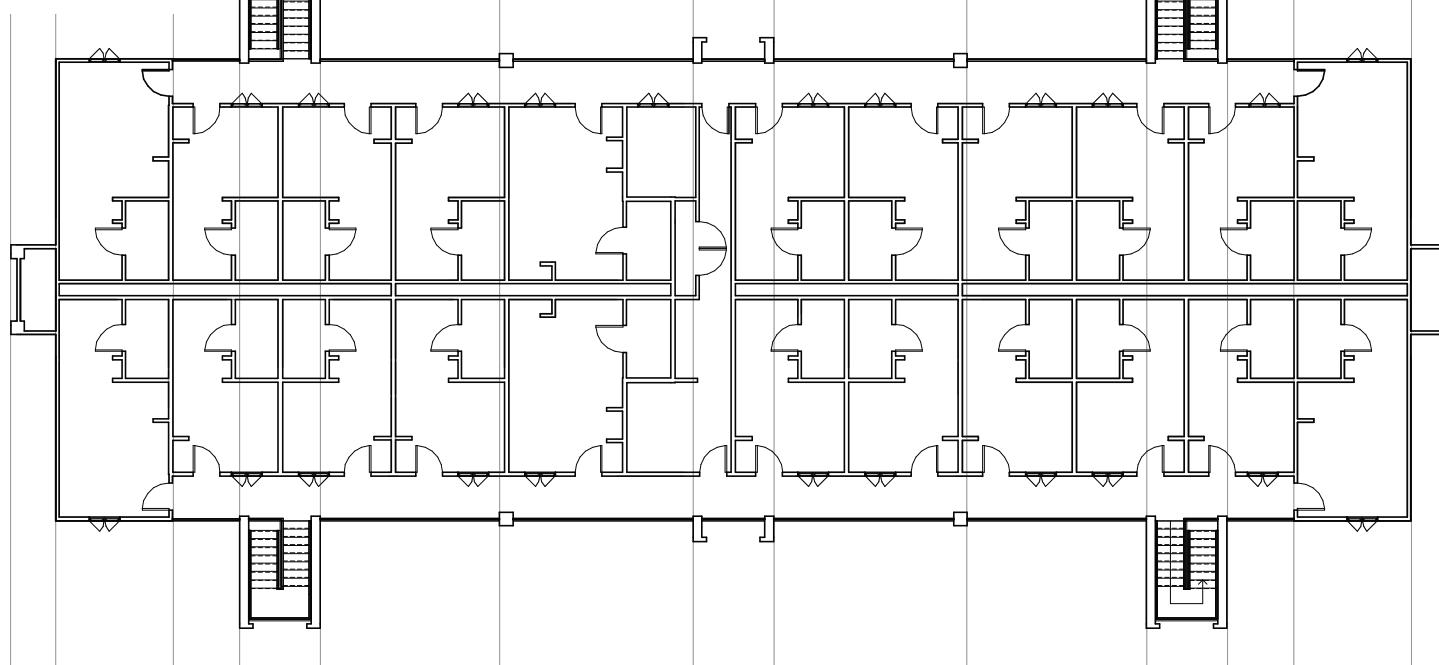
1st Floor Plan

3"=32'



2nd Floor Plan

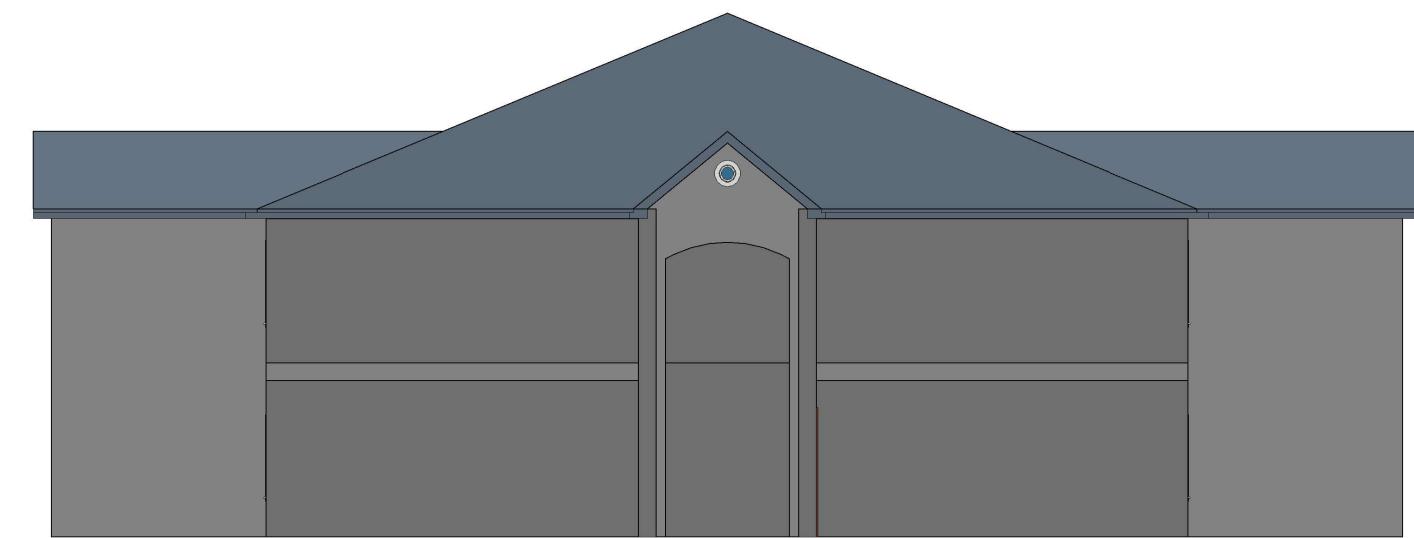
3"=32'



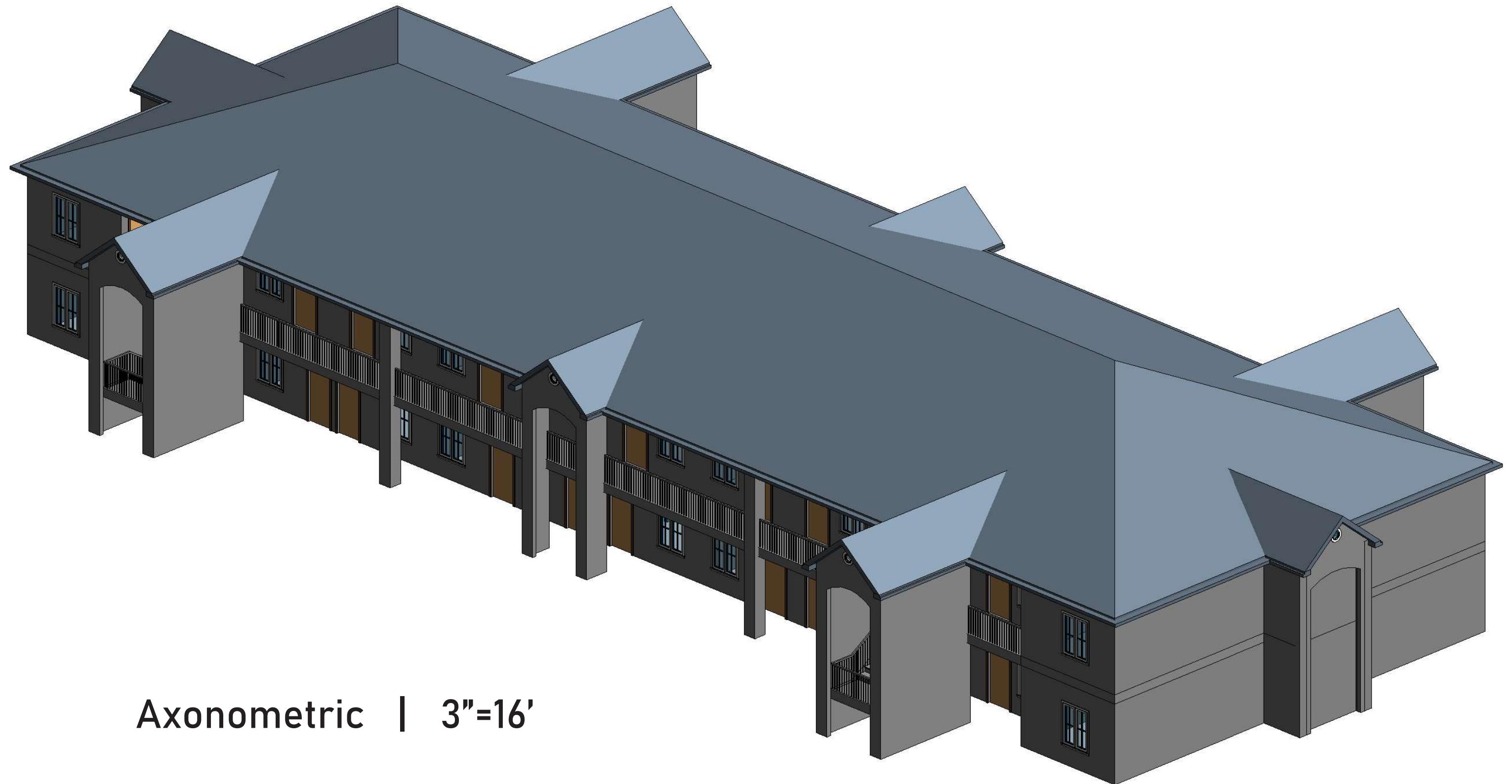
20



Long Elevation | 3"=32'



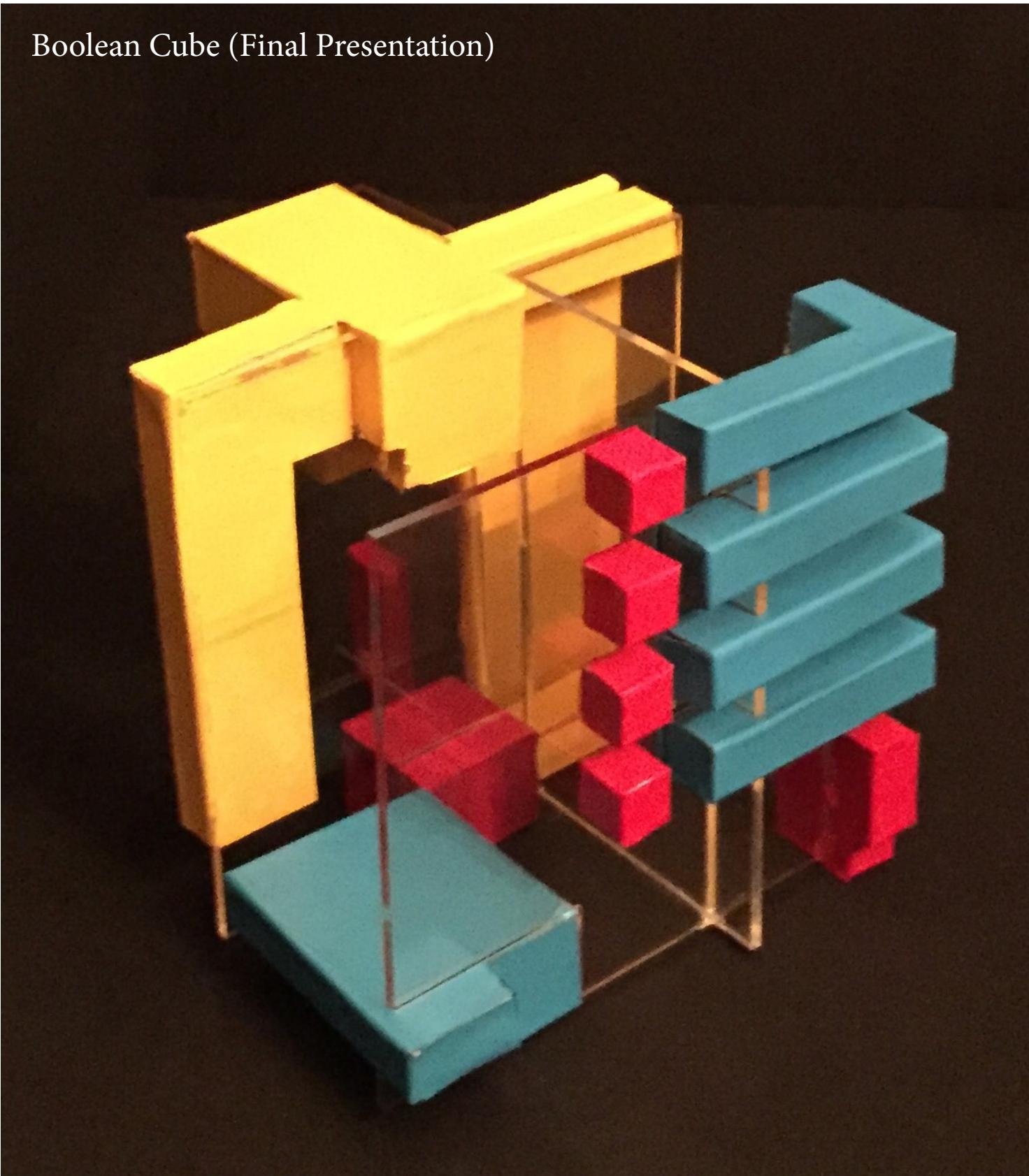
Short Elevation | 3"=16'



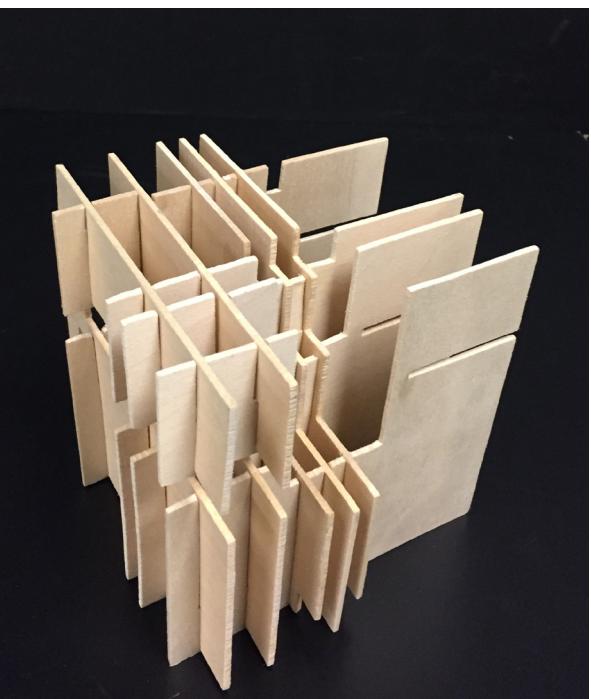
Axonometric | 3"=16'

# Boolean Cube & Dynamic Field

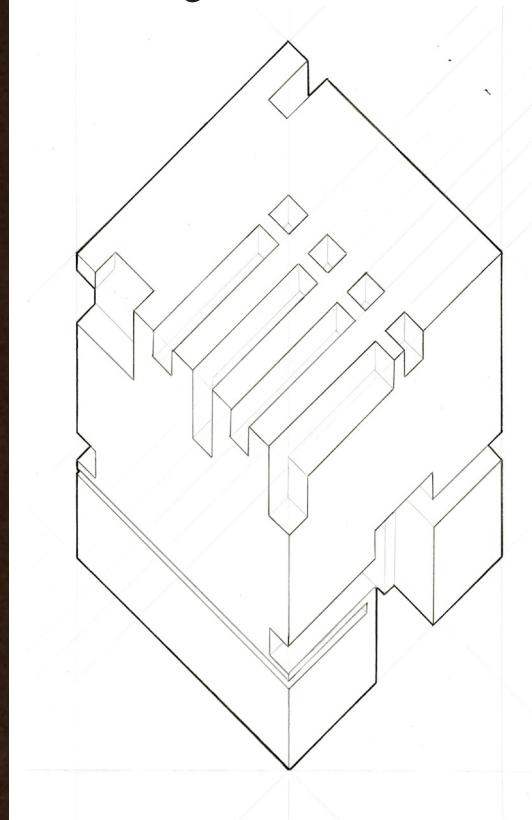
Fall 2019 | 1st Year



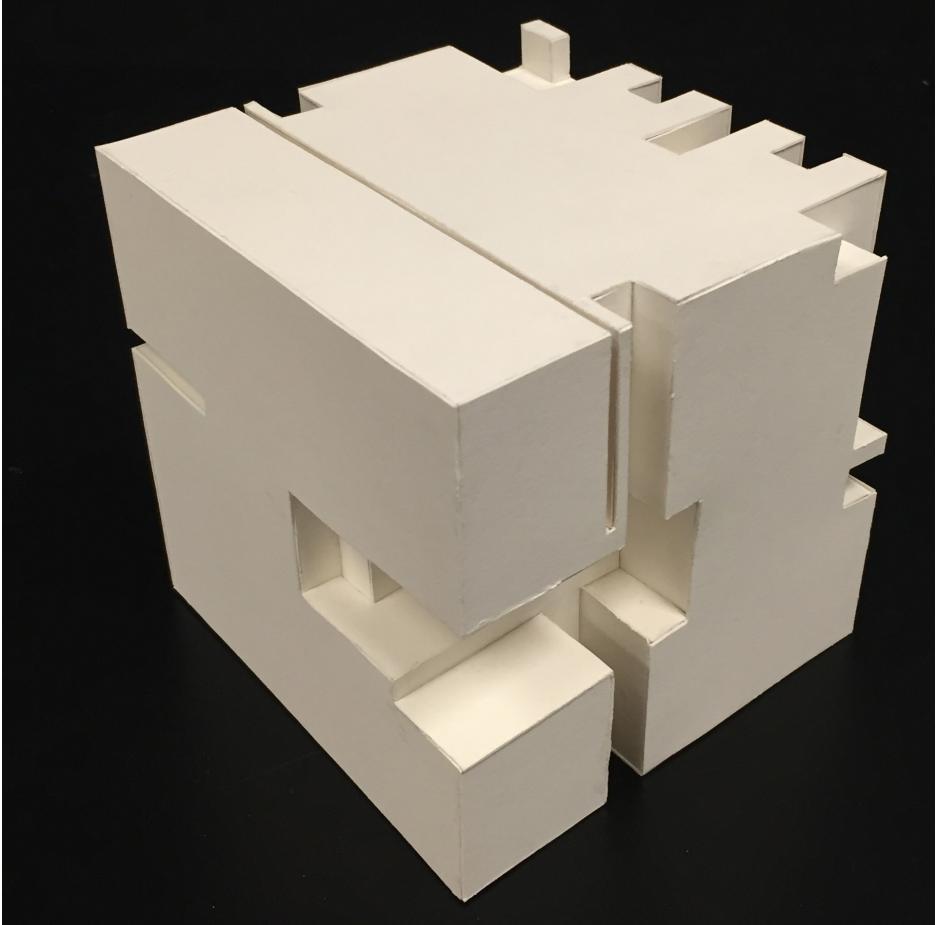
The very first semester at university was spent completing several different abstract design exercises. The central piece was the boolean cube. Students began with a 5.5" cube and made several deliberate “subtractions” from the mass. Once a final design was arrived at, the cube took on a variety of different styles of representation, all while keeping the same dimensions. This cube resembles a civic structure you might find in a cyberpunk science-fiction dystopian city setting.



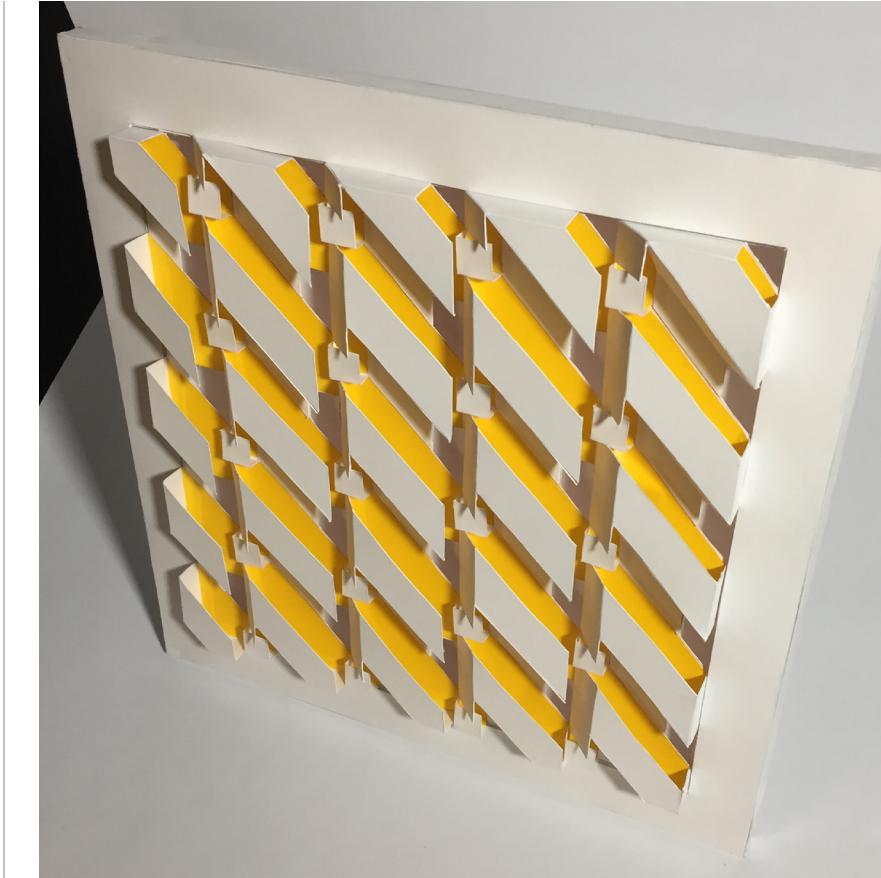
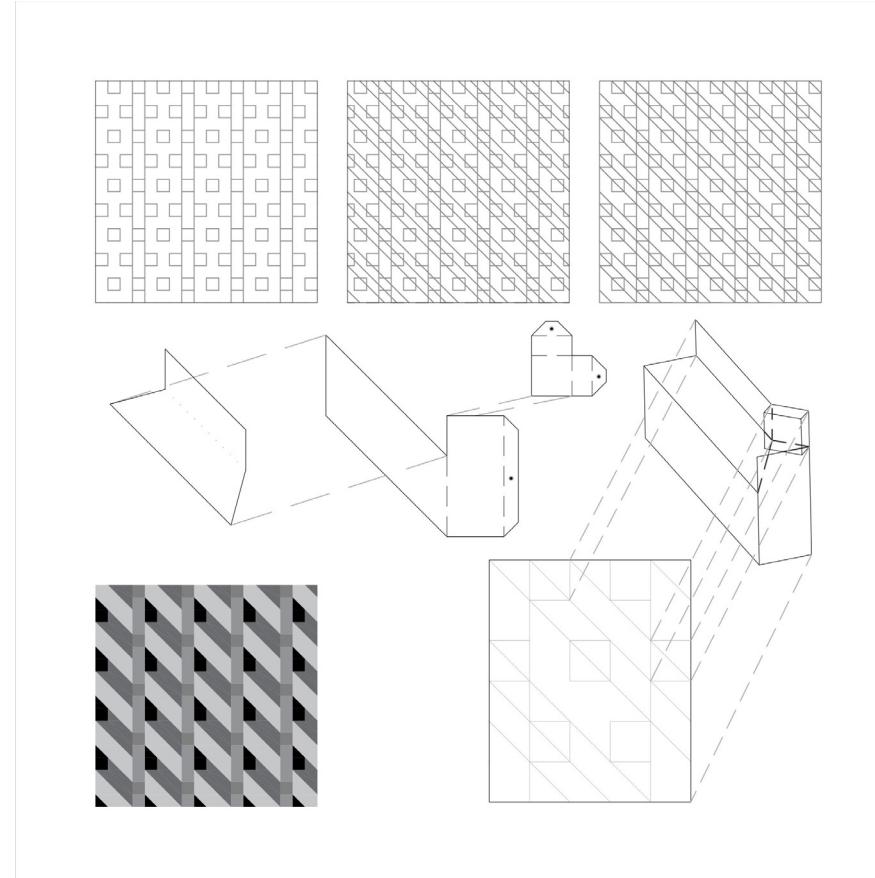
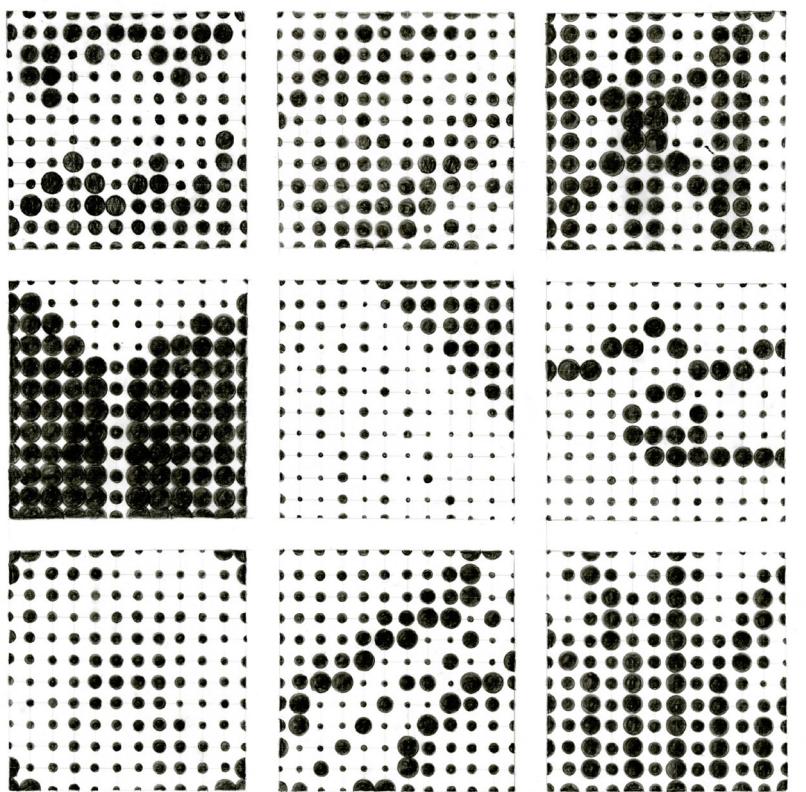
Boolean Cube (Hand Drawing)



Boolean Cube (Plain)

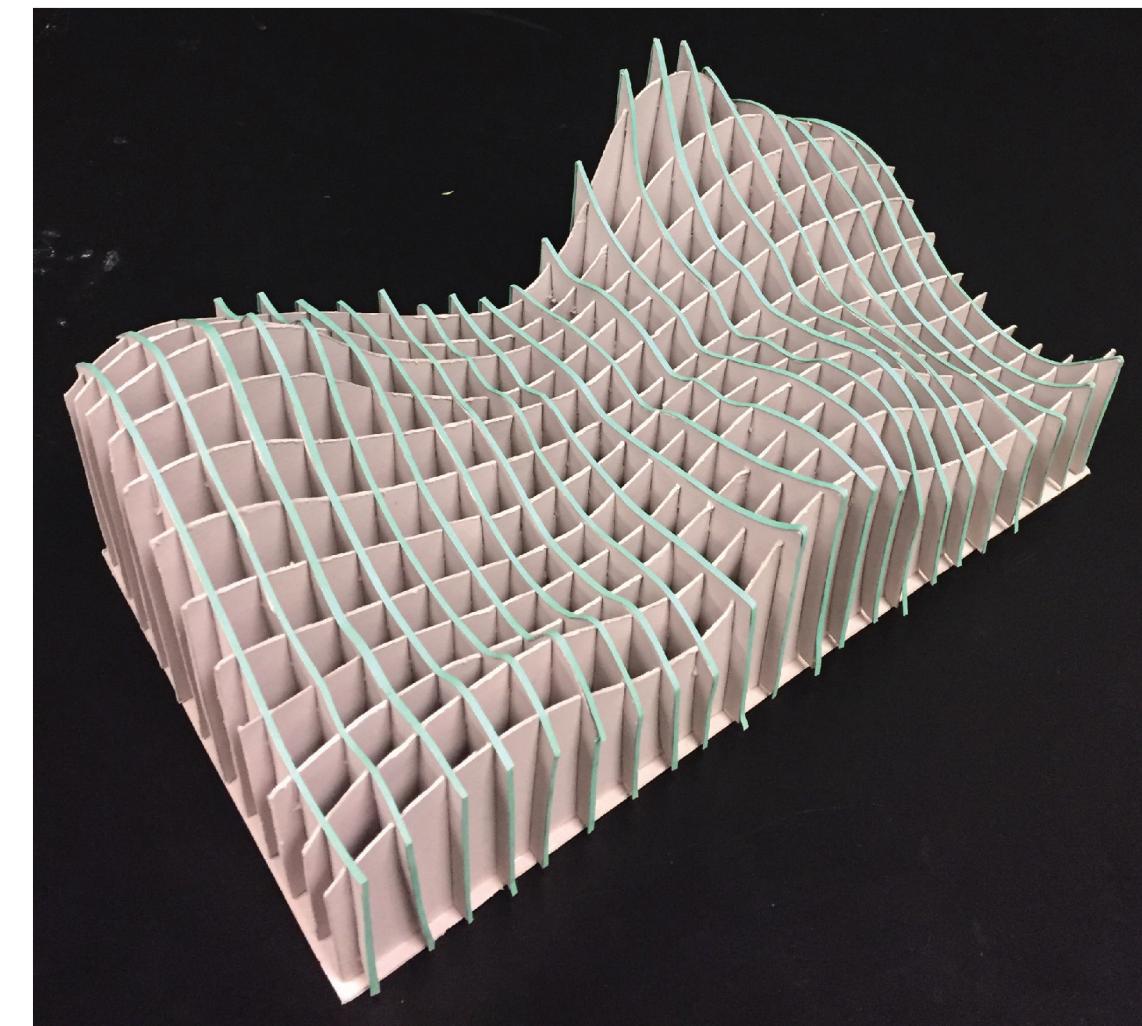
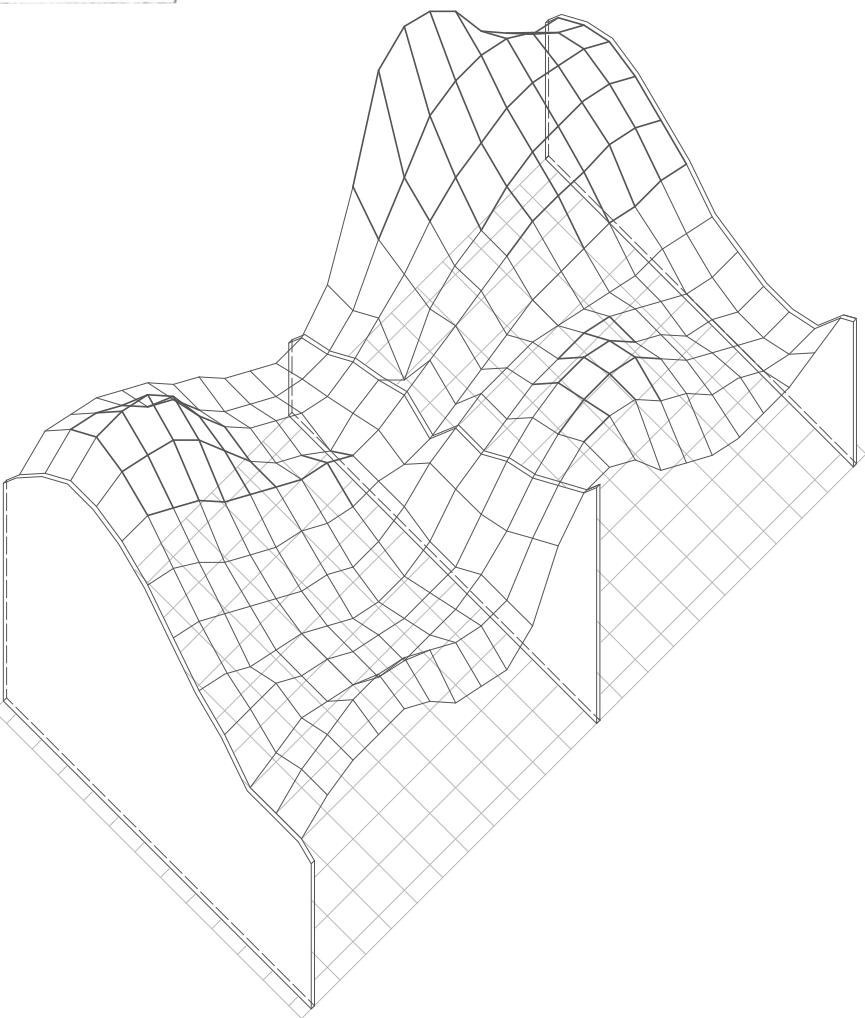


# Dynamic Field



# Section Train

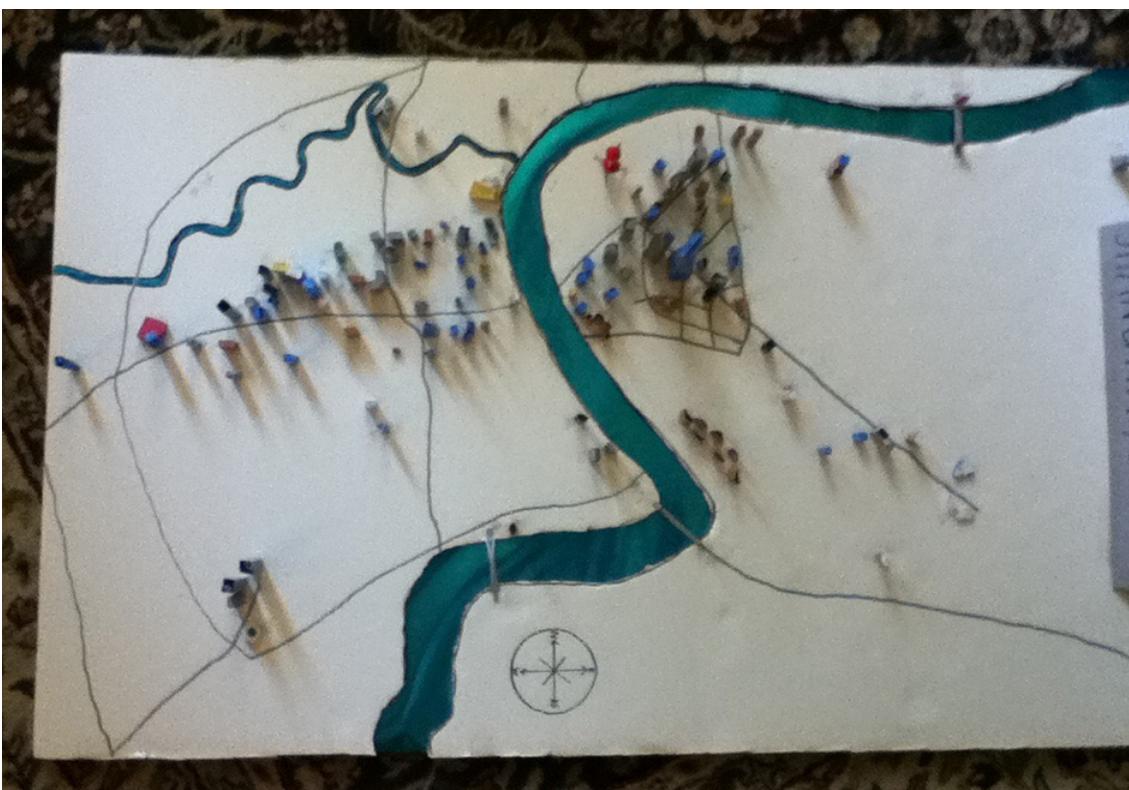
For this assignment, each student had to design a “wavy” mass made out of museum board arranged in a section grid fashion. Each student’s model had to connect with the person before and after them, leading to one long wavy train.

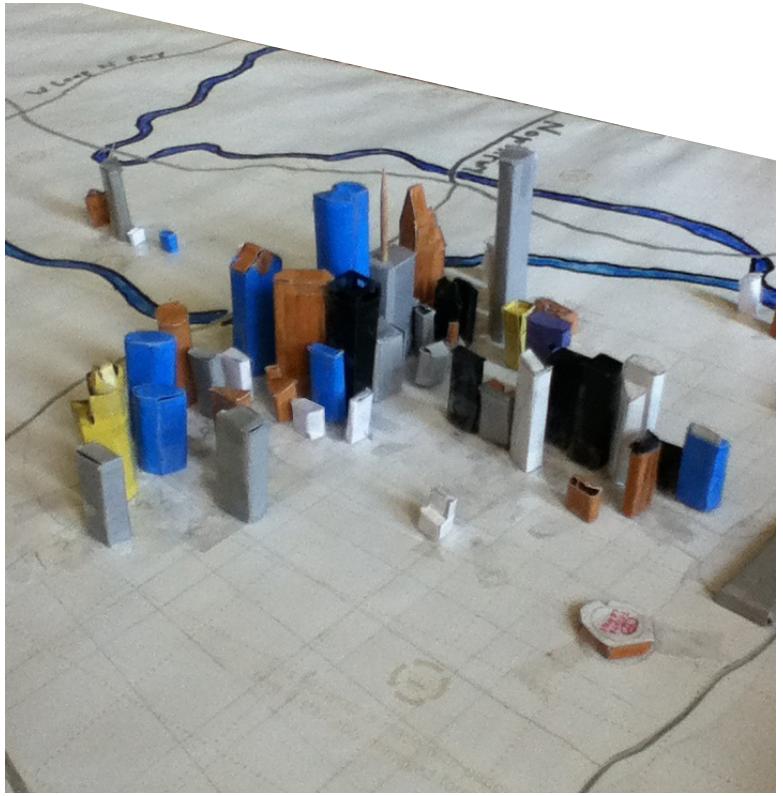


# Before College

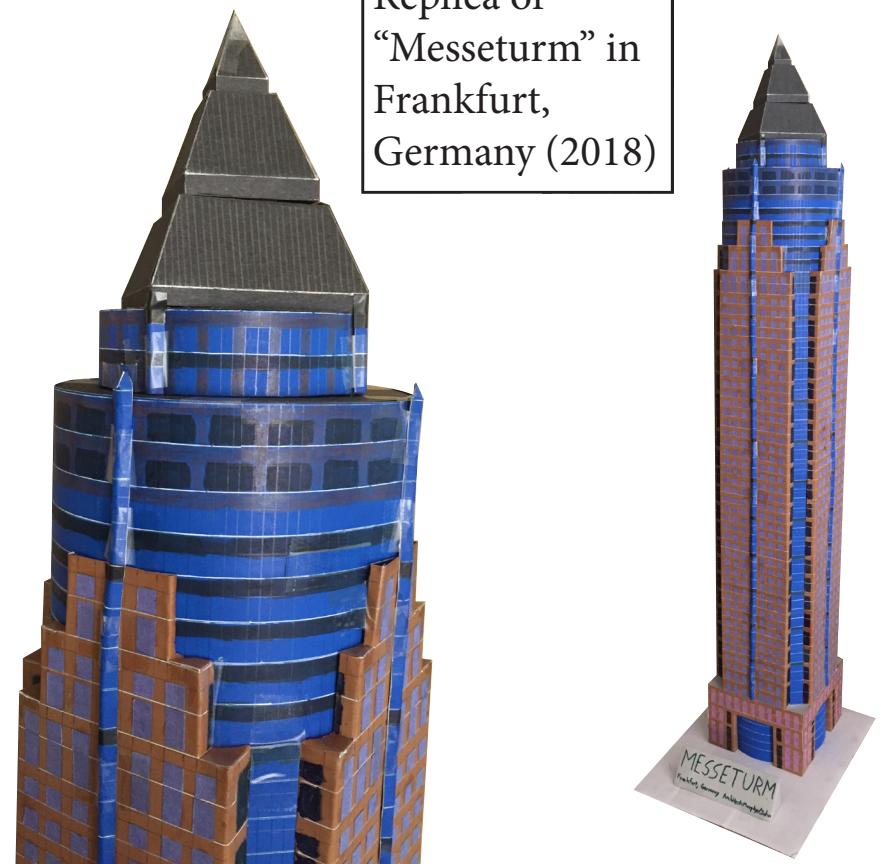
Shown here are several physical models made before beginning college, with some reaching as far back as middle school. These included models of famous city skylines, models of existing buildings, and even some original designs.

Shanghai, China Skyline Model (2014)





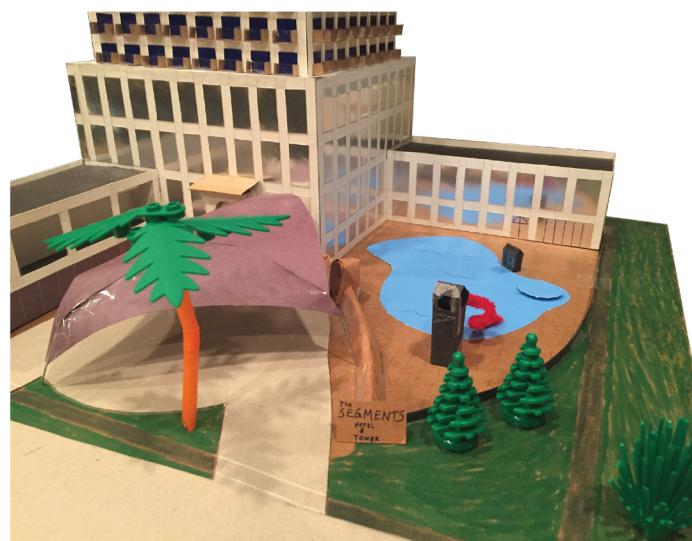
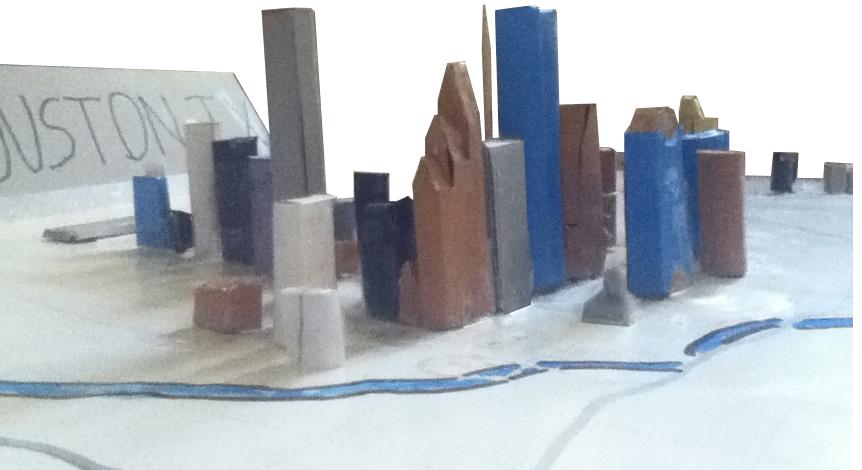
Replica of  
“Messelurm” in  
Frankfurt,  
Germany (2018)



Original work ti-  
tled “Communion  
of Saints and the  
Trinity Cathedral”  
(2019)



commission by an ar-  
chitect for a physical  
model to accompany the  
design of a house (2019)



Original work titled  
“The Segments’  
Hotel & Tower” (2018)



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